CHINO VALLEY
UNIFIED SCHOOL DISTRICT

Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

BOARD OF EDUCATION AGENDA

May 3, 2018

BOARD OF EDUCATION
Pamela Feix, President
James Na, Vice President
Irene Hernandez-Blair, Clerk
Andrew Cruz, Member
Sylvia Orozco, Member

Jonah Botello, Student Representative

SUPERINTENDENT
Wayne M. Joseph

5130 Riverside Drive. Chino. California 91710
www.chino.k12.ca.us

CHINO VALLEY UNIFIED SCHOOL DISTRICT

REGULAR MEETING OF THE BOARD OF EDUCATION
5130 Riverside Drive, Chino, CA 91710
District Board Room
6:00 p.m. – Closed Session • 7:00 p.m. – Regular Meeting
May 3, 2018

AGENDA

- The public is invited to address the Board of Education regarding items listed on the agenda. Comments on an agenda item will be accepted during consideration of that item, or prior to consideration of the item in the case of a closed session item. Persons wishing to address the Board are requested to complete and submit to the Administrative Secretary, Board of Education, a "Request to Speak" form available at the entrance to the Board room.
- In compliance with the Americans with Disabilities Act, please contact the Administrative Secretary, Board of Education, if you require modification or accommodation due to a disability.
- Agenda documents that have been distributed to members of the Board of Education less than 72 hours prior to the meeting are available for inspection at the Chino Valley Unified School District Administration Center, 5130 Riverside Drive, Chino, California, during the regular business hours of 7:30 a.m. to 4:30 p.m., Monday through Friday.
- Order of business is approximate and subject to change.

I. OPENING BUSINESS

I.A. CALL TO ORDER – 6:00 P.M.

1. Roll Call
2. Public Comment on Closed Session Items
3. Closed Session

Discussion and possible action (times are approximate):

a. Conference with Legal Counsel Existing Litigation: Government Code 54954.4(c) and 54956.9 (d)(1): Federal District Court, Case No. EDCV 14-2336-JGB (DTBx) Freedom from Religion Foundation vs. Chino Valley Unified School District Board of Education. (Tyler & Bursch, LLP) (10 minutes)
b. Conference with Legal Counsel Existing Litigation: Government Code 54954.5 (c) and 54956.9 (d)(1): Oxford Preparatory Academy v. Chino Valley Unified School District, et. al. SBC No. CIVDS1710045. (Chidester, Margaret A. & Associates) (10 minutes)
c. Conference with Legal Counsel Anticipated Litigation: Government Code 54956.9 (d)(2) and (e)(1): One possible case. (Atkinson, Andelson, Loya, Ruud & Romo) (10 minutes)
d. Student Readmission Matter (Education Code 35146, 48916 (c)): Case: 16/17-07A. (5 minutes)
e. Public Employee Discipline/Dismissal/Release: Government Code 54957: (20 minutes)
f. Public Employee Appointment: Government Code 54957: Elementary principals. (5 minutes)

I.B. RECONVENE TO REGULAR OPEN MEETING: 7: 00 P.M.

1. Report Closed Session Action
2. Pledge of Allegiance

I.C. STUDENT SHOWCASE/PRESENTATIONS

1. LCAP: Goal 2

I.D. COMMENTS FROM STUDENT REPRESENTATIVE

I.E. EMPLOYEE REPRESENTATIVES' COMMUNICATIONS

I.F. COMMUNITY LIAISONS' COMMUNICATIONS

I.G. COMMENTS FROM THE AUDIENCE ON ITEMS NOT ON THE AGENDA

I.H. CHANGES AND DELETIONS

II. ACTION

II.A. HUMAN RESOURCES

II.A.1. Page 8
Revisions to the Superintendent Salary Schedule
Recommend the Board of Education approve the revisions to the Superintendent Salary Schedule.
Motion ____ Second ___
Preferential Vote: _____
Vote: Yes _____ No ___

II.A.2. Page 10
Consideration and Approval of Employment Contract for a New Superintendent of the Chino Valley Unified School District
Recommend the Board of Education consider and approve the proposed contract of employment for Norman P. Enfield, Ed.D., as the Superintendent of the Chino Valley Unified School District, effective July 1, 2018, through June 30, 2022.
Motion ____ Second ___
Preferential Vote: _____
Vote: Yes _____ No ___

II.A.3. Page 19
Declaration of Need for Fully Qualified Educators for the 2018/2019 School Year
Recommend the Board of Education approve the Declaration of Need for Fully Qualified Educators for the 2018/2019 school year.
Motion ____ Second ___
Preferential Vote: _____
Vote: Yes _____ No ___

III. CONSENT

Motion ____ Second ___
Preferential Vote: _____
Vote: Yes _____ No ___

III.A. ADMINISTRATION

III.A.1. Page 23
Minutes of the Regular Meeting of April 19, 2018
Recommend the Board of Education approve the minutes of the regular meeting of April 19, 2018.

III.B. BUSINESS SERVICES

III.B.1. **Warrant Register**
Page 32
Recommend the Board of Education approve/ratify the warrant register, provided under separate cover.

III.B.2. **Fundraising Activities**
Page 33
Recommend the Board of Education approve/ratify the fundraising activities.

III.B.3. **Donations**
Page 35
Recommend the Board of Education accept the donations.

III.B.4. **Legal Services**
Page 38
Recommend the Board of Education approve payment for legal services to the law offices of Atkinson, Andelson, Loya, Ruud & Romo; and Margaret A. Chidester & Associates.

III.C. CURRICULUM, INSTRUCTION, INNOVATION, AND SUPPORT

III.C.1. **Student Readmission Case 16/17-07A**
Page 39
Recommend the Board of Education approve student readmission case 16/17-07A.

III.C.2. **School-Sponsored Trips**
Page 40
Recommend the Board of Education approve/ratify the following school-sponsored trips: Canyon Hills JHS; Ayala HS; Chino HS; and Don Lugo HS.

III.C.3. **California Department of Education Child Development Agency Annual Report and Parent Handbook 2018/2019**
Page 42
Recommend the Board of Education approve the California Department of Education Child Development Agency Annual Report and Parent Handbook 2018/2019.

III.C.4. **New Course: Advanced Placement Comparative Government and Politics**
Page 48
Recommend the Board of Education approve the new course Advanced Placement Comparative Government and Politics.

III.C.5. **New Course: Advanced Placement Human Geography**
Page 54
Recommend the Board of Education approve the new course Advanced Placement Human Geography.

III.C.6. **New Course: Advanced Placement Seminar**
Page 60
Recommend the Board of Education approve the new course Advanced Placement Seminar.

III.C.7. **New Course: Advanced Placement Studio Art: 2D Design**
Page 65
Recommend the Board of Education approve the new course Advanced Placement Studio Art: 2D Design.

III.C.8. **New Course: Advanced Placement United States Government and Politics**
Page 73
Recommend the Board of Education approve the new course Advanced Placement United States Government and Politics.

III.C.9. **New Course: Biology and the Living Earth**
Page 79
Recommend the Board of Education approve the new course Biology and the Living Earth.

III.C.10. **New Course: Biology and the Living Earth Honors**
Page 95
Recommend the Board of Education approve the new course Biology and the Living Earth Honors.

III.C.11. **New Course: Chemistry in the Earth System**
Page 112
Recommend the Board of Education approve the new course Chemistry in the Earth System.

III.C.12. **New Course: Chemistry in the Earth System Honors**
Page 120
Recommend the Board of Education approve the new course Chemistry in the Earth System Honors.

III.D. FACILITIES, PLANNING, AND OPERATIONS

III.D.1. **Purchase Order Register**
Page 136
Recommend the Board of Education approve/ratify the purchase order register, provided under separate cover.

III.D.2. **Agreements for Contractor/Consultant Services**
Page 137
Recommend the Board of Education approve/ratify the Agreements for Contractor/Consultant Services.

III.D.3. **Surplus/Obsolete Property**
Page 140
Recommend the Board of Education declare the District property surplus/obsolete and authorize staff to sell/dispose of said property.

III.D.4. **Resolutions 2017/2018-69, 2017/2018-70, and 2017/2018-71 for Authorization to Utilize Piggyback Contracts**
Page 142
Recommend the Board of Education adopt Resolutions 2017/2018-69, 2017/2018-70, and 2017/2018-71 for authorization to utilize piggyback contracts.

III.D.5. **Bid 17-18-19F, Ayala HS, Chino Hills HS, and Don Lugo HS Tennis Court Resurfacing**
Page 150
Recommend the Board of Education award Bid 17-18-19F, Ayala HS, Chino Hills HS, and Don Lugo HS Tennis Court Resurfacing to Trueline Construction & Surfacing, Inc.

III.D.6. **Bid 17-18-17F, Interactive Flat Panel Displays and Accessories**
Page 151
Recommend the Board of Education award Bid 17-18-17F, Interactive Flat Panel Displays and Accessories to CDW-G.

III.D.7. **Amendment to Land Lease Agreement with Verizon Wireless**
Page 153
Recommend the Board of Education approve the amendment to the Land Lease Agreement with Verizon Wireless.

III.D.8. **Approval of Members for the Measure G Bond Citizens' Oversight Committee**
Page 169
Recommend the Board of Education approve Robert Basile and William Kolbow to serve on the Measure G Bond Citizens' Oversight Committee in their currently represented categories through June 30, 2020.

III.E. HUMAN RESOURCES

III.E.1. **Certificated/Classified Personnel Items**
Page 170
Recommend the Board of Education approve/ratify the certificated/classified personnel items.

III.E.2. **Revisions to the Job Descriptions for Director, Business Services, and Payroll Supervisor**
Page 180
Recommend the Board of Education approve the revisions to the job descriptions for:
a) Director, Business Services; and
b) Payroll Supervisor.

IV. INFORMATION

IV.A. CURRICULUM, INSTRUCTION, INNOVATION, AND SUPPORT

IV.A.1. **New Course: Aerospace Engineering**
Page 190
Recommend the Board of Education receive for information the new course Aerospace Engineering.

IV.A.2. **New Course: Hospitality Consumer Economics**
Page 207
Recommend the Board of Education receive for information the new course Hospitality Consumer Economics.

IV.A.3. **New Course: International Foods**
Page 219
Recommend the Board of Education receive for information the new course International Foods.

IV.A.4. **New Course: Introduction to Digital Media**
Page 228
Recommend the Board of Education receive for information the new course Introduction to Digital Media.

IV.A.5. **Course Modifications: AVID 9, AVID 10, and AVID 11**
Page 234
Recommend the Board of Education receive for information the course modifications for AVID 9, AVID, 10, and AVID 11.

IV.A.6. **Course Modification: Introduction to Design**
Page 260
Recommend the Board of Education receive for information the course modification for Introduction to Design.

IV.A.7. **Course Modification: Public Speaking**
Page 280
Recommend the Board of Education receive for information the course modification for Public Speaking.

IV.B. FACILITIES, PLANNING, AND OPERATIONS

IV.B.1. **Use of First Issuance Measure G Bond Funds for Renovations and Upgrades to Former El Rancho ES Facilities and Infrastructure**
Page 288
Recommend the Board of Education receive for information the use of first issuance Measure G bond funds for renovations and upgrades to former El Rancho ES facilities and infrastructure.

IV.C. HUMAN RESOURCES

IV.C.1. **Revision of Board Policy 4119.25, 4219.25, and 4319.25 All Personnel—Political Activities of Employees**
Page 289
Recommend the Board of Education receive for information the revision of Board Policy 4119.25, 4219.25 and 4319.25 All Personnel—Political Activities of Employees.

V. COMMUNICATIONS

BOARD MEMBERS AND SUPERINTENDENT

VI. ADJOURNMENT

Prepared by: Patricia Kaylor, Administrative Secretary, Board of Education Date posted: April 27, 2018

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Lea Fellows, Assistant Superintendent, Human Resources

SUBJECT: REVISIONS TO THE SUPERINTENDENT SALARY SCHEDULE
==========

BACKGROUND

Board Policy 4151, personnel, employee compensation, states in part, "the board shall adopt separate salary schedules for certificated, classified, confidential and supervisory and administrative personnel" further, "salary schedules for staff who are not part of a bargaining unit shall be determined by the board at the recommendation of the superintendent or designee."

As such, the Board is being asked to approve the revisions to the Superintendent Salary Schedule effective July 1, 2018, to provide step advancement in order to recruit and retain educational leaders. The proposed revisions are provided in **bold** while old language to be deleted is ~~lined through.~~

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the revisions to the Superintendent Salary Schedule.

FISCAL IMPACT

None.

WMJ:LF:mcm

CHINO VALLEY UNIFIED SCHOOL DISTRICT

Superintendent Salary Schedule

2018/2019

Effective July 1, 2018

RANGE	POSITION	DAYS	STEP 1	STEP 2	STEP 3	STEP 4
A	Superintendent	226	**265,237** ~~275,953~~	**270,542**	**275,953**	**281,472**

Effective 7/1/18
BOARD APPROVED:

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
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DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Lea Fellows, Assistant Superintendent, Human Resources

SUBJECT: **CONSIDERATION AND APPROVAL OF EMPLOYMENT CONTRACT FOR A NEW SUPERINTENDENT OF THE CHINO VALLEY UNIFIED SCHOOL DISTRICT**

==========

BACKGROUND

Government Code 53262 requires that "all contracts with a superintendent, deputy superintendent, assistant superintendent, associate superintendent…of a local agency shall be ratified in an open session of the governing body, which shall be reflected in the governing body's minutes." Further, copies of the employment contract shall be made available to the public upon request.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education consider and approve the proposed contract of employment for Norman P. Enfield, Ed.D., as the Superintendent of Chino Valley Unified School District, effective July 1, 2018, through June 30, 2022.

FISCAL IMPACT

$12,900.00 is the projected cost savings to the General Fund for the 2018/2019 budgeted expenses for the Superintendent. The savings is inclusive of salary and mandatory benefits.

WMJ:LF:mcm

CONTRACT FOR EMPLOYMENT OF SUPERINTENDENT
BETWEEN
CHINO VALLEY UNIFIED SCHOOL DISTRICT
AND
NORMAN P. ENFIELD, Ed.D.

THIS CONTRACT FOR EMPLOYMENT OF SUPERINTENDENT ("AGREEMENT" or "CONTRACT") is hereby made and entered into this 3rd day of May 2018 by and between the Board of Education ("Board") of the Chino Valley Unified School District ("District") and Norman P. Enfield, Ed.D., ("Superintendent").

NOW, THEREFORE, it is hereby agreed as follows:

1. Superintendent, Chief Executive Officer, and Secretary to the Board

Norman P. Enfield, Ed.D. is hereby employed as the District's Superintendent. The Superintendent shall also be the Chief Executive Officer of the Board and shall serve as Secretary to the Board.

2. Term of Contract

The term of this Contract shall be from July 1, 2018, through June 30, 2022. On or before June 30th of each year, the Board may extend this Contract for an additional year subject to the Superintendent receiving a satisfactory performance evaluation by the Board ("Satisfactory" is defined as an overall rating of 3 or above), so long as the term of this Contract does not at any time exceed four years.

3. General Terms and Conditions of Employment

This Contract is subject to all applicable laws of the State of California, the rules and regulations of the California State Board of Education and the District. Said laws, rules and regulations are hereby made a part of the terms and conditions of this Contract as though herein set forth.

4. Duties of Superintendent

The Superintendent shall perform all of his powers and duties in accordance with the laws, rules and regulations of the State of California, the California State Board of Education and this District and this Contract. All powers and duties legally delegated to the Superintendent are to be executed in accordance with the policies adopted by the Board. Acts that require ratification by the Board shall be referred to the Board at the earliest opportunity.

The Superintendent's duties and functions shall include but not be limited to the following:

a. Serving as the Chief Executive Officer of the District as described by District policy, the Superintendent shall be delegated all powers and duties necessary for efficient management and administration of the District to the full extent permitted by law. Any organizational change and/or arrangement of the administrative and supervisory staff including instruction, business and operational affairs shall be recommended by the Superintendent, subject to approval by the Board. Employment of new personnel will be recommended by the Superintendent, subject to approval by the Board. In the event the Board does not approve the Superintendent's personnel recommendations, the Superintendent shall submit an alternate recommendation, subject to the Board's approval.

In addition to the foregoing duties, the Superintendent shall:

b. Working with the Board, District personnel, parents and the public, develop short and long-range goals with clear criteria for determining effective achievement and evaluating outcomes.

c. Represent the interests of the Board and the District in day-to-day contact with parents, other citizens, community, governmental agencies, and legal representatives.

d. Provide leadership, guidelines and directions to ensure the policies related to curriculum, instruction, pupil personnel services, personnel, budget and business affairs are carried out.

e. Report regularly to the Board information regarding student learning and an analysis of student learning, student achievement, and test scores.

f. Review policies adopted by the Board and make appropriate recommendations to the Board for addition, deletion or modification.

g. Evaluate employees directly accountable to the Superintendent and oversee the employees as defined by California law and Board policy.

h. Provide leadership and direction in planning and financing school facilities to meet growth needs.

i. Advise the Board and make recommendations regarding possible sources of funds that may be available to implement present or contemplated district programs.

j. Establish and maintain an effective community relations program including effective relationships with the media.

k. Communicate openly, systematically and in a timely manner to the Board, staff and the community, and promptly inform the Board of critical issues or incidents.

l. Provide educational leadership to ensure quality teaching and learning.

m. Perform other duties and functions as assigned or required by the Board.

5. Board - Superintendent Relations

The Board shall provide the Superintendent periodic opportunities to discuss Board-Superintendent relationships as they relate to the Superintendent's productivity and the effectiveness of the Superintendent's leadership.

The Board shall hold the Superintendent responsible for operations, personnel, and student achievement and is accountable to manage the District consistent with the approved policies that establish the Board's expectancies, and what it expects the schools to accomplish. It is through Board policy and official Board action that the Board gives direction to the Superintendent.

The Board shall hold the Superintendent responsible for operations, personnel, and student achievement and for managing the District to meet the Board's expected outcomes including the provision of data from which the Board can evaluate the District's achievements.

6. Evaluation

The Board shall evaluate the performance of the Superintendent and the working relationship between the Superintendent and the Board once each year, commencing on or about April 5th, and concluding no later than June 15th. Evaluations shall be based upon the Superintendent's performance of duties and responsibilities contained in the Superintendent's job description and written goals and objectives that will include operations, personnel, and student achievement established by mutual agreement between the Board and Superintendent no later than June 30th of each year. A mid-year informal progress assessment shall take place prior to January 31st of each year.

7. Salary

The Superintendent's shall be afforded the same opportunity to STEP on the salary schedule as all other employees of the District. The salary of the Superintendent shall be Range A STEP 1, two hundred sixty-five thousand, two hundred thirty-seven dollars ($265,237), payable in twelve (12) equal monthly payments. When only a portion of a year is served, compensation shall be prorated. For subsequent years of this Contract, the Superintendent shall STEP on the salary schedule, but, in no case will it be less than the previous year's salary. Any adjustment in salary during the term of this Contract shall be in the form of an amendment and shall not operate as a termination of this Contract.

The Superintendent shall receive the same general or across-the-board salary increase provided by the Board to other employee groups of the District.

8. Fringe Benefits, Professional Schedule and Vacation

The Superintendent shall have a work year of two hundred twenty-six (226) days of full and regular service to the District during each annual period covered by this Contract or a portion thereof; provided, however, that the Superintendent shall be entitled to twenty-two (22) days of annual vacation with pay, exclusive of holidays defined in Sections 37220, 37220.5, and 37221 of the California Education Code, and any additional local holidays granted by the Board to twelve-month management employees of the District.

In the event of termination of this Contract, the Superintendent shall be entitled to compensation for unused vacation at a salary rate effective during the school year in which the vacation credit was earned. The Superintendent is entitled to sell back up to thirty (30) days of unused vacation annually. In no case shall more than 56 days of unused vacation be paid at the expiration or termination of this Contract.

The Superintendent and eligible dependent shall be provided all health and insurance benefits which are provided to District certificated management personnel.

The District will provide retiree medical insurance coverage only up to the certificated management benefit cap for the Superintendent and his eligible dependent only if the Superintendent is in full-time employment status in the District for ten (10) years immediately preceding his retirement from the District. Such insurance coverage will be the same as that available to active certificated management employees of the District. Such insurance coverage shall cease with the death of the Superintendent or upon his reaching age 65, whichever occurs first.

The Superintendent shall be provided with two days per month sick leave annually. Earned sick leave may be accrued and accumulated as provided by the Education Code and Board rules and regulations.

9. Expenses

a. District-Related Expenses and Travel

The District shall reimburse the Superintendent for all actual and necessary expenses incurred and paid by the Superintendent in the conduct of his duties on behalf of the District while outside the District. The Superintendent will submit itemized claims or invoices for such expenses and such items claimed must be a proper use of District funds.

b. Professional Organizations

The District encourages the Superintendent to participate in professional organizations and activities. The District shall pay the Superintendent's membership dues in ACSA (Association of California School Administrators), AASA (American Association of School Administrators), local service clubs, and other professional or community organizations as may be approved by the Board. Fines assessed by service clubs shall not be paid or reimbursed under this section.

c. Professional Meetings

The Superintendent may attend professional meetings at the local, county, and state levels. Prior approval of the Board shall be obtained when the Superintendent attends national functions. All actual and necessary expenses of attendance at local, county, state and national meetings shall be paid by the District. In case of emergency attendance requirement, the President of the Board shall be notified, and the expenses will be ratified at the next appropriate Board meeting.

d. Outside Professional Activities

The Superintendent may engage in outside professional activities, such as consulting, speaking, and writing, provided such activities do not interfere with the Superintendent's duties, and may be subject to prior Board approval.

10. Termination of Contract

The Superintendent may terminate his obligations under this Contract by providing the Board a minimum of a thirty (30) day written notice.

This Contract shall terminate upon the occurrence of any of the following events:

a) Upon mutual written agreement of the Board and the Superintendent.

b) Death of the Superintendent terminates this Contract immediately. In such event, all salary and monetary amounts due the Superintendent at the time of death, if any, shall be paid to the Superintendent's estate unless otherwise declared in writing by the Superintendent.

c) Termination for Cause: This Contract and the services of the Superintendent may be terminated by the Board at any time for any grounds enumerated in Education Code Section 44932. The Board shall not terminate this Contract under this paragraph until a written statement of the grounds for termination has first been served upon the Superintendent. The Superintendent shall then be entitled to a conference with the Board, at which time the Superintendent shall be given a reasonable opportunity to address the Board's concerns. The Superintendent shall have the right at his own expense, to have a representative of his choice at the conference with the Board.

d) Termination Without the Necessity of Cause: By a two-thirds vote the Board may, for any reason, without cause, terminate this Contract at any time upon written notice to the Superintendent. Prior to the Board's termination of this Contract, the Superintendent shall have an opportunity to discuss the proposed termination without cause with the Board in closed session. In consideration for the exercise of this right, the Board shall pay to Superintendent from the date of termination until the expiration of this Contract, or for a period of twelve (12) months, whichever is less, a sum equal to the Superintendent's base salary at the rate in effect during the Superintendent's last month of service. Payments to the Superintendent shall be made on a monthly basis unless the parties agree in writing otherwise. For purpose of this Contract, the

term "salary" shall include the Superintendent's regular monthly base salary. All payments made pursuant to this termination without cause provision shall be subject to applicable deduction and shall be treated as compensation for state and federal tax purposes. Payments made pursuant to this termination without cause provision shall be considered as final settlement pay. Upon termination under the paragraph 10(d), the Superintendent shall continue to be eligible to participate in the District's health benefit programs (medical, dental and vision) for the same period as the payment of salary described herein or until the Superintendent accepts other employment, whichever occurs first, and under the same terms set out in Section 8 of this Contract (this cessation upon acceptance of other employment applies only to health benefit programs, and does not apply to payment of the remaining balance of the twelve (12) months' base salary as described above).

The parties agree that any damages to the Superintendent that may result from the Board's early termination of this Contract without cause cannot be readily ascertained. Accordingly, the parties agree that the payments made pursuant to this termination without cause provision, along with the District's agreement to provide health benefits, constitutes reasonable liquidated damages for the Superintendent, fully compensates the Superintendent for all tort, contract and other damages of any nature whatsoever, whether in law or equity, and does not result in penalty. The parties agree that the District's completion of its obligations under this provision constitutes the Superintendent's sole remedy to the fullest extent provided by law. Finally, the parties agree that this provision meets the requirements governing maximum cash settlements as set forth in Government Code section 53260 et. Seq.

The following language "By a two-thirds vote the Board may, for any reason, without cause, terminate this Contract at any time upon written notice to the Superintendent." will sunset on July 1, 2021, and be replaced with "The Board may, for any reason, without cause, terminate this Contract at any time upon written notice to the Superintendent."

e) Notwithstanding any provisions hereunder termination for cause or without cause, should the Superintendent be unable to serve in his position due to physical and/or mental condition, and upon expiration of the sick leave entitlement as provided by statue and the rules and policies of the Board, and upon written evaluation by a licensed physician designated by the District indicating the inability of the Superintendent to further serve in his position of employment, this Contract may be terminated by the Board.

f) Notwithstanding any other provision of this Contract, if the Board believes, and subsequently confirms through an independent audit, that the Superintendent has engaged in fraud, misappropriation of funds, or other illegal fiscal practices, then the Superintendent shall not be entitled to any cash, salary payments, health benefits, or other non-cash settlement.

11. Abuse of Office

Notwithstanding any other provisions of this Contract and as mandated by Government Code Section 53243, et seq., in the event the Superintendent is convicted of a crime constituting "abuse of office," the Superintendent shall reimburse the District to the fullest extent mandated by Government Code Section 53243, et seq., (i.e. for paid leave, criminal defense expenditures, or any cash settlement). In the event of such conviction, the District shall make no payment barred by Government Code Section 53243, et seq.

12. Indemnification

Unless there is a finding of criminal action, actual fraud, corruption or actual malice, in accordance with the provisions of Government Code Section 825 and 995, the District shall hold harmless and indemnify the Superintendent from any and all demands, claims, suits, actions, and legal proceedings brought against the Superintendent in the Superintendent's individual capacity or in the Superintendent's official capacity as an agent and employee of the District, provided that the incident giving rise to any such demand, claim, suit, action, or legal preceding arose while the Superintendent was acting within a scope of Superintendent's employment. Such indemnification and hold harmless shall be for any and all claims arising out of or related to this Contract and its provisions, duties and responsibilities of the Superintendent's job performance, including any extensions of this Contract.

13. Statement Required by Government Code Section 53260

Regardless of the term of this Contract, if this Contract is terminated, the maximum cash settlement that the Superintendent may receive shall be in an amount equivalent to his monthly salary multiplied by the number of months left on the unexpired term of this Contract, not to exceed twelve (12) months.

14. Action at Open Session of Regular Meeting

Pursuant to Government Code Sections 54956(b) and 54957.6(b), this Contract shall be approved in an open session of a regular meeting of the Board of Education.

15. Savings Clause

If any provisions of this Contract are held to be contrary to law by final legislative act or a court of competent jurisdiction inclusive of appeals, if any, such provisions shall not be deemed valid and subsisting except to the extent permitted by law, but all other provisions shall continue in full force and effect.

16. Renewal

If the Board determines not to renew this Contract it shall provide the Superintendent with written notice of such decision no later than March 15th of the final year of this Contract.

17. **Complete Agreement**

This Contract is the full and complete agreement between the parties hereto. Any amendment, modifications, or variations from the terms of this Contract shall be in writing and shall be effective only upon approval of such amendment, modification, or variation by the Board and the Superintendent.

IN WITNESS WHEREOF, the parties hereto have duly approved and executed this Contract on the day and year above written.

BOARD OF EDUCATION OF THE
CHINO VALLEY UNIFIED SCHOOL DISTRICT

Pamela Feix, President

James Na, Vice President

Irene Hernandez-Blair, Clerk

Andrew Cruz, Member

Sylvia Orozco, Member

I hereby accept this offer of employment and agree to comply with the conditions thereof and to fulfill all of the duties of employment of Superintendent of the Chino Valley Unified School District.

Norman P. Enfield, Ed.D.

Date of Acceptance

APPROVED BY COUNSEL AS TO FORM

Anthony P. De Marco, Partner
Atkinson, Andelson, Loya, Ruud & Romo

Date: 4/24/18

005209.00134
19636755.1

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Lea Fellows, Assistant Superintendent, Human Resources
Suzanne Hernandez, Ed.D., Director, Human Resources
Richard Rideout, Director, Human Resources

SUBJECT: **DECLARATION OF NEED FOR FULLY QUALIFIED EDUCATORS FOR THE 2018/2019 SCHOOL YEAR**

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BACKGROUND

The California Commission on Teacher Credentialing (CCTC), effective July 1, 1994, established requirements regarding the use of teachers with emergency permits. While the current credentialing laws no longer allow the use of emergency multiple, single, and special education permits, the requirement still remains that the Board annually adopt a Declaration of Need for Fully Qualified Educators as there are still select emergency permits available that the District currently utilizes.

Individual teachers with these select emergency permits will be required to fulfill the credentialing requirements in a timely manner. This Declaration of Need must be properly filed with the CCTC prior to July 1 of a school year. Any emergency permits processed without a Declaration of Need on file will be rejected.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the Declaration of Need for Fully Qualified Educators for the 2018/2019 school year.

FISCAL IMPACT

All personnel employed on emergency permits will be within the approved staffing ratios for the 2018/2019 school year and selections will be in accordance with approved District policies.

WMJ:LF:SH:RR:mcm

State of California
Commission on Teacher Credentialing
Certification Division
1900 Capitol Avenue
Sacramento, CA 95811-4213

Email: credentials@ctc.ca.gov
Website: www.ctc.ca.gov

DECLARATION OF NEED FOR FULLY QUALIFIED EDUCATORS

Original Declaration of Need for year: 2018/2019

Revised Declaration of Need for year: _____

FOR SERVICE IN A SCHOOL DISTRICT

Name of District: Chino Valley Unified School District District CDS Code: 36

Name of County: San Bernardino County CDS Code: 67678

By submitting this annual declaration, the district is certifying the following:

- A diligent search, as defined below, to recruit a fully prepared teacher for the assignment(s) was made
- If a suitable fully prepared teacher is not available to the school district, the district will make a reasonable effort to recruit based on the priority stated below

The governing board of the school district specified above adopted a declaration at a regularly scheduled public meeting held on 05 / 03 / 2018 certifying that there is an insufficient number of certificated persons who meet the district's specified employment criteria for the position(s) listed on the attached form. The attached form was part of the agenda, and the declaration did NOT appear as part of a consent calendar.

► ***Enclose a copy of the board agenda item***

With my signature below, I verify that the item was acted upon favorably by the board. The declaration shall remain in force until June 30, 2019.

Submitted by (Superintendent, Board Secretary, or Designee):

Lea Fellows		Assistant Superintendent, Human Resources
Name	*Signature*	*Title*
909-703-6106	909-628-1201	May 3, 2018
Fax Number	*Telephone Number*	*Date*

5130 Riverside Drive Chino, CA 91710
Mailing Address

lea_fellows@chino.k12.ca.us
EMail Address

FOR SERVICE IN A COUNTY OFFICE OF EDUCATION, STATE AGENCY OR NONPUBLIC SCHOOL OR AGENCY

Name of County _____ County CDS Code _____

Name of State Agency _____

Name of NPS/NPA _____ County of Location _____

The Superintendent of the County Office of Education or the Director of the State Agency or the Director of the NPS/NPA specified above adopted a declaration on ____/____/____, at least 72 hours following his or her public announcement that such a declaration would be made, certifying that there is an insufficient number of certificated persons who meet the county's, agency's or school's specified employment criteria for the position(s) listed on the attached form.

The declaration shall remain in force until June 30, _____.

▶ ***Enclose a copy of the public announcement***

Submitted by Superintendent, Director, or Designee:

Lea Fellows		Assistant Superintendent, Human Resources
Name	*Signature*	*Title*
909-703-6106	909-628-1201	May 3, 2018
Fax Number	*Telephone Number*	*Date*

5130 Riverside Drive Chino, CA 91710

Mailing Address

lea_fellows@chino.k12.ca.us

EMail Address

▶ *This declaration must be on file with the Commission on Teacher Credentialing before any emergency permits will be issued for service with the employing agency*

AREAS OF ANTICIPATED NEED FOR FULLY QUALIFIED EDUCATORS

Based on the previous year's actual needs and projections of enrollment, please indicate the number of emergency permits the employing agency estimates it will need in each of the identified areas during the valid period of this Declaration of Need for Fully Qualified Educators. This declaration shall be valid only for the type(s) and subjects(s) identified below.

This declaration must be revised by the employing agency when the total number of emergency permits applied for exceeds the estimate by ten percent. Board approval is required for a revision.

Type of Emergency Permit	**Estimated Number Needed**
CLAD/English Learner Authorization (applicant already holds teaching credential)	10
Bilingual Authorization (applicant already holds teaching credential)	0
List target language(s) for bilingual authorization: _____	
Resource Specialist	0
Teacher Librarian Services	1

LIMITED ASSIGNMENT PERMITS

Limited Assignment Permits may only be issued to applicants holding a valid California teaching credential based on a baccalaureate degree and a professional preparation program including student teaching.

Based on the previous year's actual needs and projections of enrollment, please indicate the number of Limited Assignment Permits the employing agency estimates it will need in the following areas:

TYPE OF LIMITED ASSIGNMENT PERMIT	ESTIMATED NUMBER NEEDED
Multiple Subject	5
Single Subject	25
Special Education	15
TOTAL	45

EFFORTS TO RECRUIT CERTIFIED PERSONNEL

The employing agency declares that it has implemented in policy and practices a process for conducting a diligent search that includes, but is not limited to, distributing job announcements, contacting college and university placement centers, advertising in local newspapers, exploring incentives included in the Teaching as a Priority Block Grant (refer to **www.cde.ca.gov** for details), participating in state and regional recruitment centers and participating in job fairs in California.

If a suitable fully prepared teacher is not available to the school district, the district made reasonable efforts to recruit an individual for the assignment, in the following order:

- A candidate who qualifies and agrees to participate in an approved internship program in the region of the school district
- An individual who is scheduled to complete initial preparation requirements within six months

EFFORTS TO CERTIFY, ASSIGN, AND DEVELOP FULLY QUALIFIED PERSONNEL

Has your agency established a District Intern program? Yes ☐ No ☑

If no, explain. _____

Does your agency participate in a Commission-approved college or university internship program? Yes ☑ No ☐

If yes, how many interns do you expect to have this year? 25

If yes, list each college or university with which you participate in an internship program.

Cal State Univ., San Bernardino; Cal State Univ., Fullerton; Cal State Poly. Univ., Pomona; Cal State Univ., LA; University of La Verne; Point Loma University; Azusa Pacific University; University of Redlands; USC Rossier; Cal Baptist Univ.; Alliant International Univ.; Biola Univ.; National Univ.; Chapman Univ.; and Loyola Marymount Univ.

If no, explain why you do not participate in an internship program.

_____

_____

CHINO VALLEY UNIFIED SCHOOL DISTRICT
REGULAR MEETING OF THE BOARD OF EDUCATION
April 19, 2018

MINUTES

I. OPENING BUSINESS

I.A. CALL TO ORDER – 4:30 P.M.

1. Roll Call
   President Feix called to order the regular meeting of the Board of Education, Thursday, April 19, 2018, at 4:30 p.m. with Blair, Na, Orozco, and Feix present. Mr. Cruz arrived at 4:45 p.m.

   Administrative Personnel
   Wayne M. Joseph, Superintendent
   Norm Enfield, Ed.D., Deputy Superintendent
   Sandra H. Chen, Assistant Superintendent, Business Services
   Lea Fellows, Assistant Superintendent, Human Resources
   Grace Park, Ed.D., Assistant Superintendent, CIIS
   Gregory J. Stachura, Asst. Supt., Facilities, Planning, & Operations

2. Public Comment on Closed Session Items
   None.

3. Closed Session
   President Feix adjourned to closed session at 4:30 p.m. regarding conference with legal counsel existing and anticipated litigation; student discipline; public employee discipline/dismissal/release; public employee employment: Director, Assessment & Instructional Technology; Director, Access & Equity; Coordinator, Elementary Curriculum; and Superintendent; and conference with labor negotiators agency designated representatives Sylvia Orozco and James Na. Unrepresented employee: new Superintendent Dr. Norm Enfield.

I.B. RECONVENE TO REGULAR OPEN MEETING: 7:00 P.M.

1. Report Closed Session Action
   President Feix reconvened the regular meeting of the Board of Education at 7:15 p.m. with Cruz, Na, Orozco, and Feix present. Mrs. Blair was absent from open session.

The Board met in closed session from 4:30 p.m. to 7:10 p.m. regarding conference with legal counsel existing and anticipated litigation; student discipline; public employee discipline/dismissal/release; public employee employment: Director, Assessment & Instructional Technology; Director, Access & Equity; Coordinator, Elementary Curriculum; and Superintendent; and conference with labor negotiators agency designated representatives Sylvia Orozco and James Na. Unrepresented employee: new Superintendent Dr. Norm Enfield. The Board of Education authorized the approval of a settlement agreement with former certificated employee number 473 by a unanimous vote of 5-0 with Cruz, Blair, Na, Orozco, and Feix voting yes; voted to appoint Corinna Hathuc as Coordinator, Elementary Curriculum, effective July 1, 2018, by a unanimous vote of 5-0 with Cruz, Blair, Na, Orozco, and Feix voting yes; voted to appoint Yvette Farley as Director, Access & Equity, effective July 1, 2018, by a unanimous vote of 5-0 with Cruz, Blair, Na, Orozco, and Feix voting yes; and voted to appoint Dr. Tracy Freed as Director, Assessment and Instructional Technology, effective July 1, 2018, by a unanimous vote of 5-0 with Cruz, Blair, Na, Orozco, and Feix voting yes. No further action was taken that required public disclosure.

2. Pledge of Allegiance
   Sean Jenkins led the Magnolia JHS band in the National Anthem, and Matthew McCain, Principal, led the Pledge of Allegiance.

I.C. STUDENT SHOWCASE/PRESENTATIONS

1. Magnolia JHS
   The Magnolia JHS band gave a musical performance.

2. Hit the Greens for Scholarships Golf Tournament Check Presentation
   Tim Adams, Adams Photography, presented a check in the amount $27,887.00 representing the proceeds from the 9th Annual Hit the Greens for Scholarships Golf Tournament.

3. LCAP: Local Metrics
   Dr. Grace Park, presented the Local Control Accountability Plan Local Metrics.

I.D. COMMENTS FROM STUDENT REPRESENTATIVE

Jonah Botello shared that he will be attending the School of Business at NYU after he graduates.

I.E. EMPLOYEE REPRESENTATIVE'S COMMUNICATIONS

Steve Ball, A.C.T. President, spoke about last month's CTA dinner awards and said community member Naomi Minogue was the recipient of their community award; congratulated Rob McKellip, Walnut ES teacher, for being nominated for the San Bernardino County Education Medal of Honor; and spoke about the 19th anniversary of the Columbine shooting and spoke about the National Day of Action against Prevent Gun Violence in Schools.

CHAMP representatives said four CHAMP administrators attended ACSA's Legislative Action Day in Sacramento and shared information regarding bills that may impact education.

Danny Hernandez, CSEA President, said the Member Unity Program has started; and spoke about attacks on public and private sector unions, and spoke about the purpose of unions.

I.F. COMMUNITY LIAISONS' COMMUNICATIONS

Paula Avendano, Assembly Member Freddie Rodriguez's Field Representative, addressed the Board regarding Assembly Bill 1747.

I.G. COMMENTS FROM THE AUDIENCE ON ITEMS NOT ON THE AGENDA

Ana Rivas addressed the Board regarding student Skyler Javier; Kyle Bacskai, Sabrina Reza, Dezi Bacskai, Lisan Centeno, and Noah Centeno addressed the Board regarding the Ayala HS varsity basketball program; Don Bridge, Mark Hargrove addressed the Board regarding the Principal for a Day event; Bob Whitmore addressed the Board regarding substitute teacher shortage; Valerie Quiroz, Mario Quiroz, Frank Alfaro, and Peter Attwood addressed the Board regarding special education; and Sebastian Cognetto and Samantha Odo addressed the Board regarding Allegiance STEAM Academy.

I.H. CHANGES AND DELETIONS

The following changes were read into the record: CIIS, Item II.C.1., Student Expulsion Case 17/18-20, amended to a suspended expulsion for the remainder of second semester 2017/2018 with continued placement at Cortez ES and a full expulsion and placement at CVLA for first semester of the 2018/2019 school year; CIIS, Item II.C.2., School Sponsored Trips, was yellow-sheeted; Facilities, Planning, and Operations, Item II.D.2, Contractor/Consultant Services, deleted contract under CIIS:1718-130 K-12 Insight; and Human Resources, Item II.E.1., Certificated/Classified Personnel Items, corrected the years of service for Robert Whitmore, III, to read 12 years of service.

II. CONSENT

Sylvia Orozco pulled for separate action Item II.D.2.; II.D.7.; and II.D.8. Andrew Cruz pulled for separate action Item II.C.4. Moved (Na) seconded (Orozco) motion carried (4-0, Blair absent) to approve the consent items, as amended. Student representative voted yes.

II.A. ADMINISTRATION

II.A.1. Minutes of the Regular Meeting of March 15, 2018
Approved the minutes of the regular meeting of March 15, 2018.

II.B. BUSINESS SERVICES

II.B.1. Warrant Register
Approved/ratified the warrant register.

II.B.2. Fundraising Activities
Approved/ratified the fundraising activities.

II.B.3. Donations
Accepted the donations.

II.B.4. Legal Services
Approved payment for legal services to the law offices of Atkinson, Andelson, Loya, Ruud & Romo; Fagen Friedman & Fulfrost LLP; Margaret A. Chidester & Associates; and Parker & Covert LLP. Peter Attwood addressed the Board on this item.

II.B.5. Request for Allowance of Attendance Due to a School Shooting Threat at Lyle S. Briggs K-8
Approved the request for allowance of attendance due to a school shooting threat at Lyle S. Briggs K-8.

II.B.6. Resolution 2017/2018-40 Temporary Borrowing Between Funds of the School District
Adopted Resolution 2017/2018-40 Temporary Borrowing Between Funds of the School District.

II.C. CURRICULUM, INSTRUCTION, INNOVATION, AND SUPPORT

II.C.1. Student Expulsion Case 17/18-20
Approved student expulsion case 17/18-20, amended.

II.C.2. School-Sponsored Trips

Approved/ratified the following school-sponsored trips: Country Springs ES; Liberty ES; Briggs K-8; Ayala HS; Chino HS; Chino Hills HS; and Don Lugo HS, as amended

II.C.3. Advanced Placement History/Social Science Textbook Adoption

Approved the following instructional materials for the Advanced Placement History/Social Science textbook adoption: a) AP European History: Jackson J. Spielvogel, 2018, *Western Civilization: Since 1300*, 10th Edition. Spielvogel, Cengage. Replaces: McDougal Littell, 2003, *History of Western Society*, 7th Edition and McDougal Littell, 2006, *History of Western Society*, 8th Edition, Houghton Mifflin; b) AP US History: Henretta, Hinderaker, Edwards, and Self, 2014, *America's History for The AP Course*, 9th Edition, Bedford, Freeman and Worth Publishing Group. Replaces: Henretta, Brody, Dumenil, 2008, *America's History AP Edition*, 6th Edition, Bedford/St. Martin's; c) AP Psychology: David G. Myers, 2014, *Myers Psychology for AP,* 2nd Edition, Worth Publishers. Replaces: David G. Myers, 2010, AP Psychology, W.H. Freeman and Company; and d) AP Economics: David Anderson, Margaret Ray, 2011, *Krugman's Economics for AP*, 2nd Edition, BFW/Worth Publishers. Replaces: Robin Bade, Michael Parkin, 2007, *Foundations of Economics,* Pearson.

II.C.4. English Language Arts/English Language Development Textbook Adoption for Grades 7 and 8

Moved (Na) seconded (Cruz) motion carried (4-0, Blair absent) to approve the following instructional materials for English Language Arts/English Language Development textbook adoption for grades 7 and 8: a) *California Collections Student Edition. 7th Grade.* 2017. Houghton Mifflin Harcourt. Replaces: McDougal Littell. *Language of Literature 7.* 2002. McDougal Littell Reading and Language Arts Program; and *High Point.* Levels A, B, and C. 2002. Hampton-Brown; and b) *California Collections Student Edition. 8th Grade.* 2017. Houghton Mifflin Harcourt. Replaces: McDougal Littell. *Language of Literature 8.* 2002. McDougal Littell Reading and Language Arts Program; and *High Point.* Levels A, B, and C. 2002. Hampton-Brown. Student representative voted yes.

II.C.5. Proclamation for National School Nurse Day on May 9, 2018

Adopted the proclamation for National School Nurse day on May 9, 2018.

II.D. FACILITIES, PLANNING, AND OPERATIONS

II.D.1. Purchase Order Register

Approved/ratified the purchase order register.

II.D.2. Agreements for Contractor/Consultant Services

Moved (Na) seconded (Cruz) motion carried (4-0, Blair absent) to approve Approved/ratified the Agreements for Contractor/Consultant Services, as amended.

II.D.3. Surplus/Obsolete Property
Declared the District property surplus/obsolete and authorized staff to sell/dispose of said property.

II.D.4. Notice of Completion for CUPCCAA Projects
Approved the Notice of Completion for CUPCCAA Projects.

II.D.5. Bid 17-18-15F Ayala HS and Chino HS High Jump and Pole Vault Equipment
Awarded Bid 17-18-15F, Ayala HS and Chino HS High Jump and Pole Vault Equipment to VS Athletics.

II.D.6. Resolutions 2017/2018-61, 2017/2018-62, 2017/2018-63, 2017/2018-66, 2017/2018-67, and 2017/2018-68 for Authorization to Utilize Piggyback Contracts
Adopted Resolutions 2017/2018-61, 2017/2018-62, 2017/2018-63, 2017/2018-66, 2017/2018-67, and 2017/2018-68 for authorization to utilize piggyback contracts.

II.D.7. Resolutions 2017/2018-49, 2017/2018-50, 2017/2018-51, 2017/2018-52, 2017/2018-53, 2017/2018-54, 2017/2018-55, 2017/2018-56, 2017/2018-57, 2017/2018-58, and 2017/2018-59 Adopting Notices of Exemption for School Modernization Projects
Moved (Na) seconded (Cruz) motion carried (4-0, Blair absent) to adopt Resolutions 2017/2018-49, 2017/2018-50, 2017/2018-51, 2017/2018-52, 2017/2018-53, 2017/2018-54, 2017/2018-55, 2017/2018-56, 2017/2018-57, 2017/2018-58, and 2017/2018-59 Adopting Notices of Exemption for School Modernization Projects.

II.D.8. Request to Name the Don Lugo HS Varsity Baseball Field After Joe Marcos
Todd Sinclair and Erik Wetzel addressed the Board in support of the item. Moved (Orozco) seconded (Na) motion carried (4-0, Blair absent) to approve the request to name the Don Lugo HS varsity baseball field after Joe Marcos. Student representative voted yes.

II.E. HUMAN RESOURCES

II.E.1. Certificated/Classified Personnel Items
Approved/ratified the certificated/classified personnel items, as amended.

II.E.2. **New Job Descriptions and Creation of Positions for: Family Services Program Specialist; Junior Database Administrator; and Nutrition Eligibility Specialist**

Approved the new job description for Family Services Program Specialist; authorized the creation of the Family Services Program Specialist position; approved the new job description of the Junior Database Administrator; authorized the creation of the Junior Database Administrator position; approved the new job description for Nutrition Eligibility Specialist; and authorized the creation of the Nutrition Eligibility Specialist position.

II.E.3. **Resolution 2017/2018-64 Classified Employees Week/Semana de Empleados Clasificados**

Adopted Resolution 2017/2018-64 Classified Employees Week/Semana de Empleados Clasificados.

II.E.4. **Resolution 2017/2018-65 Day of the Teacher/Día del Maestro**

Adopted Resolution 2017/2018-65 Day of the Teacher/Día del Maestro.

III. INFORMATION

III.A. CURRICULUM, INSTRUCTION, INNOVATION, AND SUPPORT

III.A.1. **New Course: Advanced Placement Comparative Government and Politics**

Received for information the new course Advanced Placement Comparative Government and Politics.

III.A.2. **New Course: Advanced Placement Human Geography**

Received for information the new course Advanced Placement Human Geography.

III.A.3. **New Course: Advanced Placement Seminar**

Received for information the new course Advanced Placement Seminar.

III.A.4. **New Course: Advanced Placement Studio Art: 2D Design**

Received for information the new course Advanced Placement Studio Art: 2D Design.

III.A.5. **New Course: Advanced Placement United States Government and Politics**

Received for information the new course Advanced Placement United States Government and Politics.

III.A.6. New Course: Biology and the Living Earth
Received for information the new course Biology and the Living Earth.

III.A.7. New Course: Biology and the Living Earth Honors
Received for information the new course Biology and the Living Earth Honors.

III.A.8. New Course Chemistry in the Earth System
Received for information the new course Chemistry in the Earth System.

III.A.9. New Course: Chemistry in the Earth System Honors
Recommend the Board of Education receive for information the new course Chemistry in the Earth System Honors.

III.A.10. Williams Settlement Legislation Quarterly Uniform Complaint Report Summary for January Through March 2018
Received for information the Williams Settlement Legislation Quarterly Uniform Complaint Report Summary for January through March 2018.

IV. COMMUNICATIONS

BOARD MEMBERS AND SUPERINTENDENT

Sylvia Orozco announced the retirees on the agenda; gave a reminder for the District's Retirement Recognition Dinner scheduled for May 22, which will also include the Hall of Fame recipients; attended ROP Student Success Awards; and commented on protocols associated with hiring coaches.

Andrew Cruz attended the Magnolia JHS 50th Anniversary celebration; attended the Principal for a Day event at Chaparral ES; said that Chaparral ES and Country Springs ES have been designated Distinguished Schools; spoke about genocides in the last centuries, the 2nd Amendment, and student safety; and asked for a moment of silence in memory of Julie Gobin.

James Na spoke about Julie Gobin's passing; thanked people who participated in the Principal for a Day event; thanked Peter Attwood for speaking on behalf of the special education population; spoke about hiring policies; and said Chaparral ES is having a Disability Awareness Assembly tomorrow.

Superintendent Joseph announced that Chaparral ES and Country Springs ES have been named 2018 California Distinguished Schools.

President Feix made no comments.

V. ADJOURNMENT

President Feix adjourned the regular meeting of the Board of Education at 9:10 p.m. in memory of Julie Gobin.

Pamela Feix, President

Irene Hernandez-Blair, Clerk

Recorded by: Patricia Kaylor, Administrative Secretary, Board of Education

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Sandra H. Chen, Assistant Superintendent, Business Services
Liz Pensick, Director, Business Services

SUBJECT: **WARRANT REGISTER**

==========

BACKGROUND

Education Code 42650 requires the Board to approve and/or ratify all warrants. These payments are made in the form of warrants, and the warrant (check) form is approved by the County Superintendent.

All items listed are within previously budgeted amounts. There is no fiscal impact beyond currently available appropriations.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve/ratify the warrant register, provided under separate cover.

FISCAL IMPACT

$2,952,341.48 to all District funding sources.

WMJ:SHC:LP:wc

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Sandra H. Chen, Assistant Superintendent, Business Services
Liz Pensick, Director, Business Services

SUBJECT: **FUNDRAISING ACTIVITIES**

==========

BACKGROUND

Board Policy 3452 Business and Noninstructional Operations – Student Activity Funds and Board Policy 1230 Community Relations – School Connected Organizations require that fundraising activities be submitted to the Board of Education for approval.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve/ratify the fundraising activities.

FISCAL IMPACT

None.

WMJ:SHC:LP:wc

CHINO VALLEY UNIFIED SCHOOL DISTRICT
May 3, 2018

SITE/DEPARTMENT	ACTIVITY/DESCRIPTION	DATE
Chaparral ES		
PTO	Clothing Drive	5/4/18 - 5/30/18
Marshall ES		
PTO	6th Grade Promotion Gift Sale	5/4/18 - 5/30/18
Ramona JHS		
Band Boosters	Off Campus Yard Sale	5/12/18 - 5/13/18
Band Boosters	IHOP Fundraiser Days	6/5/18 - 6/7/18
Ayala HS		
ELD International Club	Chick-fil-A Family Night Out	5/4/18
Boys Soccer	T-Shirt Sale	5/4/18 - 5/18/18
Boys Soccer	After School Krispy Kreme Donut Sale	5/4/18 - 5/17/18
A.N.E.A. Club	Chipotle Family Night Out	5/9/18
Robotics Club	Chipotle Family Night Out	5/11/18
Boys Water Polo Boosters	Water Polo Home Games Snack Bar	6/4/18 - 6/30/18
Chino Hills HS		
Spirit Leaders	Off Campus Krispy Kreme Donut Sale	5/11/18
Christians on Campus	Dodgeball Tournament	5/18/18
Girls Basketball	Girls Basketball Summer Camp	6/4/18 - 7/22/18
Theatre Club	Theatre Summer Camp	6/25/18 - 6/29/18
Aquatics Boosters	Aquatics Summer Camp	6/25/18 - 8/2/18
Don Lugo HS		
Girls Swim Team	Swim-A-Thon	5/4/18

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Sandra H. Chen, Assistant Superintendent, Business Services
Liz Pensick, Director, Business Services

SUBJECT: **DONATIONS**

==========

BACKGROUND

Board Policy 3290 Business and Noninstructional Operations - Gifts, Grants, and Bequests states the Board of Education may accept any bequest or gift of money or property on behalf of the District. All gifts, grants, and bequests shall become property of the District. Use of the gift shall not be impaired by restrictions or conditions imposed by the donor. Approximate values are determined by the donor.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education accept the donations.

FISCAL IMPACT

Any cost for repairs of donated equipment will be a site expense.

WMJ:SHC:LP:wc

CHINO VALLEY UNIFIED SCHOOL DISTRICT
May 3, 2018

DEPARTMENT/SITE DONOR	ITEM DONATED	APPROXIMATE VALUE
Cortez ES		
Kroger	Cash	$38.00
Dickson ES		
Jonathan Vong	2 Bicycles	$200.00
Costco	200 Backpacks	$2,000.00
Litel ES		
Arcenia Palomor	Cash	$120.00
Briggs K-8		
Hans Sandoke	Cash	$100.00
WLC Architects	Cash	$250.00
O.F. Wolfinbarger, Inc.	Cash	$250.00
John Hyland	Cash	$300.00
Genievre Sandoke Tyler	Cash	$300.00
David Landeros	Cash	$500.00
PRL Glass Systems	Cash	$500.00
Chino Kiwanis	Cash	$1,000.00
Shoring Engineers	Cash	$1,000.00
DonorsChoose.org	Cash	$1,200.00
Chino Hills HS		
Michele Schempp	Cash	$50.00
Don Lugo HS		
Lucille Pruitt	Cash	$25.00
David & Magaly Rodriguez	Cash	$25.00
Andrew & Cynthia Toone	Cash	$25.00
John & Teresa Garcia	Cash	$50.00
Kory W. Lee Construction	Cash	$50.00

CHINO VALLEY UNIFIED SCHOOL DISTRICT
May 3, 2018

DEPARTMENT/SITE DONOR	ITEM DONATED	APPROXIMATE VALUE
Don Lugo HS (cont.)		
Robert Miller	Cash	$50.00
Christine Dominguez	Cash	$82.00
Shanette Encarnacion	Cash	$85.00
Christi Crawford	Cash	$100.00
Gerald & Glenda Heaton	Cash	$100.00
Rudolph Lancaster	Cash	$150.00
Kimberly Cabrera	Cash	$344.00

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Sandra H. Chen, Assistant Superintendent, Business Services
Liz Pensick, Director, Business Services

SUBJECT: **LEGAL SERVICES**

==========

BACKGROUND

The following law firms provide services to the Chino Valley Unified School District and have submitted their invoices. The current invoice amounts, along with the fiscal year-to-date totals for each individual law firm, are listed below.

FIRM	MONTH	INVOICE AMOUNTS	2017/2018 YEAR-TO-DATE
Atkinson, Andelson, Loya, Ruud & Romo	March 2018	$12,902.20	$ 194,581.38
Fagen Friedman & Fulfrost LLP	-	-	$ 700.50
Margaret A. Chidester & Associates	February 2018	$71,287.58	$ 919,162.07
McCune & Harber, LLP	-	-	$ 45.00
Parker & Covert LLP	-	-	$ 1,777.50
	Total	$84,189.78	$1,116,266.45

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve payment for legal services to the law offices of Atkinson, Andelson, Loya, Ruud & Romo; and Margaret A. Chidester & Associates.

FISCAL IMPACT

$84,189.78 to the General Fund.

WMJ:SHC:LP:wc

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
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Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Norm Enfield, Ed.D., Deputy Superintendent
Stephanie Johnson, Director, Student Support Services

SUBJECT: **STUDENT READMISSION CASE 16/17-07A**

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BACKGROUND

Administrative Regulation 5144.1 Students – Suspension and Expulsion/Due Process Readmission after Expulsion state:

- The Superintendent or designee shall hold a conference with the parent/guardian and the student. At the conference, the student's rehabilitation plan shall be reviewed and the Superintendent or designee shall verify that the provisions of this plan have been met.
- School regulations shall be reviewed and the student and parent/guardian shall be asked to indicate in writing their willingness to comply with these regulations.
- The Superintendent or designee shall transmit his/her recommendation regarding readmission to the Board. The Board shall consider this recommendation, in closed session, if information disclosed would be in violation of Education Code 49073-49079. If a written request for open session is received from the parent/guardian or adult student, it shall be honored.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve student readmission case 16/17-07A.

FISCAL IMPACT

None.

WMJ:NE:SJ:ss

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support

SUBJECT: SCHOOL-SPONSORED TRIPS

==========

BACKGROUND

The Board of Education recognizes that school-sponsored trips are an important component of a student's development and supplement and enrich the classroom learning experience. School-sponsored trips may be conducted in connection with the District's course of study or school related social, educational, cultural, athletic, school band activities, or other extracurricular or cocurricular activities. Resources will be identified and established at the school site to assist economically disadvantaged students in obtaining funding for field trips and, in some cases, student travel. School sponsored trips that require overnight stay or are in excess of 250 miles (one way) require board approval.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve/ratify the following school-sponsored trips:

School-Sponsored Trips	Date	Fiscal Impact
Site: Canyon Hills JHS Event: Odyssey of the Mind World Finals Place: Ames, IA Chaperone: 6 students/3 chaperones	May 22-27, 2018	Cost: $625.00 per student Funding Source: GATE
Site: Ayala HS Event: Swim Team - State Championship Place: Fresno, CA Chaperone: 6 students/2 chaperones	May 17-19, 2018	Cost: $350.00 per student Funding Source: Athletics

Site: Ayala HS Event: California Association of Directors of Activities/California Association of Student Leaders Summer Leadership Camp Place: Santa Barbara, CA Chaperone: 8 students/1 chaperones	July 12-15, 2018	Cost: $574.00 per student Funding Source: Parents and fundraising
Site: Chino HS Event: Solar Cup 2018 Place: Winchester, CA Chaperone: 12 students/1 chaperone	May 17-21, 2018	Cost: $100.00 per student Funding Source: Sponsors
Site: Don Lugo HS Event: Future Farmers of America - State Finals Place: San Luis Obispo, CA Chaperone: 8 students/2 chaperones	May 4-6, 2018	Cost: $200.00 per student Funding Source: Parents and fundraising

FISCAL IMPACT

None.

WMJ:GP:rtr

Chino Valley Unified School District
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Sherri Johnson, Psy.D., Director, Health Services/Child Development

SUBJECT: **CALIFORNIA DEPARTMENT OF EDUCATION CHILD DEVELOPMENT AGENCY ANNUAL REPORT AND PARENT HANDBOOK 2018/2019**

==========

BACKGROUND

The Chino Valley Unified School District contracts with the California Department of Education to provide general child care to children of low income families in the community. To comply with the funding terms and conditions, an Agency Annual Report has been completed for each contract using the Categorical Program Monitoring/Contract Monitoring Review Summary of Findings, the Environment Rating Scale Summary of Findings, and the Desired Results Program Action Plan. A parent handbook of operational provisions, policies, and procedures is provided under separate cover.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the California Department of Education Child Development Agency Annual Report and Parent Handbook 2018/2019.

FISCAL IMPACT

None.

WMJ:GP:LM:rtr

Program Self-Evaluation Process
Fiscal Year 2017–18

Contractor Legal Name: (Full Spelling of Legal Name only; no acronyms or site names)

Four-Digit Vendor Number:

Contract Type(s): (CSPP, CCTR, CHAN, CFCC, CMIG, CRRP, CAPP, C2AP, C3AP, CMAP)

☑ CSPP ☑ CCTR ☐ CHAN ☐ CFCC ☐ CMIG ☐ CRRP ☐ CAPP ☐ C2AP ☐ C3AP ☐ CMAP

Age Group(s):

☑ Infant/Toddler ☑ Preschool ☑ School Age

Program Director Name (as listed in the Child Development Management Information System):
Sherri Johnson

Program Director Phone Number:
(909) 628-1201

Program Director E-mail:
sherri_johnson@chino.k12.ca.us

Check each box verifying the collection, analysis, and integration of each assessment data toward ongoing program improvement for all applicable contract types.

- ☐ Program Review Instrument FY 2017–18 – All Contract Types:
  https://www.cde.ca.gov/ta/cr/documents/eesos1718.pdf
- ☐ Desired Results Parent Survey – All Contract Types:
  https://www.cde.ca.gov/sp/cd/ci/documents/parentsurvey.doc
- ☐ Age Appropriate Environment Rating Scales – Center-based/CFCC Contracts Types:
  http://www.ersi.info/ecers.html
- ☐ Desired Results Developmental Profile and DRDPtech Reports - Center-based/CFCC Contracts Types:
  https://www.desiredresults.us/drdp-forms

Statement of Completion: I certify that all documents required as a part of the PSE have been completed and are available for review and/or submittal upon request.

Name of Executive or Program Director as listed in the Child Development Management Information System:
Sherri Johnson

Signature of Executive or Program Director listed above:

Phone Number:

Date:

Scan and submit the signed PSE, all four (4) pages, together including additional pages, to FY1718PSE@CDE.CA.GOV using the fiscal year and the contractor's legal name in the subject line (example: 17-18 XYZ School District).

Provide a summary of staff and board member participation in the PSE process:

ANNUAL PROGRAM SELF-EVALUATION PROCESS: The self-evaluation process for the Chino Valley Unified School District was conducted in several phases. Child Development District and Center staffs collaborated to complete the self-evaluation process over the course of several months. This report is for both CCTR and CSPP contracts.

PHASE 1: In July 2017, administrative and center staffs reviewed the 2016-17 Agency Annual Report, ERS Summary of Findings, Desired Results Parent Survey, and Desired Results Program Action Plan. Staffs reviewed the agency Program Goals and Objectives to follow-up on success toward meeting and/or maintaining identified goals. Adjustments were documented and summary of findings were posted as a tool to remind parents and staffs of agency efforts toward continuous program improvement.

At enrollment intakes, parent orientation meetings, and PAC meetings, information is provided to parents about the Desired Results for Children and Families system and tools we use to measure program quality.

PHASE 2: The initial age appropriate Desired Results Developmental Profile was completed within 60 calendar days of the child's first day of enrollment, and every six months after the initial Desired Results Developmental Profile. All center staffs participated by observing and documenting observations of children's learning and development during their routine center activities. The site supervisors collected and analyzed various evidence, including staffs' anecdotal and observation notes, parent information and observations about their child, pictures taken by staff during routine center activities, and child work samples. The collection of evidence was used to complete the age appropriate Desired Results Developmental Profile for each child on DRDPtech. Child's Development reports were printed and parent-teacher conferences were held to share the developmental assessment and to establish learning goals for each child. Throughout the year, a variety DRDPtech reports were produced for both individual children and for group of children. The collective reports were utilized to develop the Desired Results Developmental Profile – Summary of Findings Classroom and Family Home (EESD 3900) for each classroom and to develop and implement curriculum and activities that support the learning and development of each child. Follow-up parent-teacher conferences were held six months after the initial parent-teacher conference to share progress toward educational goals, to engage parents in observing their child's growth and development, and to foster parent involvement in learning activities at home that will enhance the child's growth and development. Agency office and administrative staffs formally reviewed input of DRDP ratings on DRDPtech beginning September 2017, followed by a site visit to review portfolios. Randomized checks are conducted monthly to ensure completion, timeliness, and continuous progress toward achieving educational goals. Site Supervisors received training on Desired Results Developmental Profile and DRDPtech as needed.

In addition to monthly site meetings, center staffs participated in professional development opportunities. Training opportunities offered were CPIN trainings, Child Care Directors' Meetings, local CAEYC trainings, FIRST 5 California, CVUSD Certificated Professional Developments, and Pre-K CLASS. Site supervisor attended countywide director meetings, a time for training and networking with other center directors in the county.

PHASE 3: Age Appropriate Environment Rating Scale was used to assess program quality and capacity for positive developmental outcomes for each enrolled child. We measured health and safety, the quality of children's learning experiences, the quality of interactions with adults and other children, and the quality and variety of materials and learning opportunities available within the environment. We also measured the quality of staff interactions and parent participation. The ERS results were compiled and program staffs developed a plan of correction for all subscales average score below "5". Ongoing monitoring by agency administrators through routine and random site visits, as well as by the site supervisor at staff meetings, provided problem-solving and reflection time. The ERS Action Steps are routinely referred to for follow-up on and reflection of the plan, to identify progress and to inform decision-making for any adjustments, and to document continuous progress on ERS Summary of Findings (EESD 4002). Agency administrators performed random, unannounced visits to substantiate completion of and ongoing implementation of the steps identified in the action plan. The site supervisor shared the ERS results with center staffs and parents. Results were posted for families to review and they were shared at PAC meetings.

PHASE 4: The Desired Results for Children and Families - Parent Survey was administered in October 2017. The Parent Survey results were collectively summarized and all site supervisors received the Desired Results Parent Survey Summary Overview. The first planning meeting to develop the Parent Survey Summary of Findings (EESD 4003) was held November 2017, with monthly, formal and informal, follow-up meetings thereafter. Site supervisors used key findings from the parent survey summary overview to identify trends and target areas for improvement. Site supervisor shared the survey results with center staffs and parents. Results were also posted for families to review and were shared at PAC meetings.

A second Parent Survey was distributed in April 2018, and results were used to compare and reflect on progress towards realizing improvement in the areas identified or address ongoing needs as yet unmet.

Parents are actively encouraged to identify areas for improvement, and to collaborate on effective solutions with center staffs. A variety of parent meetings including PAC meetings or parent involvement activities were offered to provide program information, policy changes, and community resources or events of interest to families.

PHASE 5: Desired Results Developmental Profile- Summary of Findings Program Action Plan Educational Goal (EESD 4004) was produced by using summarized DRDPtech "Group Summary by Percent" data at the program level. Lead planner's, center staffs, office staffs and agency administrators, looked for trends or patterns to identify overall strengths and areas needing improvement at the domain level and an educational program goal for children was defined. Lead Planner's actively collaborated to develop and complete attainable action steps using a variety of strategies to achieve the program education goal. Lead Planner's met monthly to develop and implement the Agency DRDP-Summary of Findings Program Action Plan Educational Goal. Ongoing monitoring of the plan was accomplished through random visits by agency administrators and office staffs, and by site supervisor daily monitoring for action plan implementation. Lead Planner and center staff met monthly to reflect on Action Steps submitted FY 2016-2017 where a narrative summarizing the outcome of each Action Steps were monitored and recorded.

The Desired Results for Children and Families system was supported by parent involvement and active participation in PAC meetings where findings were shared and ideas were exchanged.

The Program Self-Evaluation is provided to Board members and Administration for review, and to gather questions or concerns raised by the Board or Administration members. The final Program Self-Evaluation is then submitted to the Chino Valley Unified School District Board of Education for formal approval at a regularly scheduled Board meeting. The Board of Education will receive the FY 2017-18 Program Self-Evaluation report and Parent Handbook at the May 3, 2018, Board meeting.

Provide a summary of the program areas that did not meet standards and a list of tasks needed to improve those areas:

Desired Results Parent Survey
Key findings identify that parents were not satisfied on: a) How they receive information about the program b) How the child is growing and developing, and c) Discipline

To increase our families' satisfaction with information received by our programs, staff will:

- Discuss with parents DRDP assessment and after their 1st assessment staff and parent will have a conference to discuss their child's growth and development in program.
- Include "Important Milestone's" information flyer and Developmental checklist and incorporate it into part of part of conference twice a year.
- Provide materials regarding age appropriate expectation and behaviors during parent conferences.
- Invite a guest speaker to parents meeting to give presentations on parenting skills, appropriate behaviors and discipline.
- Design a guideline for all centers to use to increase Parent Involvement.
- Provide at least one resource to share with parents at DRDP staff meetings each month.
- Collaborate with the Hope Family Resource Center for materials to give to parents.
- Find free local workshops that offer classes on parenting, health, nutrition, discipline, etc.

Environment Rating Scale
Although subscales listed below were observed, key findings identified that there were not enough examples or activities actively practiced during the time of rating.

To achieve a higher score in the areas of:
Program Structure
- Staff will work with the PAC committee to brainstorm on Special Day Events in the Community
- Invite local business and law enforcements to visit centers.
- Incorporate field trips a minimum of 1 per year.

Personal Care and Routines
- Photocopy and review handwashing practices with staff
- Purchase timers to re-teach children the 20 second handwashing rule
- Begin a practice or removing sheets and blankets after each nap and storing them in individual cubbies.
- Begin a practice of sanitizing each cot after naps and allowing them to air dry.

Activities
- Add more art supplies to centers.
- Let children know that art supplies are available for their use in art centers.
- Perform periodic check of all centers to assure proper amount of materials are available throughout the day.
- Install permanent sand box and add sand.
- Add water to water table after sandbox is installed.

Desired Results
Action steps listed below are some examples of new approaches, modification and/or changes to promote and/or improve children's development in the following domains.

Social Emotional Development
- Create lesson plans that discuss feelings.
- Use more language that describes feelings and behavior.
- Create opportunities to engage more frequently in dramatic play.

Exercise and Fitness
- Provide proper training for students before the use of new materials.
- Include children in planning their own activities outside.
- Incorporate activities such as Special Day Events such as Jr Olympics, color Run, and Walk for Health
- Children will create posters to encourage physical activity.

Science
- Offer monthly, different types of natural materials (i.e.: seeds, twigs, rocks to measure) and discuss the differences.
- Teachers to engage in conversation with children that will challenge and expand child's thinking.
- Periodically bring in live animal (i.e.: ant farm, fish) and plant a garden for children to observe and understand that living things must be attendee for them to live and grow.
- Teachers to use scientific language (i.e.: compare, observe, investigate, predict)
- Have children document thru pictures they draw what they have seen outside or inside, journaling.

Provide a summary of areas that met standards and a summary of procedures for ongoing monitoring to ensure that those areas continue to meet standards:

To ensure that areas listed below continues to meet standards all site supervisor will continue to follow-up, and reflect on action steps.

Science and Nature
- Staff will continue to use lesson plans that show science rotating on different days.
- Children will lead hands on sciences experiments
- School-Age children will continue to have a Science Fair Special Day Event for families each year.
- Materials are rotated often to encourage exploration of the science area of their own.
- Use open-ended questions to promote critical thinking and support the Scientific Method.

Language and Reasoning
- Teachers will continue to use open ended questions.
- Site supervisor will remind staff on more appropriate language to use when engaging child in informal

conversation or during a learning lessons.

Health and Safety

- Staff will continue to support one another by double checking attendance form/sheets for accuracy.
- Supervisor will create a weekly rotation schedule that will allow all staff the opportunity for a hands-on experience and familiarity in recording and maintaining attendance records.
- Staff will continue to check playground for hazards before children are dismissed to playground.

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: ADVANCED PLACEMENT COMPARATIVE GOVERNMENT AND POLITICS**

==========

BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Advanced Placement (AP) Comparative Government and Politics introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course aims to illustrate the rich diversity of political life, to show available institutional alternatives, to explain differences in processes and policy outcomes, and to communicate to students the importance of global political and economic changes. AP Comparative Government and Politics is taken in conjunction with the AP US Government and Politics Course. The study of various case studies will provide a meaningful comparison and context for studying governments throughout the world. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Advanced Placement Comparative Government and Politics.

FISCAL IMPACT

None.

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Advanced Placement Comparative Government and Politics
2. Transcript Title/Abbreviation:	AP Comp Gov
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	Yes
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement
6. Grade Level(s):	12
7. Unit Value:	5 credits per semester
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	
13. Brief Course Description: The AP course in Comparative Government and Politics introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course aims to illustrate the rich diversity of political life, to show available institutional alternatives, to explain differences in processes and policy outcomes, and to communicate to students the importance of global political and economic changes.	
14. Prerequisites:	None
15. Context for Course: Students will take AP Comparative Government and Politics in conjunction with the AP US Government and Politics Course. The study of various case studies will help to inform the course in AP US Government and Politics and provide a meaningful comparison and context for studying governments throughout the world.	
16. History of Course Development: This course has been developed over the 2017-2018 school year. The curriculum has been approved by College Board and meets the requirements of the AP Comparative Government and Politics Course.	
17. Textbooks:	Kesselman, M., Krieger, J., & Joseph, W. A. (2018). *Introduction to comparative politics: political challenges and changing agendas*. Cengage Learning.
18. Supplemental Instructional Materials:	Hauss, C., & Haussman, M. (2012). *Comparative Politics: Domestic Responses to Global Challenges*. Nelson Education. Powell Jr, G. B. J., Strøm, K. J., & Dalton, R. J. (2011). *Comparative Politics Today: A Theoretical Framework*. Pearson Higher Ed. Mansbach, R. W., & Rhodes, E. J. (2009). *Global politics in a changing world: a reader*. Cengage Learning. Lachmann, R. (2010). *States and power* (Vol. 5). Polity.

	Throughout the course, students will be reading articles from a variety of academic journals, including, but not limited to the Economist, Foreign Policy, and others.

C. COURSE CONTENT

1. Course Purpose:

This course is designed to examine the political institutions, policies, and peoples of the following case studies: The United Kingdom, Mexico, China, Russia, Iran, and Nigeria. Students who complete this course will successfully:

1. Define and describe major comparative political concepts
2. Support generalizations with relevant, factual, information pertaining to the government and politics of Great Britain, Mexico, Russia, China, Iran, and Nigeria
3. Analyze typical patterns of political processes and behavior and their consequences
4. Compare and contrast political institutions and processes across countries
5. Analyze and interpret basic data relevant to comparative government and politics

2. Course Outline:

I. Introduction to Comparative Politics

- Purpose and methods of comparison and classification
- Concepts (state, nation, regime, government)
- Process and policy (what is politics; purpose of government; what are political science and comparative politics; common policy challenges)

II. Sovereignty, Authority, and Power

- Political culture, communication, and socialization
- Nations and states C. Supranational governance (e.g., European Union)
- Sources of power
- Constitutions (forms, purposes, application)
- Regime types
- Types of economic systems
- State building, legitimacy, and stability
- Belief systems as sources of legitimacy
- Governance and accountability

III. Political Institutions

- Levels of government
    - Supranational/national/regional/local
    - Unitary/federal
    - Centralization/decentralization
- Executives (head of state, head of government, cabinets)
- Legislatures
    - Unicameral/bicameral (symmetric/asymmetric)
    - Organization
    - Membership (representation)
    - Parliamentary and presidential systems
    - Elections
    - Electoral systems
    - Political parties (organization, membership, institutionalization, ideological position)
    - Party systems
    - Leadership and elite recruitment

- Interest groups and interest group systems
- Bureaucracies
- Military and other coercive institutions
- Judiciaries

IV. Citizens, Society, and the State

- Cleavages and politics (ethnic, racial, class, gender, religious, regional)
- Civil society and social capital
- Media roles
- Political participation (forms/modes/trends) including political violence E. Social movements
- Citizenship and representation

V. Political and Economic Change

- Revolution, coups, and war
- Trends and types of political change (including democratization)
- Trends and types of economic change (including privatization)
- Relationship between political and economic change
- Globalization and fragmentation: interlinked economies, global culture, reactions against globalization, regionalism
- Approaches to development

VI. Public Policy

- Common policy issues
  - Economic performance
  - Social welfare (e.g., education, health, poverty)
  - Civil liberties, rights, and freedoms
  - Environment
  - Population and migration
  - Economic development
  - Factors influencing public policymaking and implementation
    - Domestic
    - International

3. Key Assignments:

- Reading Quizzes and Discussions
  - Students will take a reading quiz on each section and then discuss the readings in partners and then in groups to ensure they have comprehended what they read
- Notecards
  - Students will create a set of notecards for each country to use to review key terms and people
- Model United Nations:
  - Students will use their knowledge of supranational organizations to further analyze global issues as if they were country members of the united nations
  - The topic that students will analyze and formulate solutions to will be failed states – using Iran and Nigeria as examples
- Organizing Government in the Case Studies Group Lessons:
  - Students will work together to present lessons to the class on the 6 different case studies, focusing on how each country organizes its government – specifically unitary, federal, and confederal

- Lessons will include an overview of the political institutions in the country to further their understanding of unitary, federal, and confederal systems

- Election Simulations:
  - Students will analyze the electoral system, pressure groups, and the media in each of the case studies by participating in short election simulations for each country
  - Students will be asked to do a written analysis of the election in each case study and be able to recall and explain their difference and similarities
- Documentary Project:
  - Students will choose a revolution, coup, or war that changed the political or economic landscape in one of the case studies
  - They will create a 3-5 minute documentary about that revolution, coup, or war and present it to the class, focusing on the changes that it caused to that country
- Political Current Event Projects:
  - Students will choose a current policy issue in one of the case studies and write a news article that captures the political change that is occurring as a result
- Economic Current Event Projects:
  - Students will choose a current economic policy issue in one of the case studies and write a news article that captures the economic change that is occurring as a result
- Model European Union:
  - Students will be assigned a member country of the European Union and will complete a role-play that allows them to live in the European Union
  - Students will analyze and make decisions about what is best for their country
  - They will then complete a written analysis on how regionalism affects the politics of each member states
- Unit Exams:
  - Students will answer multiple choice and free-response questions from each unit
  - Each exam will be cumulative and include questions from previous exams
- Midterm Exam:
  - Students will take a midterm exam with cumulative questions half way through the semester
  - The exam will include both multiple choice and free-response questions
- Final Exam:
  - Students will take a Final exam with cumulative questions at the end of the semester
  - The exam will include both multiple choice and free-response questions

4. Instructional Methods and/or Strategies:

Activities:

Debates, Mock Trials, Socratic Seminars, Simulations, Discussions, Reading Secondary and Primary Sources, Research Projects, Formal and Informal Writing Assignments, Taking notes on lectures

Homework:

Students will be expected to complete textbook and supplemental readings at home, as well as various research projects, and current events.

Current Events:

Aside from class activities, reading assignments, and notes, students will need to complete current event write-up once per week. Students will also be asked to present their current events to the class orally at least once a unit. The use of

consistent current event analysis will allow students to better connect the concepts learned in class to the world in which they live.

Using Graphs, Maps, and Charts:
Each unit will make use of a variety of data and stimuli, including graphs, maps, and charts that are relevant to the topic being studied. Students will also gain practice analyzing these stimuli for a variety of purposes.

5. Assessment Including Methods and/or Tools:
The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
  - Midterm/Final
  - Reading Quizzes
- Assignments and class discussions: 25-40% of the final grade
  - Projects
  - Free-Response Question Practice/Participation

CHINO VALLEY UNIFIED SCHOOL DISTRICT
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DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: ADVANCED PLACEMENT HUMAN GEOGRAPHY**

==========

BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas

Advanced Placement Human Geography introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Advanced Placement Human Geography.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Advanced Placement Human Geography
2. Transcript Title/Abbreviation:	AP Human Geography
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	Yes
5. Subject Area/Category:	Meets the UC/CSU "a" History/Social Science requirement
6. Grade Level(s):	9-10
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	

13. Brief Course Description:
The AP Human Geography course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of earth's surface. Students learn to employ spatial concepts and landscape analysis to examine human socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications.

14. Prerequisites:	None

15. Context for Course:
AP Human Geography will be a year-long course offered primarily to freshmen and sophomores. Freshmen who take AP Human Geography will be encouraged to meet their world history requirement by taking AP European History or Honors World History their sophomore year. AP Human Geography is anticipated as a critical component of Ayala High School's attempts to expand the reach of AP course offerings to a broader swath of students.

16. History of Course Development:
This course has been developed over the 2017-2018 school year. The curriculum is modeled on the requirements and suggestions in the College Board's AP Human Geography Course Description AP Human Geography Teacher's Guide.

17. Textbooks:	Recommended textbooks from the College Board will be evaluated, piloted in the 2018/2019 school year.
18. Supplemental Instructional Materials:	Textbook publisher ancillary materials and web resources (see above). Newspaper and magazine articles (see "Key Assignments" section). Videos: *The Power of Place: Geography for the 21st Century* video series from Annenberg/CPB; Cultures: *A Tapestry of Life* by National Geographic Society; select YouTube clips, and other videos

	Web Resources: UN Human Development Reports; US Census Bureau, and other web resources as appropriate Atlases: *Goode's World Atlas; Penguin* topic-specific atlases, etc. Other instructional materials are currently under review and will be added to the list as appropriate.

C. COURSE CONTENT

1. Course Purpose:

The AP Human Geography course is designed to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students will employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. Students will also learn about the methods and tools geographers use in their research and applications.

2. Course Outline:

I. Geography: Its Nature and Perspectives
- A. Geography as a field of inquiry
- B. Evolution of key geographical concepts and models associated with notable geographers
- C. Key concepts underlying the geographical perspective: location, space, place, scale, pattern, regionalization, and globalization
- D. Key geographical skills
  1. How to use and think about maps and spatial data
  2. How to understand and interpret the implications of associations among phenomena in places
  3. How to recognize and interpret at different scales the relationships among patterns and processes
  4. How to define regions and evaluate the regionalization process
  5. How to characterize and analyze changing interconnections among places
- E. New geographic technologies, such as GIS and GPS
- F. Sources of geographical ideas and data: the field, census data

II. Population and Migration
- A. Geographical analysis of population
  1. Density, distribution, and scale
  2. Consequences of various densities and distributions
  3. Patterns of composition: age, sex, race, and ethnicity
  4. Population and natural hazards: past, present, and future
- B. Population growth and decline over time and space
  1. Historical trends and projections for the future
  2. Theories of population growth including the Demographic Model
  3. Patterns of fertility, mortality, and health
  4. Regional variations of demographic transitions
  5. Effects of population policies
- C. Population movement
  1. Push and pull factors
  2. Major voluntary and involuntary migrations at different scales
  3. Migration selectivity
  4. Short-term, local movements, and activity space

III. Cultural Patterns and Processes
- A. Concepts of culture
  1. Traits
  2. Diffusion
  3. Acculturation
  4. Cultural regions

B. Cultural differences
    1. Language
    2. Religion
    3. Ethnicity
    4. Gender
    5. Popular and folk culture
C. Environmental impact of cultural attitudes and practices
D. Cultural landscapes and cultural identity
    1. Values and preferences
    2. Symbolic landscapes and sense of place

IV. Political Organization of Space
A. Territorial dimensions of politics
    1. The concept of territoriality
    2. The nature and meaning of boundaries
    3. Influences of boundaries on identity, interaction, and exchange
B. Evolution of the contemporary political pattern
    1. The nation-state concept
    2. Colonialism and imperialism
    3. Federal and unitary states
C. Challenges to inherited political–territorial arrangements
    1. Changing nature of sovereignty
    2. Fragmentation, unification, alliance
    3. Spatial relationships between political patterns and patterns of ethnicity, economy, and environment
    4. Electoral geography, including gerrymandering

V. Agriculture, Food Production, and Rural Land Use
A. Development and diffusion of agriculture
    1. Neolithic Agricultural Revolution
    2. Second Agricultural Revolution
B. Major agricultural production regions
    1. Agricultural systems associated with major bioclimatic zones
    2. Variations within major zones and effects of markets
    3. Linkages and flows among regions of food production and consumption
C. Rural land use and settlement patterns
    1. Models of agricultural land use, including von Thünen's model
    2. Settlement patterns associated with major agriculture types
D. Modern commercial agriculture
    1. Third Agricultural Revolution
    2. Green Revolution
    3. Biotechnology
    4. Spatial organization and diffusion of industrial agriculture
    5. Future food supplies and environmental impacts of agriculture

VI. Industrialization and Economic Development
A. Key concepts in industrialization and development
B. Growth and diffusion of industrialization
    1. The changing roles of energy and technology
    2. Industrial Revolution
    3. Evolution of economic cores and peripheries

4. Geographic critiques of models of economic localization (i.e., land rent, comparative costs of transportation), industrial location, economic development, and world systems

C. Contemporary patterns and impacts of industrialization and development
   1. Spatial organization of the world economy
   2. Variations in levels of development
   3. Deindustrialization and economic restructuring
   4. Pollution, health, and quality of life
   5. Industrialization, environmental change, and sustainability
   6. Local development initiatives: government policies

VII. Cities and Urban Land Use

A. Definitions of urbanism
B. Origin and evolution of cities
   1. Historical patterns of urbanization
   2. Rural–urban migration and urban growth
C. Global cities and megacities
   1. Models of urban systems
D. Functional character of contemporary cities
   1. Changing employment mix
   2. Changing demographic and social structures
E. Built environment and social space
   1. Comparative models of internal city structure
   2. Transportation and infrastructure
   3. Political organization of urban areas
   4. Urban planning and design
   5. Patterns of race, ethnicity, gender, and class
   6. Uneven development, ghettoization, and gentrification
   7. Impacts of suburbanization and edge cities

3. Key Assignments:

- Readings: Students will be required to regularly read assigned textbook chapters and other select readings outside of class. Most weeks, students will read a chapter from their textbook. Newspaper and magazine articles from sources such as *The New York Times, The Economist, The Los Angeles Times, The Atlantic,* and *The Chino Champion* will be assigned occasionally. Students will be held accountable for the readings in a variety of ways— reading quizzes, comprehension questions, class discussions, and/or notecards.
- Notebook: Students will be required to keep an organized notebook containing all of their discussion/ video/ lecture notes, homework, class handouts and returned assignments and tests. Student notebooks will be periodically checked for completeness and organization. Students will be expected and encouraged to use their notebooks as they prepare for taking the AP Human Geography exam.
- Unit exams: The College Board has identified seven major units of study that are listed in the section above. At the culmination of each unit, students will be assessed on the key concepts and skills in that unit. Exam questions may include of a combination of multiple choice, short answer and essay questions depending on the specific content in the unit.
- Practice tests: Students will take released tests from the College Board and commercially published practice tests to help them better prepare for the AP Human Geography exam. These formative assessments will be taken with increased frequency approaching the AP exam in May.
- Research-based projects: Students will engage in at least one research-based project each semester on a topic of their choice. Projects may be completed individually or in small groups. All projects will require students to engage in academic research beyond the textbook and websites such as Wikipedia. Students will need to use and cite at least three quality academic sources appropriate for a college research project. Student learning

may be expressed in a variety of ways such as through a written paper, class presentation, video, power point, etc. based on the specific nature of each project topic.

4. Instructional Methods and/or Strategies: Instruction will focus on student understanding and application of the curricular concepts outlined above with an emphasis on making connections within and across units. Instructional strategies will include all of the following methods.

- Discussion and Debates: Class discussion and debate will be frequently used to help students internalize the course material and make connections across topics. Some discussions will be whole-class Socratic Seminars or fishbowl style while other discussions and debates will take place in smaller groups using a jigsaw or shared inquiry approach. Some possible discussion and debate topics include: Should government encourage or restrict migration? Should cultural diffusion be encouraged or resisted? How should political boundaries and cultural patterns be reconciled? Is the impact of globalization and new technologies positive or negative? How effective are transnational organizations and agreements? How should the negative effects of restructuring and deindustrialization be addressed? How should cities and countries regulate environmental issues and land use?
- Mapping Activities: Students will engage regularly in a variety of mapping exercises such as creating a mind map (e.g. of Chino Hills), comparing different types of maps and mapped information (e.g. dot distribution, choropleth), evaluating the advantages and limitations of specific maps and projections (e.g. conic, cylindrical), and using maps to analyze data and answer questions (e.g. population, climate, socio-economic).
- Case Studies: Within each unit, students will examine one or more case studies to grapple with the real-world implications of the issues being studied. Case studies may include some of the following examples—overpopulation in Egypt, Mexican migration, the legacy of colonialism in the Ivory Coast, shared space in Jerusalem, ethnic diversity in Boston, Chile's role in world trade, and the emergence of Tokyo as a megacity.
- Data Analysis: Students will read, collect and analyze various geographical data. Examples may include collecting class data on residential preference, calculating the Human Development Index for a country based on a set of statistical data, examining local and national U.S. Census data, comparing and plotting data over time to look for patterns, and ranking regions of the world based on data from the *CIA's World Factbook.*
- Direct Instruction: Periodic direct instruction will be used to deliver and reinforce important concepts. Lectures, readings and video clips will provide students with essential course content. As befitting an AP class taught primarily to freshmen and sophomores, direct instruction will be chunked into manageable segments and built upon with skill-based activities. In other words, the content provided via direct instruction will be the foundation for the activities, exercises, discussions and debates in and beyond the classroom.

5. Assessment Including Methods and/or Tools:

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
  - Multiple choice quizzes and tests
  - Short answer responses and essays
  - Research projects
- Assignments and class discussions: 25-40% of the final grade
  - Document analysis
  - Graphic organizers
  - Written questions
  - Discussion, video, and lecture notes
  - Class notebook

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: ADVANCED PLACEMENT SEMINAR**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Advanced Placement Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Advanced Placement Seminar.

FISCAL IMPACT

None.

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Advanced Placement Seminar
2. Transcript Title/Abbreviation:	AP Seminar
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	Yes
5. Subject Area/Category:	Meets the CSU/UC "g" General Elective requirement
6. Grade Level(s):	11-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	

13. Brief Course Description:

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

14. Prerequisites:	None

15. Context for Course:

Ayala High School has already been approved through College Board to teach AP Seminar for the 2018-2019 school year. This course is meant to complement other AP courses and help AP students improve their AP skills. Students who complete AP Seminar and AP Research will receive the AP Capstone Certificate. Students who take both courses and also pass four additional AP exams will receive an AP Diploma.

16. History of Course Development:

This course has been approved by College Board and the teacher will be attending AP Capstone training the summer of 2018 to prepare for the 2018-2019 school-year.

17. Textbooks:	N/A
18. Supplemental Instructional Materials:	Provided by College Board

C. COURSE CONTENT

1. Course Purpose:

This course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

a. Students explore the complexities of one or more themes by making connections within, between, and/or among multiple cross-curricular areas by exploring multiple perspectives and lenses related to those themes
b. Students develop and apply discrete skills identified in the learning objectives of the enduring understandings within the following big 5 ideas (Question and Explore; Understand and Analyze; Evaluate Multiple Perspectives; Synthesize Ideas; Team, Transform, and Transmit)
c. Students gain a rich appreciation and understanding of issues through the following activities: reading articles and research studies; reading foundational, literary, and philosophical texts; viewing and listening to speeches, broadcasts, and/or personal accounts; and experiencing artistic works and performances
d. Students work collaboratively with a team to identify, investigate, analyze, and evaluate a real-world or academic problem or issue; consider and evaluate alternatives or options; propose one or more solutions or resolutions; and present and defend the argument for their solutions through a multimedia presentation
e. Students work independently to identify a research question based on provided stimulus material; research the issue; analyze, evaluate, and select evidence to develop an argument; present and defend a conclusion; and produce a multimedia presentation to be delivered to their peers.

2. Course Outline:

This course will use the approved "student interest" format, in which students are given a list of 10 possible themes by the teacher and asked to rate them. The 4 highest rated themes will then be used for the course and will be the center of the 5 big ideas.

- Big Idea #1: Question and Explore
  - Context of a problem or issue and effects on how it is interpreted or presented
  - Multiple perspectives of the problem or issue
  - Questions that haven't been asked
  - Voices or perspectives missing from research
  - Keywords to search for information about this topic
- Big Idea #2: Understand and Analyze
  - Strategies to help comprehend the text
  - Argument's main idea and what reasoning does the author use to develop it
  - Author's point of view
  - Biases of the author
  - Does the argument acknowledge other perspectives?
  - Is the source trustworthy
  - Implications of the arguments
  - How does the conclusion impact the students and the community?
- Big Idea #3: Evaluate Multiple Perspectives
  - Patterns or trends can be identified among the arguments about this issue
  - Implication and/or consequences of accepting or rejecting a particular argument
  - Connecting multiple perspectives and other issues, questions, and topics that they relate to
  - Explain contradictions within or between arguments
  - From whose perspective is this information being presented
- Big Idea #4: Synthesize Ideas
  - Connect and analyze the evidence in order to develop an argument or support a conclusion
  - Is the reasoning logical and what reasoning and evidence would best support the argument?
  - Other conclusions to consider
  - How to account for their own biases and assumptions

- Best way to acknowledge and attribute the work of others
- Avoid plagiarism

- Big Idea #5: Team, Transform, and Transmit
  - How to appeal and engage and audience
  - The best medium or genre through which to engage the audience
  - Common misconceptions the audience might have
  - How to adapt the argument for different audiences and situations
  - How do communication choices affect my credibility with my audience?
  - Contributions to offer to a team
  - The benefits of revision
  - Benefits of reflecting on work
- Possible Themes:
  - Aesthetics, belief, communication, courage, culture, democracy, discovery, discrimination, diversity, education, environment, evolution, food, freedom, government, health, home, identity, immigration, innovation, intelligence, justice, language, leisure, liberty, media, modeling, myth, networks, opportunity, patterns, peace, perception, place, power, protest, representation, revolution, rights and responsibilities, social media, space, sustainability, technology, theory, traditions, transformation, utopia, war, wealth and poverty, work

3. Key Assignments:

- I-Search Paper – personal research paper about a topic that is important to the student
- Service Learning – Linking classroom based contexts with field-based learning in the community
- Source Mining – reviewing bibliographies of research studies or articles on a topic to see which names or works are referenced repeatedly to get an overview of key scholars or sources in the field
- Annotated bibliographies – bibliography with brief summary of each sources and a commentary about its usefulness to the inquiry along with the source's citation
- Peer Reviews – students providing structured reviews of each other's essays and presentations
- Team Project and Presentation – Students work in teams of 3-5 to identify, investigate, and analyze an academic or real-world problem or issue. Each team designs and/or considers options and evaluates alternatives; develops a multimedia presentation to present the argument for their proposed solution or resolution; and provides a defense to questions posed by the teacher.
- Individual Research-Based Essay and Presentation – students will read an analyze the cross-curricular stimulus material released by college board to identify thematic connections among them and possible areas fro inquiry; compose a research question of their own; conduct research; analyze, evaluate, and select evidence to develop an argument; and present and defend their conclusions.
- End-of-Course Exam – Exam consists of three short answers and one essay question

4. Instructional Methods and/or Strategies:

- Debates
- Socratic Seminar
- Jigsaw
- Fishbowl
- Shared Inquiry
- Discussion Groups
- Debriefing
- Graphic Organizers
- Focused Note-Taking
- Close Reading

- Marking the Text
- Summarizing
- Paraphrasing
- Retelling
- Think-Alouds
- Videotaping for self-evaluation
- Practice Modeling from Teacher
- Team-Building Activities

5. Assessment Including Methods and/or Tools:

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
    - Individual Research-Based Essay and Presentation
    - End of Course Exam
- Assignments and class discussions: 25-40% of the final grade
    - Team Project and Presentation

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: ADVANCED PLACEMENT STUDIO ART: 2D DESIGN**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas

Advanced Placement Studio Art: 2D Design is a year-long elective course that prepares students for classes and careers that use 2D design. The course consists of work involved with diverse media, styles, subjects, and content. Through the use of portfolios, students demonstrate their artistic skills and ideas they have developed, refined, and applied over the course of the year. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Advanced Placement Studio Art: 2D Design.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	AP Studio Art: 2D Design
2. Transcript Title/Abbreviation:	AP Design
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	Yes
5. Subject Area/Category:	Meets the UC/CSU "f" Visual & Performing Arts requirement
6. Grade Level(s):	10-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	

13. Brief Course Description:

In this course, students will be creating a portfolio that focuses on two-dimensional (2-D) design. Design involves purposeful decision making about how to use the elements and principles art in an integrative way.

The principle of designs (unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion/scale, figure/ground relationships) can be articulated through the visual elements (line, shape, color, value, texture, space). The principles and elements of art help guide artists in making decisions about how to organize an image on a picture plane in order to communicate content. Effective Design is possible whether one uses representational or abstract approaches to art.

The 2-D Design portfolio has a basic, three-section structure, which requires the student to show a fundamental competence and range of understanding in visual concerns (and methods). The portfolio asks the student to demonstrate a depth of investigation and process of discovery through the Sustained Investigation section (Section II). In the Range of Approaches section (Section III), the student is asked to demonstrate a serious grounding in visual principles and material techniques. The Selected Works section (Section I) permits the student to select the works that best exhibit a synthesis of form, technique, and content

For this portfolio, students are asked to demonstrated understanding 2-D Design through any two-dimensional medium or process, including, but not limited to, graphic design, digital imaging, photography, collage, fabric design, weaving, fashion design, fashion illustration, painting and printmaking. Video clips, DVDs, CDs and three-dimensional works may not be submitted. However still images from videos or films are accepted. There is no preferred) or unacceptable) style or content.

When creating a portfolio in two-dimensional design, students must submit artwork that should show a clear individual "voice" that is evident within the art piece. Any work that makes use of(appropriate) photographs, published images and/or other artists' work must show substantial and significant development beyond duplication. It is unethical, constitutes plagiarism, and often violates copyright law simply to copy another artists' work or imagery (even in another medium) and represent it as one's own art.

When students submit digital images to the teacher and the AP exam, the images in the Breadth and Concentration sections of the portfolio may be edited. However, the goals of image editing should be able to present the clearest, most accurate representation of the student's artwork, and to ensure that images meet the requirements of the Digital Submission Web application.

14. Prerequisites:	Teacher Approval

15. Context for Course:

AP Studio Art: 2D design will be a year-long elective course offered primarily to sophomores, juniors, and seniors. Students will need to present a portfolio of previous work to the teacher when entering the class. AP Studio Art is anticipated as a critical component of Ayala High School's attempts to expand the reach of AP course offerings to a broader range of students and to help provide a course that will prepare our students for classes and careers that use 2D design.

16. History of Course Development:

This course has been developed over the 2017-2018 school year. The curriculum is modeled on the requirements and suggestions in the College Board's AP Studio Art Course Description.

17. Textbooks:	None

18. Supplemental Instructional Materials:	• Computers for Each Student (Computer Lab). Suggested operating systems for computers:
	  o Windows 10
	  o Windows XP
	  o Winows Vista
	  o Mac OS
	• Licenses for the adobe suite (Photoshop, Lightroom, Illustrator, Animate etc.),
	• Drawing tablet for each computer (Wacom tablets)

C. COURSE CONTENT

1. Course Purpose:

AP Studio Art: 2D design is a class designed for students who have an interest in the practical experience of art. Students will learn skills and techniques necessary to be successful in college courses and careers in the field of art. Students will be creating a portfolio in this class that demonstrates artistic skills and ideas they have developed, refined, and applied over the course of the year to produce visual compositions.

This course will:

- Encourage create and systematic investigation of formal and conceptual issues
- Emphasize making art as an ongoing process that involves the student in informed and critical decision making
- Help students develop technical skills and familiarize them with the functions of the visual elements
- Encourage students to become independent thinkers who will contribute inventively and critically to their culture through artmaking.

2. Course Outline:

Week 1: AP Portfolio Overview

- AP Portfolio requirements and its components will be explored in detail.
- Students will look at examples of successful and less successful portfolios.

- Students will practice scoring portfolios themselves to see if they can recognize the expectations of the readers.
- Discuss and understand the principles of design and the elements of art. Understand how it is connected to making work

Weeks 2-3: Quick Breadth Work

- Students will begin 4 smaller scale works in a variety of media. These lessons are designed to get the students back into practice, give a refresher on techniques, and create several quick works that may fit into the Breadth section.
- Explanation of the Breadth Section
- Components of a Critique. Practice in small groups analyzing a variety of different works to practice vocabulary
- In small groups, students will start listing possible ideas for works they can make for the Breadth Section.
- Start Rough sketches for the portfolio sections.
- Tutorials on how to use Photoshop and Illustrator.

Weeks 4-12: Breadth Section

- Group collaboration on making a schedule and goals for the breadth section
- Students will start creating works for their breadth section. There will be the expectation of ***creating two portfolio-ready works every two and a half weeks***
- Ever work will require a written reflection explaining their rationale and thought process.
- Students will start their case studies which will be due at the end of the semester.
- Presentations will be made at the end of the Breadth Section so students can explain what they have learned over the semester.
- Every 2 weeks, we will spend one day doing critiques on works so far. This will be done as a whole class to talk what is successful within the works and what could possibly be improved.

Week 13: Quick Concentration Work

- Explanation of the Concentration Section
- Students will research and show a wide variety of artists that have a good theme that connects a wide variety of pieces in a concentration. Students will choose a theme for their portfolio.
- In small groups, students will start listing possible ideas for works they can make for the concentration section.
- Start Rough sketches for the portfolio section.

Weeks 14-33: Concentration Section

- Group collaboration on making a schedule and goals for the concentration section
- Students will start creating works for their concentration section. There will be the expectation of creating two portfolio ready works every two and a half weeks
- Ever work will require a written reflection explaining their rationale and thought process.
- Students will start their case studies which will be due at the end of the semester.
- Presentations will be made at the end of the Concentration Section so students can explain what they have learned over the semester.
- Every 2 weeks, we will spend one day doing critiques on works so far. This will be done as a whole class to talk what is successful within the works and what could possibly be improved.
- Begin downloading completed work to the AP Website during this time. Students will also be writing/revising your artist statement. All work to be included in your portfolio must be completed before the submission deadline.

Weeks 34-36: Wrap Up

- Students will create a Powerpoint presentation of their portfolio including the breadth sections, concentration sections, and their quality works.
- Any unfinished work should be completed.
- Final evaluation of portfolio and final reflection

3. Key Assignments:

Overview

Students will be required to make a portfolio in 2D design. This portfolio will have a three-section structure, which requires the students to show a fundamental competence and range of understanding in visual concerns and methods. The portfolio is broken up into the following sections: Quality (Selected Works), Concentration (Sustained Investigation), and Breadth (Range of Approaches)

2D Design Portfolio

Section I: Quality (Selected Works)

Requirements: 5 pieces of actual work in one or more media. These pieces will be mailed and delivered to the AP testing site.

Description:

For this section of the portfolio, students are asked to submit *5 actual works* in one or more media. Students should carefully select works that demonstrate their in-depth understanding of 2-D design issues. The works shout be on flat surfaces, such as paper, cardboard, canvas board, or unstretched canvas.

Students will receive all the portfolio materials for submission of the Quality (Selected Works) in May. Because of limitations imposed by shipping and handling of the portfolios, work submitted for this section must fit easily into the portfolio envelop which will be provided by the teacher. The envelop will be approximately 18" X 24". Works for Quality (Selected Works) that are smaller than 8"X10" should be mounted on sheets 8" X 10" or larger. To protect all work, all work on paper should be backed or mounted. Mats are optional. Do not use reflective materials such as acetate or shrink-wrap because they cause a glare that makes the work difficult to see. A sturdy, opaque overleaf that is hinged to one edge of the backing so that it may be easily lifted, provides excellent protection and is highly recommended. Materials that may smudge should be protected with fixative. If the work is matted, a neutral color for that mat is advisable. Do NOT send books, or journals, work on glass, fragile work, work that is rolled or folded, or unmounted work that can be crumbled or damaged in shipping.

The works selected for the Quality Works may come from the Concentration (Sustained Investigation) and /or Breadth (Range of Approaches) sections, but they do not have to. They may be a group of related pieces, unrelated works, or a combination of related and unrelated materials.

Section II: Concentration (Sustained Investigation)

Requirements: 12 digital images submitted that have a clear concentration that connects all the pieces and an explanation of how your concentration demonstrates your intent and the exploration of your idea.

Description:

This section will focus on students creating a body of work that has a concentration. A concentration is a body of related works that demonstrate a student's sustained and thoughtful investigation on a specific topic. It is not a selection of a variety of works produced as solutions to class projects or a collection of works with differing intent. Students are encouraged to explore a personal, central interest as intensively as possible. Students are free to work with any idea

in any medium that addresses two-dimensional design issues. The concentration should grow out of the student's idea and demonstrate growth and discovery through a number of conceptually related works. Students in this section should make artwork that not only create art that is good technically, but a piece or work that has visual evidence of the student thinking, selected method of working, and development of the work over time

Some examples of artwork that meet the requirements of the concentration section:

- Development of a series of identity products (logos, letterhead, signage, and so on) for businesses
- A series of political cartoons using current events and images
- Use classical standard such as the golden ration and variations of it to produce differing compositions
- Diagrammatic overlays of mathematical principles on photography of architectural structures
- A series of fabric designs, apparel design or weavings used to express a particular theme

Since there is a wide range of possibilities of concentration works, the number of works the student creates should be dictated by the focus of the investigation. Students will produce and select 12 pieces of artwork in the concentration section that best represents the process of investigation.

When turning in concentration pieces, students should give though to the sequence of images on the AP portfolio website. There is no required order but the images should be organized in a way to show the development of the concentration. In most cases, this would be chronological.

Section III: Breadth (Range of Approaches)
Requirements: 12 pieces submitted of 12 different works that show experimentation and a wide range of conceptual approaches to the elements and principles of design.

Description:
This section will focus on students creating 12 works in which the elements and principles of art/two-dimensional design are the main focus. Students are asked to demonstrate that they are thoughtfully applying these principles while composing skills. These works should demonstrate exploration, inventiveness, and the expressive manipulation of form as well as knowledge of compositional organization.
Artwork that has the best demonstrations of breadth clearly show experimentation and a range of conceptual approaches to the work. Students can do this in a single medium or a variety of mediums. For example, students can use the medium of collage and use collage to make a wide variety of works that explore different parts of the elements and principles of design. There are many ways that students can show experimentation and exploration of the elements and principles of design. This can include:

- Work that employs line, shape, and color to create unity or variety in a composition
- Work that demonstrates symmetry/asymmetry, balance, or anomaly
- Work that explores figure/ground relationships
- Work that develops a modular or repeat pattern to create rhythm
- Work that uses various color relationship for emphasis or contrast in a concentration
- Work that investigates or exaggerates proportion/scale

<u>Critiques</u>
Throughout the course, students will be expected to participate in written and verbal discussion of works of art. Students will learn the process of critiques with examples of portfolios which include discussing the subject, composition, and content of a work. Students will then learn how the principles and elements of art are used in order to support the subject, composition, and content. After learning how to identify the principles and elements of design in a work, students will learn how to improve a piece focusing on how the artist can change the elements and principles of design that will improve the quality of the subject, composition, or content within a piece.

Reflections

For each work in the breadth and concentration section of the portfolio, students will be expected to write a reflection about their work. When students write their reflections, they will be expected to describe the following:

- The title, medium, and dimensions of the work
- The elements and principles of design focused in the work
- How the artist utilized subject, content, and composition within the work. Artists will describe how the elements and principles of design support the subject, content, and composition
- Describe their thought process on how they created the work. Students will describe what main idea/concept on they are trying to get across in the work. They will also describe what experimentation used to get to the final result.

Research

Students will be asked to do research on different artists that have specialize with a certain medium, style, or creative theme/idea. Students will have to learn the thought and experimentation process the artist used to create the work, how the artist utilized the principles and elements of design to support the composition/subject/content of a work, and what the student can take and use from this artist to incorporate into their own work.

4. Instructional Methods and/or Strategies:

Methods used in the class will include:

- Experimentation, Critiques, and Collaboration- When students are working on their works for their portfolio, students will be expected to experiment with different ideas with rough sketches of possible compositions they would want to do for their final work. Before the experimentation process, students will be asked to collaborate in small groups of 3-4 on what concepts and ideas would make an interesting piece. This will provide feedback from other artists and the instructor
- Reflections- For each work in the breadth and concentration section of the portfolio, students will be expected to write a reflection about their work. When students write their reflections, they will be expected to describe the following:
  1. The title, medium, and dimensions of the work
  2. The elements and principles of design focused in the work
  3. How the artist utilized subject, content, and composition within the work. Artists will describe how the elements and principles of design support the subject, content, and composition
  4. Describe their thought process on how they created the work. Students will describe what main idea/concept on they are trying to get across in the work. They will also describe what experimentation used to get to the final result.
- Guided Practice- Throughout the year, the teacher will have different tutorials to provide students skills needed in ordered to help create engaging works. The teacher will provide sequence steps of a concept that students can easily understand and follow to create a final result. There will be many concepts taught including:

1. How to draw a head from multiple angles to support the element form in a work
2. How to use color theory to show emphasis and harmony in a work
3. How to use line and shape to create flow in a composition.

- Independent Practice- After a student learns a concept through guided practice, the teacher will have students practice the concept on their own with a few prompts provided by the teacher. The teacher will walk around the classroom to ensure that students understand the concept. For students that are struggling, the teacher will provide tutoring to have the students help understand the concept better.
- Discussions and Critiques- Class discussion and debate will be frequently used to help students internalize the course material and make connections across topics. Some discussions will be whole-class while other discussions and critiques will take place in smaller groups an inquiry approach. Some possible discussion and debate topics include: How are the elements and principles of design being used in order to support an idea in a work? What elements and principles of design can be changed to strengthen the work? What is a

concentration and how can you make multiple pieces based off a single concentration? What makes good and bad art? How do we measure if something is "good" or "bad" in art?

- Research- Students will be asked to do research on different artists that have specialize with a certain medium, style, or creative theme/idea. Students will have to learn the thought and experimentation process the artist used to create the work, how the artist utilized the principles and elements of design to support the composition/subject/content of a work, and what the student can take and use from this artist to incorporate into their own work.
- Case Studies- Once a semester, students will examine one or more case studies to grapple with the real-world implications of the issues being studied. Case studies may include some of the following examples—politics in the art field, creating a good portfolio for careers, components of a functional art studio, outsourcing animation and graphic design positions to different countries and its affect to current art industry
- Presentation- At the end of each semester, students will have to make a presentation about all of the art pieces that they created over the semester. For the presentation, they must:
  1. Describe the ideas and concepts in each of their works or a group of works
  2. The elements of art and principles of design focused on in the work
  3. How they used experimentation and collaboration to improve the quality of their piece
  4. The successes and failures they had throughout the creative process and time management
  5. How they plan to improve next semester, in college, or into an art career based off their experience in the class so far.

5. Assessment Including Methods and/or Tools:

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: ADVANCED PLACEMENT UNITED STATES GOVERNMENT AND POLITICS**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas

Advanced Placement (AP) United States Government and Politics will be a semester-long course designed to give students a critical perspective on politics and government and can be taught in conjunction with AP Comparative Government and Politics. This course includes both general concepts and relevant case studies for the purpose of interpreting politics and government in a critical way. It will also require an understanding of the institutions, groups, people, beliefs, and ideas that make up the past and current US political system. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Advanced Placement United States Government and Politics.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Advanced Placement United States Government and Politics
2. Transcript Title/Abbreviation:	AP US Gov
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	Yes
5. Subject Area/Category:	Meets the UC/CSU "a" History/Social Science requirement
6. Grade Level(s):	12
7. Unit Value:	5 credits per semester
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	

13. Brief Course Description:

The Advanced Placement Course in US Government and Politics is designed to give students a critical perspective on politics and government. This course includes both general concepts and relevant case studies for the purpose of interpreting politics and government in a critical way. It will also require an understanding of the institutions, groups, people, beliefs, and ideas that make up the past and current US political system. At the conclusion of the course, students will have the opportunity to take the Advanced Placement Examination in the hopes of receiving college credit for this course.

14. Prerequisites:	None

15. Context for Course:

This course is already approved by Chino Valley Unified School District as a year-long course. However, College Board allows AP US Government and Politics to be a semester-long course, which is the change being submitted. This change is being made so that AP US Government and Politics can be taught in conjunction with AP Comparative Government and Politics. Students would take both AP Comparative Government and Politics and AP US Government in Politics during their senior year as a "year-long" course.

16. History of Course Development:

This course introduces students to key political ideas, institutions, policies, interactions, roles, and behaviors that characterize the political culture of the United States. The course examines politically significant concepts and themes, through which students learn to apply disciplinary reasoning, assess causes and consequences of political events, and interpret data to develop evidence-based arguments. The course is designed to prepare students for the Advanced Placement Exam in US Government and Politics.

17. Textbooks:	Wilson, James Q. *American Government.* 13th edition. Boston: Wadsworth Cengage Learning, 2013.

18. Supplemental Instructional Materials:	Throughout the course, students will be reading articles from a variety of academic journals, including, but not limited to the Economist, Foreign Policy, and others.

C. COURSE CONTENT

1. Course Purpose:

This course is designed to examine the institutions, participants, and processes which characterize political activity in the United States. The course has three objectives:

1. To introduce students to the basics of American national and state governments
2. To help students develop an analytical perspective toward the conduct of politics in the United States
3. To introduce students to the manner in which political scientists conduct research on politics, government, and the political process

2. Course Outline:

Unit 1: Constitutional Underpinnings of United States Government

- Considerations that influenced the formation and adoption of the Constitution
- Separation of Powers
- Checks and Balances
- Federalism
- Theories of Democratic Government

Unit 2: Political Beliefs and Behaviors

- Beliefs that citizens hold about their government and its leaders
- Processes by which citizens learn about politics
- The nature, sources, and consequences of public opinion
- The ways in which citizens vote and otherwise participate in political life
- Factors that influence citizens to differ from one another in terms of political beliefs and behaviors

Unit 3: Political Parties, Interest Groups, and Mass Media

- Political Parties and Elections
  - Functions
  - Organization
  - Development
  - Effects on the Political Process
  - Electoral laws and systems
- Interest groups, including political action committees (PACs)
  - The range of interests represented
  - The activities of interest groups
  - The effects of interest groups on the political process
  - The unique characteristics and roles of PACs in the political process
- The mass media
  - The functions and structures of the news media
  - The impacts of the news media on politics
  - The news media industry and its consequences

Unit 4: Institutions of National Government: The Congress, the Presidency, the Bureaucracy, and the Federal Courts

- The major formal and informal institutional arrangements of power
- Relationships among these four institutions and varying balances of power
- Linkages between institutions and the following:
  - Public opinion and voters
  - Interest groups
  - Political parties
  - The media
  - State and local governments

Unit 6: Public Policy

- Policymaking in the federal system
- The formation of policy agendas
- The role of institutions in the enactment of policy
- The role of the bureaucracy and the courts in policy implementation and interpretation
- Linkages between policy processes and the following:
  - Political institutions and federalism
  - Political parties
  - Interest groups
  - Public opinion
  - Elections
  - Policy networks

Unit 7: Civil Rights and Civil Liberties

- The development of civil liberties and civil rights by judicial interpretation
- Knowledge of substantive rights and liberties
- The impact of the 14th amendment on the constitutional development of rights and liberties

3. Key Assignments:

- Reading Quizzes and Discussions
  - Students will take a reading quiz on each section and then discuss the readings in partners and then in groups to ensure they have comprehended what they read
- Notecards
  - Students will create a set of notecards to use to review key terms and people
- Students will assess and discuss current events occurring in US government and politics, in writing.
  - Current Event Write-Ups due, present in class.
- Students will interpret and assess at least 5 amendments to the US constitution and how those amendments have affect US government and politics, while working in groups.
  - Group research project – analyze 5-6 amendments and present to class, must include analysis of relevant supreme court cases and current examples.
- Students will define and explain the sources of American political culture, including: mistrust of government, political tolerance, religious roots, and class consciousness.
  - Group Research project on sources of political culture and how it affects public opinion.
    - Students must provide public opinion polls along with analysis of those polls to support their arguments.

- Students will practice using the academic language in AP Free-Response questions, as it relates to the Judicial branch, Supreme Court cases, civil rights and civil liberties.
  - Practice FRQs
- Students will interpret political ideology and how it relates to their own political participation and ideals.
  - Political ideology Activity and Essay – students discover own political ideology
- Students will analyze the causes and effects of different levels of voter turnout and political participation.
  - "Who participates" survey project – students conduct their own surveys of adults in their lives and whether or not they participate politically
  - "Letter to Congressmen" Project – Students will participate in politics by writing letters to Congressmen about issues they are concerned about
- Students will describe the media process that contributes to awareness during campaigns.
  - Campaign Simulation – create their own platform, campaign ad, and prepare for mock debates
- Students will analyze how a President's character affects campaigns, elections, policy making power, and public opinion ratings.
  - Create the perfect President project – traits and characteristics
- Students will compare and contrast at least 2 presidents and their approval ratings.
  - President research project
- Students will define and describe the bill making process in both houses, including how committees are organized and the tasks of staff members of Congress members.
  - Project and Simulation – Students will create a bill and simulate the process by which it needs to be passed
- Students will analyze the federal budget process, budget deficits, surpluses, and the cooperation between Congress and the Executive in passing economic policy.
  - Budget project – students will create a school budget and figure out where to allocate funds
- Unit Exams:
  - Students will answer multiple choice and free-response questions from each unit
  - Each exam will be cumulative and include questions from previous exams
- Midterm Exam:
  - Students will take a midterm exam with cumulative questions half way through the semester
  - The exam will include both multiple choice and free-response questions
- Final Exam:
  - Students will take a Final exam with cumulative questions at the end of the semester
  - The exam will include both multiple choice and free-response questions

4. Instructional Methods and/or Strategies:

Activities:

Debates, Mock Trials, Socratic Seminars, Simulations, Discussions, Reading Secondary and Primary Sources, Research Projects, Formal and Informal Writing Assignments, Taking notes on lectures

Homework:

Students will be expected to complete textbook and supplemental readings at home, as well as various research projects, and current events.

Current Events:

Aside from class activities, reading assignments, and notes, students will need to complete current event write-up once per week. Students will also be asked to present their current events to the class orally at least once a unit. The use of consistent current event analysis will allow students to better connect the concepts learned in class to the world in which they live.

Using Graphs, Maps, and Charts:
Each unit will make use of a variety of data and stimuli, including graphs, maps, and charts that are relevant to the topic being studied. Students will also gain practice analyzing these stimuli for a variety of purposes.

5. Assessment Including Methods and/or Tools:
The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
  - Midterm/Final
  - Reading Quizzes
- Assignments and class discussions: 25-40% of the final grade
  - Projects
  - Free-Response Question Practice/Participation

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: BIOLOGY AND THE LIVING EARTH**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Biology and the Living Earth is part of the high school three course model that is aligned to the Next Generation Science Standards. The course emphasizes the understanding of the nature of living things, their environment, and their relationships with man. The students will learn unity, interaction, continuity, and diversity of life. The major concepts that will be covered are cell biology, genetics, ecology, evolution, and physiology. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Biology and the Living Earth.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Biology and the Living Earth
2. Transcript Title/Abbreviation:	Bio and Living Earth
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "d" Laboratory Science requirement
6. Grade Level(s):	9-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	
13. Brief Course Description: Biology and the Living Earth Honors emphasizes the understanding of the nature of living things, their environment, and their relationships with man.	
14. Prerequisites:	Co-requisite: Integrated Math 1 or Higher
15. Context for Course: Biology and the Living Earth is one of three courses in California's three-course model for high schools implementing the Next Generation Science Standards (NGSS). To highlight the nature of Earth and space sciences (ESS) as an interdisciplinary pursuit, the course presents an integration of ESS and Biology.	
16. History of Course Development: The course was developed to meet the 2013 state adopted NGSS standards. It is one course from a three-course model that combines all high school performance expectations into three courses.	
17. Textbooks:	BIOLOGY by Prentice Hall, Kenneth R. Miller, Joseph S. Levine, Kenneth Miller, Joseph Levine, Prentice Hall Staff, Joe Levine, Ken Miller, Pearson Education
18. Supplemental Instructional Materials:	Teacher-created materials, as needed
C. COURSE CONTENT	
1. Course Purpose: The Biology and the Living Earth course, based on the Next Generation Science Standards, explores relationships between the living and nonliving components of Earth's systems. By using science and engineering practices, cross-cutting disciplinary concepts, and evidence from experiments, research, and observations, students will learn how to formulate questions, evaluate claims, and develop models to make interpretations and investigate the natural world. The Sequence of Units are as followed: Ecosystems Interactions and Energy, Structure, Function, and Growth (from organisms to cells), History of Earth's Atmosphere (Photosynthesis and Respiration), Evidence of Evolution, Inheritance of Traits, and Ecosystem Stability and the Response to Climate Change.	

2. Course Outline:

Unit 1: Ecosystems Interactions & Energy (Intro Earth systems thru organisms): Students use mathematical and computer models to determine the factors that affect the size and diversity of populations in ecosystems, including the availability of resources and interactions between organisms.

Guiding Questions:

- What factors affect the size of populations within an ecosystem?
- What are common threats to remaining natural ecosystems and biodiversity? How can these threats be reduced?

Learning Targets:

- Students will use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.
- Students will use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
- Students will use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
- Students will evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS2.A: Interdependent Relationships in Ecosystems
- LS2.D: Social Interactions and Group Behavior

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-4: Analyzing and Interpreting Data
- SEP-5: Using Mathematics and Computational Thinking
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-2: Cause and Effect
- CCC-3: Scale, Proportion, and Quantity
- CCC-4: System and System Models
- CCC-5: Energy and Matter: Flows, Cycles, and Conservation

Highlighted California Environmental Principles & Concepts:

- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.

Common Core:

- CA CCSS Math Connections: N-Q.1-3; S-ID.1; S-IC.1,6; MP.2, MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.9-10.8; RST.11-12.1,7,8; WHST.9- 12.2a-e

Unit 2: Structure, Function & Growth (organisms to cells): Students use models to create explanations of how cells use DNA to construct proteins, build biomass, reproduce, and create complex multicellular organisms. They investigate how these organisms maintain stability.

Guiding Questions:

- What happens if a cell in our body dies?
- How does the structure of DNA affect how cells look and behave?
- How do systems work in a multi-celled organism (emergent properties) and what happens if there is a change in the system?
- How do organisms survive even when there are changes in their environment?

Learning Targets:

- Students will construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.
- Students will develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
- Students will plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
- Students will use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
- Students will construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS1.B: Growth and Development of Organisms
- LS1.A: Structure and Function
- ETS1.C: Optimizing the Design Solution

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-4: Analyzing and Interpreting Data
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating

Crosscutting Concepts

- CCC-1: Patterns
- CCC-2: Cause and Effect
- CCC-3: Scale, Proportion, and Quantity
- CCC-4: System and System Models
- CCC-6: Structure and Function
- CCC-7: Stability and Change

Common Core:

- CA CCSS Math Connections: F-IF.7.a-e; F-BF.1a-c; MP.2; MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.11-12.1,8, WHST.9-12.2.a-e, 7,9

Unit 3: History of Earth's Atmosphere (Photosynthesis & Respiration, Earth's atmosphere): Students make a model that links photosynthesis and respiration in organisms to cycles of energy and matter in the Earth system. They gather evidence about the linked history of Earth's biosphere and atmosphere.

Guiding Questions:

- How do living things acquire energy and matter for life?
- How do organisms store energy?
- How are photosynthesis and cellular respiration connected?
- How do organisms use the raw materials they ingest from the environment?
- How has the cycling of energy and matter changed over Earth's history?

Learning Targets:

- Students will use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.
- Students will construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.
- Students will use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.
- Students will construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.
- Students will develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
- Students will apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.
- Students will develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.
- Students will construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.
- Students will use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
- Students will plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS1.A: Structure and Function
- LS1.B: Growth and Development of Organisms

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-4: Analyzing and Interpreting Data
- SEP-5: Using Mathematics and Computational Thinking
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-1: Patterns

- CCC-3: Scale, Proportion, and Quantity [CCC-6] Structure and Function
- CCC-7: Stability and Change

Highlighted California Environmental Principles & Concepts:

- Principle I: The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.
- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.
- Principle V: Decisions affecting resources and natural systems are based on a wide range of considerations and decision-making processes.

Common Core:

- CA CCSS Math Connections: MP.2; MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: SL.11-12.4; RST.11-12.1,8, WHST.9- 12.2.a-e, 7,9

Unit 4: Evolution: Students develop a model about how rock layers record evidence of evolution as fossils. Building on their learning from previous grades, they focus on effectively communicating this evidence and relate it to principles of natural selection.

Guiding Questions:

- How do layers of rock form and how do they contain fossils?
- Why do we see fossils across the world from each other but living organisms that are very different from each other?
- What evidence shows that different species are related?
- How did modern day humans evolve?

Learning Targets:

- Students will communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.
- Students will construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.
- Students will construct an explanation based on evidence for how natural selection leads to adaptation of populations.
- Students will evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
- Students will evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.
- Students will plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
- Students will construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
- Students will evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

- Students will use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
- Students will evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

NGSS Three Dimension

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS1.B: Growth and Development of Organisms
- LS3.A: Inheritance of Traits
- LS3.B: Variation of Traits
- LS4.B: Natural Selection

Science and Engineering Practices

- SEP-1: Asking Questions and Defining Problems
- SEP-2: Developing and Using Models
- SEP-4: Analyzing and Interpreting Data
- SEP-5: Using mathematics and Computational Thinking
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-3: Scale, Proportion, and Quantity

Highlighted California Environmental Principles & Concepts:

- Principle I: The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.
- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long- term functioning of both.

Common Core:

- CA CCSS Math Connections: MP.2; MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.11-12.1,9, WHST.9-12.1.a-e, 2.a-e, 7,9

Unit 4: Inheritance of Traits: Students develop explanations about the specific mechanisms that enable parents to pass traits on to their offspring. They make claims about which processes give rise to variation in deoxyribonucleic acid (DNA) codes and calculate the probability that offspring will inherit traits from their parents.

Guiding Questions:

- How are characteristics of one generation passed to the next?
- What allows traits to be transmitted from parents to offspring?
- How does variation affect a population under selective pressures?

Learning Targets:

- Students will ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

- Students will make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.
- Students will apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.
- Students will construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.
- Students will apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.
- Students will construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.

NGSS Three Dimension

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS4.A: Evidence of Common Ancestry and Diversity LS4.B: Natural Selection
- LS4.C: Adaptation
- ESS1.C: The History of Planet Earth
- ESS2.C: The Roles of Water in Earth's Surface Processes

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-1: Patterns [CCC-2] Cause and Effect[CCC-4] System and System Models
- CCC-5: Energy and Matter: Flows, Cycles, and Conservation [CCC-7] Stability and Change

Highlighted California Environmental Principles & Concepts:

- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.

Common Core:

- CA CCSS Math Connections: N-Q.1-3; F.IF.5; S-ID.6.a-c; MP.2, MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: SL.11-12.5; RST.11-12.1, WHST.9-12.2a-e, 5,8,9

Unit 6: Ecosystems Stability: Students use computer models to investigate how Earth's systems respond to changes, including climate change. They make specific forecasts and design solutions to mitigate the impacts of these changes on the biosphere.

Guiding Questions:

- What effects changes in ecosystems that ultimately effect populations?
- What are the changes that are happening in the climate and what effects are those having on life?
- How are human activities impacting Earth's systems and how does that affect life on Earth?

- What can humans do to mitigate their negative impact on the environment?

Learning Targets:

- Students will evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
- Students will design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
- Students will evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
- Students will create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
- Students will create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
- Students will evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
- Students will analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.
- Students will use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
- Students will analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
- Students will design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
- Students will evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.
- Students will use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.C: Adaptation
- LS4.D: Biodiversity and Humans
- ESS3.D: Global Climate Change

Science and Engineering Practices

- SEP-1: Asking Questions and Defining Problems
- SEP-2: Developing and Using Models
- SEP-4: Analyzing and Interpreting Data
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information]

Crosscutting Concepts

- CCC-1: Patterns
- CCC-3: Scale, Proportion, and Quantity [CCC-4] System and System Models [CCC-7] Stability and Change

Highlighted California Environmental Principles & Concepts:

- Principle I: The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.
- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.
- Principle V: Decisions affecting resources and natural systems are based on a wide range of considerations and decision-making processes.

Common Core:

- CA CCSS Math Connections: MP.2; N-Q.1-3; S-ID.1; S-IC.1,6
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.9-10.8; RST.11-12.1,2,7,8; WHST.9- 12.2.a-e, 7,8.9

Nest Generation Science Standards

Earth and Space Science:

HS-ESS1-5. Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks. [Clarification Statement: Emphasis is on the ability of plate tectonics to explain the ages of crustal rocks. Examples include evidence of the ages oceanic crust increasing with distance from mid-ocean ridges (a result of plate spreading) and the ages of North American continental crust increasing with distance away from a central ancient core (a result of past plate interactions).] (Introduced, but assessed in High School Chemistry in the Earth System course)

HS-ESS1-6. Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history. [Clarification Statement: Emphasis is on using available evidence within the solar system to reconstruct the early history of Earth, which formed along with the rest of the solar system 4.6 billion years ago. Examples of evidence include the absolute ages of ancient materials (obtained by radiometric dating of meteorites, moon rocks, and Earth's oldest minerals), the sizes and compositions of solar system objects, and the impact cratering record of planetary surfaces.]

HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. [Clarification Statement: Emphasis is on mechanical and chemical investigations with water and a variety of solid materials to provide the evidence for connections between the hydrologic cycle and system interactions commonly known as the rock cycle. Examples of mechanical investigations include stream transportation and deposition using a stream table, erosion using variations in soil moisture content, or frost wedging by the expansion of water as it freezes. Examples of chemical investigations include chemical weathering and recrystallization (by testing the solubility of different materials) or melt generation (by examining how water lowers the melting temperature of most solids).]

HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. [Clarification Statement: Emphasis is on mechanical and chemical investigations with water and a variety of solid materials to provide the evidence for connections between the hydrologic cycle and system interactions commonly known as the rock cycle. Examples of mechanical investigations include stream transportation and deposition using a stream table, erosion using variations in soil moisture content, or frost wedging by the expansion of water as it freezes. Examples of chemical investigations include chemical weathering and recrystallization (by testing the solubility of different materials) or melt generation (by examining how water lowers the melting temperature of most solids).]

HS-ESS2-6. Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere. [Clarification Statement: Emphasis is on modeling biogeochemical cycles that

include the cycling of carbon through the ocean, atmosphere, soil, and biosphere (including humans), providing the foundation for living organisms.]

HS-ESS2-7. Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth. [Clarification Statement: Emphasis is on the dynamic causes, effects, and feedbacks between the biosphere and Earth's other systems, whereby geoscience factors control the evolution of life, which in turn continuously alters Earth's surface. Examples of include how photosynthetic life altered the atmosphere through the production of oxygen, which in turn increased weathering rates and allowed for the evolution of animal life; how microbial life on land increased the formation of soil, which in turn allowed for the evolution of land plants; or how the evolution of corals created reefs that altered patterns of erosion and deposition along coastlines and provided habitats for the evolution of new life forms.] [Assessment Boundary: Assessment does not include a comprehensive understanding of the mechanisms of how the biosphere interacts with all of Earth's other systems.]

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity. [Clarification Statement: Examples of key natural resources include access to fresh water (such as rivers, lakes, and groundwater), regions of fertile soils such as river deltas, and high concentrations of minerals and fossil fuels. Examples of natural hazards can be from interior processes (such as volcanic eruptions and earthquakes), surface processes (such as tsunamis, mass wasting, and soil erosion), and severe weather (such as hurricanes, floods, and droughts). Examples of the results of changes in climate that can affect populations or drive mass migrations include changes to sea level, regional patterns of temperature and precipitation, and the types of crops and livestock that can be raised.]

HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.* [Clarification Statement: Examples of data on the impacts of human activities could include the quantities and types of pollutants released, changes to biomass and species diversity, or areal changes in land surface use (such as for urban development, agriculture and livestock, or surface mining). Examples for limiting future impacts could range from local efforts (such as reducing, reusing, and recycling resources) to large-scale geoengineering design solutions (such as altering global temperatures by making large changes to the atmosphere or ocean).]

HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.* [Clarification Statement: Examples of data on the impacts of human activities could include the quantities and types of pollutants released, changes to biomass and species diversity, or areal changes in land surface use (such as for urban development, agriculture and livestock, or surface mining). Examples for limiting future impacts could range from local efforts (such as reducing, reusing, and recycling resources) to large-scale geoengineering design solutions (such as altering global temperatures by making large changes to the atmosphere or ocean).]

HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems. [Clarification Statement: Examples of evidence, for both data and climate model outputs, are for climate changes (such as precipitation and temperature) and their associated impacts (such as on sea level, glacial ice volumes, or atmosphere and ocean composition).] [Assessment Boundary: Assessment is limited to one example of a climate change and its associated impacts.]

HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.* [Clarification Statement: Examples of Earth systems to be considered are the hydrosphere, atmosphere, cryosphere, geosphere, and/or biosphere. An example of the far-reaching impacts from a human activity is how an increase in atmospheric carbon dioxide results in an increase in photosynthetic biomass on land and an increase in ocean acidification, with resulting impacts on sea organism health and marine populations.] [Assessment Boundary: Assessment does not include running

computational representations but is limited to using the published results of scientific computational models.] (Introduced but not fully assessed until IS6)

HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.* [Clarification Statement: Examples of Earth systems to be considered are the hydrosphere, atmosphere, cryosphere, geosphere, and/or biosphere. An example of the far-reaching impacts from a human activity is how an increase in atmospheric carbon dioxide results in an increase in photosynthetic biomass on land and an increase in ocean acidification, with resulting impacts on sea organism health and marine populations.] [Assessment Boundary: Assessment does not include running computational representations but is limited to using the published results of scientific computational models.]

HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.* [Clarification Statement: Examples of Earth systems to be considered are the hydrosphere, atmosphere, cryosphere, geosphere, and/or biosphere. An example of the far-reaching impacts from a human activity is how an increase in atmospheric carbon dioxide results in an increase in photosynthetic biomass on land and an increase in ocean acidification, with resulting impacts on sea organism health and marine populations.] [Assessment Boundary: Assessment does not include running computational representations but is limited to using the published results of scientific computational models.]

Engineering, Technology and Applications of Science:

HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

HS-ETS1-4. Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

Life Science:

HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. [Assessment Boundary: Assessment does not include identification of specific cell or tissue types, whole body systems, specific protein structures and functions, or the biochemistry of protein synthesis.]

HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. [Assessment Boundary: Assessment does not include identification of specific cell or tissue types, whole body systems, specific protein structures and functions, or the biochemistry of protein synthesis.]

HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. [Clarification Statement: Emphasis is on functions at the organism system level such as nutrient uptake, water delivery, and organism movement in response to neural stimuli. An example of an interacting system could be an artery depending on the proper function of elastic tissue and smooth muscle to regulate and deliver the proper amount of blood within the circulatory system.] [Assessment Boundary: Assessment does not include interactions and functions at the molecular or chemical reaction level.]

HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. [Clarification Statement: Examples of investigations could include heart rate response to exercise, stomate response to moisture and temperature, and root development in response to water levels.] [Assessment Boundary: Assessment does not include the cellular processes involved in the feedback mechanism.]

HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms. [Assessment Boundary: Assessment does not include specific gene control mechanisms or rote memorization of the steps of mitosis.]

HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy. [Clarification Statement: Emphasis is on illustrating inputs and outputs of matter and the transfer and transformation of energy in photosynthesis by plants and other photosynthesizing organisms. Examples of models could include diagrams, chemical equations, and conceptual models.] [Assessment Boundary: Assessment does not include specific biochemical steps.]

HS-LS1-6. Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules. [Clarification Statement: Emphasis is on using evidence from models and simulations to support explanations.] [Assessment Boundary: Assessment does not include the details of the specific chemical reactions or identification of macromolecules.]

HS-LS1-6. Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules. [Clarification Statement: Emphasis is on using evidence from models and simulations to support explanations.] [Assessment Boundary: Assessment does not include the details of the specific chemical reactions or identification of macromolecules.]

HS-LS1-7. Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy. [Clarification Statement: Emphasis is on the conceptual understanding of the inputs and outputs of the process of cellular respiration.] [Assessment Boundary: Assessment should not include identification of the steps or specific processes involved in cellular respiration.]

HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. [Clarification Statement: Emphasis is on quantitative analysis and comparison of the relationships among interdependent factors including boundaries, resources, climate, and competition. Examples of mathematical comparisons could include graphs, charts, histograms, and population changes gathered from simulations or historical data sets.] [Assessment Boundary: Assessment does not include deriving mathematical equations to make comparisons.]

HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. [Clarification Statement: Examples of mathematical representations include finding the average, determining trends, and using graphical comparisons of multiple sets of data.] [Assessment Boundary: Assessment is limited to provided data.]

HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. [Clarification Statement: Emphasis is on conceptual understanding of the role of aerobic and anaerobic respiration in different environments.] [Assessment Boundary: Assessment does not include the specific chemical processes of either aerobic or anaerobic respiration.]

HS-LS2-4. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem. [Clarification Statement: Emphasis is on using a mathematical model of stored energy in biomass to describe the transfer of energy from one trophic level to another and that matter and energy are conserved as matter cycles and energy flows through ecosystems. Emphasis is on atoms and molecules such as carbon, oxygen, hydrogen and nitrogen being conserved as they move through an ecosystem.] [Assessment Boundary: Assessment is limited to proportional reasoning to describe the cycling of matter and flow of energy.]

HS-LS2-5. Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere. [Clarification Statement: Examples of models could include simulations and mathematical models.] [Assessment Boundary: Assessment does not include the specific chemical steps of photosynthesis and respiration.]

HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. [Clarification Statement: Examples of changes in ecosystem conditions could include modest biological or physical changes, such as moderate hunting or a seasonal flood; and extreme changes, such as volcanic eruption or sea level rise.]

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.* [Clarification Statement: Examples of human activities can include urbanization, building dams, and dissemination of invasive species.]

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce. [Clarification Statement: Emphasis is on: (1) distinguishing between group and individual behavior, (2) identifying evidence supporting the outcomes of group behavior, and (3) developing logical and reasonable arguments based on evidence. Examples of group behaviors could include flocking, schooling, herding, and cooperative behaviors such as hunting, migrating, and swarming.]

HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring. [Assessment Boundary: Assessment does not include the phases of meiosis or the biochemical mechanism of specific steps in the process.]

HS-LS3-2. Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. [Clarification Statement: Emphasis is on using data to support arguments for the way variation occurs.] [Assessment Boundary: Assessment does not include the phases of meiosis or the biochemical mechanism of specific steps in the process.]

HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population. [Clarification Statement: Emphasis is on the use of mathematics to describe the probability of traits as it relates to genetic and environmental factors in the expression of traits.] [Assessment Boundary: Assessment does not include Hardy-Weinberg calculations.]

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. [Clarification Statement: Emphasis is on a conceptual understanding of the role each line of evidence has relating to common ancestry and biological evolution. Examples of evidence could include similarities in DNA sequences, anatomical structures, and order of appearance of structures in embryological development.]

HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment. [Clarification Statement: Emphasis is on using evidence to explain the influence each of the four factors has on number of organisms, behaviors, morphology, or physiology in terms of ability to compete for limited resources and subsequent survival of individuals and adaptation of species. Examples of evidence could include mathematical models such as simple distribution graphs and proportional reasoning.] [Assessment Boundary: Assessment does not include other mechanisms of evolution, such as genetic drift, gene flow through migration, and co-evolution.]

HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment. [Clarification Statement: Emphasis is on using evidence to explain the influence each of the four factors has on number of organisms,

behaviors, morphology, or physiology in terms of ability to compete for limited resources and subsequent survival of individuals and adaptation of species. Examples of evidence could include mathematical models such as simple distribution graphs and proportional reasoning.] [Assessment Boundary: Assessment does not include other mechanisms of evolution, such as genetic drift, gene flow through migration, and co-evolution.]

HS-LS4-3. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. [Clarification Statement: Emphasis is on analyzing shifts in numerical distribution of traits and using these shifts as evidence to support explanations.] [Assessment Boundary: Assessment is limited to basic statistical and graphical analysis. Assessment does not include allele frequency calculations.]

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations. [Clarification Statement: Emphasis is on using data to provide evidence for how specific biotic and abiotic differences in ecosystems (such as ranges of seasonal temperature, long-term climate change, acidity, light, geographic barriers, or evolution of other organisms) contribute to a change in gene frequency over time, leading to adaptation of populations.]

HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species. [Clarification Statement: Emphasis is on determining cause and effect relationships for how changes to the environment such as deforestation, fishing, application of fertilizers, drought, flood, and the rate of change of the environment affect distribution or disappearance of traits in species.]

HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species. [Clarification Statement: Emphasis is on determining cause and effect relationships for how changes to the environment such as deforestation, fishing, application of fertilizers, drought, flood, and the rate of change of the environment affect distribution or disappearance of traits in species.]

HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.* [Clarification Statement: Emphasis is on designing solutions for a proposed problem related to threatened or endangered species, or to genetic variation of organisms for multiple species.]

HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.* [Clarification Statement: Emphasis is on designing solutions for a proposed problem related to threatened or endangered species, or to genetic variation of organisms for multiple species.]

3. Key Assignments:

Unit 1: Interactive Population Dynamics: Students determine where mice, rabbits, foxes, and owls fit into a food chain. The classroom is set-up to present a various number of these animals are posted; students calculate the population density of each organism, then evaluate the effect of density-dependent and density-independent limiting factors.

Unit 2: Life is in the Blood: Evaluate how multiple human body systems maintain homeostasis in am multicellular organism focusing on the transfer of material through the circulatory system via blood cells. Instructional strategies used are using visuals to model the systems, small group collaborative research, and presentation.

Unit 3: Floating Leaf Disk: An inquiry lab opportunity for students to collect and record the number of floating disks under different treatments. Using the collected data, students model the results in a graph to indicate the rate of photosynthesis. As photosynthesis occurs oxygen is released inside the leaf causing the disks to rise, however, different variables can be manipulated (color or light, light intensity, type of leaf, water temperature, CO2 concentration, etc.)

Unit 4: It's not Fair: Modeling how mutations contribute to natural selection, based on traits and random environmental factors. Students choose traits each round with potential to be beneficial or harmful; it's a visual representation of evolution (change of organism throughout the rounds).

Unit 5: Super Baby Genetics: Connecting concepts of co-dominance, multiple alleles, Punnett Squares, 2-factor cross, sex-linked in inheritance; Students choose a male a female superhero and determine phenotypic traits. Then demonstrating recombination by rolling dice to determine offspring traits. Potential assessment will include, but not limited to, a poster, storyline/biography, and illustration (made by hand or computer).

Unit 6: Analyzing Climate Change Data: Interpreting data and making predictions using artic sea ice satellite data from the 1980's to current day. Students predict trends based on prior knowledge; then analyze data from "science on a sphere" website, and compare actual graphical representation to their initial predictions. Students are then tasked with creating an argument to justify the importance of using data collected over long periods of time vs. short periods of time.

4. Instructional Methods and/or Strategies:

- Lab-based learning (skills based labs as well as student designed and implemented labs)
- Cross Cutting Concepts (Patterns, Similarity & Diversity; Cause & Effect; Scale, Proportion & Quantity; Systems & Systems Models; Energy & Matter; Structure & Function; Stability & Change)
- Science & Engineering Practices (Asking Questions & Defining Problems; Developing & Using Models; Planning & Carrying out Investigations; Analyzing & Interpreting Data; Using Mathematics, Information & Computer Technology & Computational Thinking; Constructing Explanations & Designing Solutions; Engaging in Argument from Evidence; Obtaining, Evaluating & Communication Information)
- Four Corners discussions (Agree, Strongly Agree, Disagree, Strongly Disagree)
- Data interpretation and predictions
- Jig Saw research projects (students or student groups research different aspects of a topic and report their learning back to the whole class, e.g. different types of invasive species or genetic disorders)
- Computer based research projects: individual students or groups research
- Evidence based data interpretation (Claim, Evidence and Reasoning writing from labs or research projects)
- Student centered and created activities (e.g. Evolution Island where students determine changes over time to organisms (e.g. rats) on islands with different ecosystems)
- Scientific article reading, annotation and/or class report/presentation
- Using CER (claims, evidence, and reasoning) graphic organizer
- Project Based Learning
- Argument Driven Instruction
- "5 E" Lessons (Engage, Explore, Explain, Elaborate & Evaluate)
- Phenomena

5. Assessment Including Methods and/or Tools:

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments, Labs and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: BIOLOGY AND THE LIVING EARTH HONORS**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Biology and the Living Earth Honors is part of the high school three course model that is aligned to the Next Generation Science Standards. The course emphasizes an understanding with depth and complexity of the nature of living things, their environment, and their relationships with man. The students will learn unity, interaction, continuity, and diversity of life. The major concepts that will be covered are cell biology, genetics, ecology, evolution, and physiology. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Biology and the Living Earth Honors.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Biology and the Living Earth Honors
2. Transcript Title/Abbreviation:	Bio and Living Earth H
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "d" Laboratory Science requirement
6. Grade Level(s):	9-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	
13. Brief Course Description: Biology and the Living Earth Honors emphasizes an understanding with depth and complexity of the nature of living things, their environment, and their relationships with man.	
14. Prerequisites:	Co-requisite: Integrated Math 1 or Higher
15. Context for Course: Biology and the Living Earth is one of three courses in California's three-course model for high schools implementing NGSS. To highlight the nature of Earth and space sciences (ESS) as an interdisciplinary pursuit the course presents an integration of ESS and Biology. The honors course in Biology is distinguished by the depth and scope of work required to show mastery of the skills with increased rigor and complexity beyond the scope of a general course.	
16. History of Course Development: The course was developed to meet the 2013 state adopted NGSS standards for the advanced learner. It is one course from a three-course model that combines all high school performance expectations into three courses.	
17. Textbooks:	BIOLOGY by Prentice Hall, Kenneth R. Miller, Joseph S. Levine, Kenneth Miller, Joseph Levine, Prentice Hall Staff, Joe Levine, Ken Miller, Pearson Education
18. Supplemental Instructional Materials:	Teacher-created materials, as needed
C. COURSE CONTENT	
1. Course Purpose: The Biology and the Living Earth course, based on the Next Generation Science Standards, explores relationships between the living and nonliving components of Earth's systems. By using science and engineering practices, cross-cutting disciplinary concepts, and evidence from experiments, research, and observations, students will learn how to formulate questions, evaluate claims, and develop models to make interpretations and investigate the natural world. The Sequence of Units are as followed: Ecosystems Interactions and Energy, Structure, Function, and Growth (from	

organisms to cells), History of Earth's Atmosphere (Photosynthesis and Respiration), Evidence of Evolution, Inheritance of Traits, and Ecosystem Stability and the Response to Climate Change.

2. Course Outline:

Unit 1: Ecosystems Interactions & Energy (Intro Earth systems thru organisms): Students use mathematical and computer models to determine the factors that affect the size and diversity of populations in ecosystems, including the availability of resources and interactions between organisms.

Guiding Questions:

- What factors affect the size of populations within an ecosystem?
- What are common threats to remaining natural ecosystems and biodiversity? How can these threats be reduced?

Learning Targets:

- Students will use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.
- Students will use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
- Students will use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.
- Students will evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS2.A: Interdependent Relationships in Ecosystems
- LS2.D: Social Interactions and Group Behavior

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-4: Analyzing and Interpreting Data
- SEP-5: Using Mathematics and Computational Thinking
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-2: Cause and Effect
- CCC-3: Scale, Proportion, and Quantity
- CCC-4: System and System Models
- CCC-5: Energy and Matter: Flows, Cycles, and Conservation

Highlighted California Environmental Principles & Concepts:

- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.

Common Core:

- CA CCSS Math Connections: N-Q.1-3; S-ID.1; S-IC.1,6; MP.2, MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.9-10.8; RST.11-12.1,7,8; WHST.9- 12.2a-e

Unit 2: Structure, Function & Growth (organisms to cells): Students use models to create explanations of how cells use DNA to construct proteins, build biomass, reproduce, and create complex multicellular organisms. They investigate how these organisms maintain stability.

Guiding Questions:

- What happens if a cell in our body dies?
- How does the structure of DNA affect how cells look and behave?
- How do systems work in a multi-celled organism (emergent properties) and what happens if there is a change in the system?
- How do organisms survive even when there are changes in their environment?

Learning Targets:

- Students will construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.
- Students will develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
- Students will plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
- Students will use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
- Students will construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS1.B: Growth and Development of Organisms
- LS1.A: Structure and Function
- ETS1.C: Optimizing the Design Solution

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-4: Analyzing and Interpreting Data
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating

Crosscutting Concepts

- CCC-1: Patterns
- CCC-2: Cause and Effect
- CCC-3: Scale, Proportion, and Quantity
- CCC-4: System and System Models
- CCC-6: Structure and Function
- CCC-7: Stability and Change

Common Core:

- CA CCSS Math Connections: F-IF.7.a-e; F-BF.1a-c; MP.2; MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.11-12.1,8, WHST.9-12.2.a-e, 7,9

Unit 3: History of Earth's Atmosphere (Photosynthesis & Respiration, Earth's atmosphere): Students make a model that links photosynthesis and respiration in organisms to cycles of energy and matter in the Earth system. They gather evidence about the linked history of Earth's biosphere and atmosphere.

Guiding Questions:

- How do living things acquire energy and matter for life?
- How do organisms store energy?
- How are photosynthesis and cellular respiration connected?
- How do organisms use the raw materials they ingest from the environment?
- How has the cycling of energy and matter changed over Earth's history?

Learning Targets:

- Students will use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.
- Students will construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.
- Students will use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.
- Students will construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.
- Students will develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.
- Students will apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.
- Students will develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.
- Students will construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.
- Students will use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
- Students will plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS1.A: Structure and Function
- LS1.B: Growth and Development of Organisms

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-4: Analyzing and Interpreting Data
- SEP-5: Using Mathematics and Computational Thinking
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-1: Patterns

- CCC-3: Scale, Proportion, and Quantity [CCC-6] Structure and Function
- CCC-7: Stability and Change

Highlighted California Environmental Principles & Concepts:

- Principle I: The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.
- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.
- Principle V: Decisions affecting resources and natural systems are based on a wide range of considerations and decision-making processes.

Common Core:

- CA CCSS Math Connections: MP.2; MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: SL.11-12.4; RST.11-12.1,8, WHST.9- 12.2.a-e, 7,9

Unit 4: Evidence of Evolution: Students develop a model about how rock layers record evidence of evolution as fossils. Building on their learning from previous grades, they focus on effectively communicating this evidence and relate it to principles of natural selection.

Guiding Questions:

- How do layers of rock form and how do they contain fossils?
- Why do we see fossils across the world from each other but living organisms that are very different from each other?
- What evidence shows that different species are related?
- How did modern day humans evolve?

Learning Targets:

- Students will communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.
- Students will construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.
- Students will construct an explanation based on evidence for how natural selection leads to adaptation of populations.
- Students will evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
- Students will evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.
- Students will plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.
- Students will construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.
- Students will evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

- Students will use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
- Students will evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

NGSS Three Dimension

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS1.B: Growth and Development of Organisms
- LS3.A: Inheritance of Traits
- LS3.B: Variation of Traits
- LS4.B: Natural Selection

Science and Engineering Practices

- SEP-1: Asking Questions and Defining Problems
- SEP-2: Developing and Using Models
- SEP-4: Analyzing and Interpreting Data
- SEP-5: Using mathematics and Computational Thinking
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-3: Scale, Proportion, and Quantity

Highlighted California Environmental Principles & Concepts:

- Principle I: The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.
- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long- term functioning of both.

Common Core:

- CA CCSS Math Connections: MP.2; MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.11-12.1,9, WHST.9-12.1.a-e, 2.a-e, 7,9

Unit 4: Inheritance of Traits: Students develop explanations about the specific mechanisms that enable parents to pass traits on to their offspring. They make claims about which processes give rise to variation in deoxyribonucleic acid (DNA) codes and calculate the probability that offspring will inherit traits from their parents.

Guiding Questions:

- How are characteristics of one generation passed to the next?
- What allows traits to be transmitted from parents to offspring?
- How does variation affect a population under selective pressures?

Learning Targets:

- Students will ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.

- Students will make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.
- Students will apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.
- Students will construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.
- Students will apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.
- Students will construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.

NGSS Three Dimension

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS4.A: Evidence of Common Ancestry and Diversity LS4.B: Natural Selection
- LS4.C: Adaptation
- ESS1.C: The History of Planet Earth
- ESS2.C: The Roles of Water in Earth's Surface Processes

Science and Engineering Practices

- SEP-2: Developing and Using Models
- SEP-3: Planning and Carrying Out Investigations
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- CCC-1: Patterns [CCC-2] Cause and Effect[CCC-4] System and System Models
- CCC-5: Energy and Matter: Flows, Cycles, and Conservation [CCC-7] Stability and Change

Highlighted California Environmental Principles & Concepts:

- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.

Common Core:

- CA CCSS Math Connections: N-Q.1-3; F.IF.5; S-ID.6.a-c; MP.2, MP.4
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: SL.11-12.5; RST.11-12.1, WHST.9-12.2a-e, 5,8,9

Unit 6: Ecosystems Stability: Students use computer models to investigate how Earth's systems respond to changes, including climate change. They make specific forecasts and design solutions to mitigate the impacts of these changes on the biosphere.

Guiding Questions:

- What effects changes in ecosystems that ultimately effect populations?
- What are the changes that are happening in the climate and what effects are those having on life?
- How are human activities impacting Earth's systems and how does that affect life on Earth?

- What can humans do to mitigate their negative impact on the environment?

Learning Targets:

- Students will evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.
- Students will design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
- Students will evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
- Students will create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
- Students will create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.
- Students will evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
- Students will analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.
- Students will use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.
- Students will analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.
- Students will design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
- Students will evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.
- Students will use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

NGSS Three Dimensions:

The bundle of performance expectations above focuses on the following elements from the NRC document *A Framework for K–12 Science Education*:

Disciplinary Core Ideas

- LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.C: Adaptation
- LS4.D: Biodiversity and Humans
- ESS3.D: Global Climate Change

Science and Engineering Practices

- SEP-1: Asking Questions and Defining Problems
- SEP-2: Developing and Using Models
- SEP-4: Analyzing and Interpreting Data
- SEP-6: Constructing Explanations (for science) and Designing Solutions (for engineering)
- SEP-7: Engaging in Argument from Evidence
- SEP-8: Obtaining, Evaluating, and Communicating Information]

Crosscutting Concepts

- CCC-1: Patterns
- CCC-3: Scale, Proportion, and Quantity [CCC-4] System and System Models [CCC-7] Stability and Change

Highlighted California Environmental Principles & Concepts:

- Principle I: The continuation and health of individual human lives and of human communities and societies depend on the health of the natural systems that provide essential goods and ecosystem services.
- Principle II: The long-term functioning and health of terrestrial, freshwater, coastal and marine ecosystems are influenced by their relationships with human societies.
- Principle III: Natural systems proceed through cycles that humans depend upon, benefit from and can alter.
- Principle IV: The exchange of matter between natural systems and human societies affects the long-term functioning of both.
- Principle V: Decisions affecting resources and natural systems are based on a wide range of considerations and decision-making processes.

Common Core:

- CA CCSS Math Connections: MP.2; N-Q.1-3; S-ID.1; S-IC.1,6
- CA ELD Connections: ELD.PI.11-12.1,5,6a-b,9,10,11a
- CA CCSS ELA/Literacy Connections: RST.9-10.8; RST.11-12.1,2,7,8; WHST.9- 12.2.a-e, 7,8.9

Nest Generation Science Standards

Earth and Space Science:

HS-ESS1-5. Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks. [Clarification Statement: Emphasis is on the ability of plate tectonics to explain the ages of crustal rocks. Examples include evidence of the ages oceanic crust increasing with distance from mid-ocean ridges (a result of plate spreading) and the ages of North American continental crust increasing with distance away from a central ancient core (a result of past plate interactions).] (Introduced, but assessed in High School Chemistry in the Earth System course)

HS-ESS1-6. Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history. [Clarification Statement: Emphasis is on using available evidence within the solar system to reconstruct the early history of Earth, which formed along with the rest of the solar system 4.6 billion years ago. Examples of evidence include the absolute ages of ancient materials (obtained by radiometric dating of meteorites, moon rocks, and Earth's oldest minerals), the sizes and compositions of solar system objects, and the impact cratering record of planetary surfaces.]

HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. [Clarification Statement: Emphasis is on mechanical and chemical investigations with water and a variety of solid materials to provide the evidence for connections between the hydrologic cycle and system interactions commonly known as the rock cycle. Examples of mechanical investigations include stream transportation and deposition using a stream table, erosion using variations in soil moisture content, or frost wedging by the expansion of water as it freezes. Examples of chemical investigations include chemical weathering and recrystallization (by testing the solubility of different materials) or melt generation (by examining how water lowers the melting temperature of most solids).]

HS-ESS2-5. Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. [Clarification Statement: Emphasis is on mechanical and chemical investigations with water and a variety of solid materials to provide the evidence for connections between the hydrologic cycle and system interactions commonly known as the rock cycle. Examples of mechanical investigations include stream transportation and deposition using a stream table, erosion using variations in soil moisture content, or frost wedging by the expansion of water as it freezes. Examples of chemical investigations include chemical weathering and recrystallization (by testing the solubility of different materials) or melt generation (by examining how water lowers the melting temperature of most solids).]

HS-ESS2-6. Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere. [Clarification Statement: Emphasis is on modeling biogeochemical cycles that

include the cycling of carbon through the ocean, atmosphere, soil, and biosphere (including humans), providing the foundation for living organisms.]

HS-ESS2-7. Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth. [Clarification Statement: Emphasis is on the dynamic causes, effects, and feedbacks between the biosphere and Earth's other systems, whereby geoscience factors control the evolution of life, which in turn continuously alters Earth's surface. Examples of include how photosynthetic life altered the atmosphere through the production of oxygen, which in turn increased weathering rates and allowed for the evolution of animal life; how microbial life on land increased the formation of soil, which in turn allowed for the evolution of land plants; or how the evolution of corals created reefs that altered patterns of erosion and deposition along coastlines and provided habitats for the evolution of new life forms.] [Assessment Boundary: Assessment does not include a comprehensive understanding of the mechanisms of how the biosphere interacts with all of Earth's other systems.]

HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity. [Clarification Statement: Examples of key natural resources include access to fresh water (such as rivers, lakes, and groundwater), regions of fertile soils such as river deltas, and high concentrations of minerals and fossil fuels. Examples of natural hazards can be from interior processes (such as volcanic eruptions and earthquakes), surface processes (such as tsunamis, mass wasting, and soil erosion), and severe weather (such as hurricanes, floods, and droughts). Examples of the results of changes in climate that can affect populations or drive mass migrations include changes to sea level, regional patterns of temperature and precipitation, and the types of crops and livestock that can be raised.]

HS-ESS3-4. Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.* [Clarification Statement: Examples of data on the impacts of human activities could include the quantities and types of pollutants released, changes to biomass and species diversity, or areal changes in land surface use (such as for urban development, agriculture and livestock, or surface mining). Examples for limiting future impacts could range from local efforts (such as reducing, reusing, and recycling resources) to large-scale geoengineering design solutions (such as altering global temperatures by making large changes to the atmosphere or ocean).]

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HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems. [Clarification Statement: Examples of evidence, for both data and climate model outputs, are for climate changes (such as precipitation and temperature) and their associated impacts (such as on sea level, glacial ice volumes, or atmosphere and ocean composition).] [Assessment Boundary: Assessment is limited to one example of a climate change and its associated impacts.]

HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.* [Clarification Statement: Examples of Earth systems to be considered are the hydrosphere, atmosphere, cryosphere, geosphere, and/or biosphere. An example of the far-reaching impacts from a human activity is how an increase in atmospheric carbon dioxide results in an increase in photosynthetic biomass on land and an increase in ocean acidification, with resulting impacts on sea organism health and marine populations.] [Assessment Boundary: Assessment does not include running

computational representations but is limited to using the published results of scientific computational models.] (Introduced but not fully assessed until IS6)

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Engineering, Technology and Applications of Science:

HS-ETS1-1. Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2. Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3. Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.

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HS-ETS1-4. Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

Life Science:

HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. [Assessment Boundary: Assessment does not include identification of specific cell or tissue types, whole body systems, specific protein structures and functions, or the biochemistry of protein synthesis.]

HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. [Assessment Boundary: Assessment does not include identification of specific cell or tissue types, whole body systems, specific protein structures and functions, or the biochemistry of protein synthesis.]

HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. [Clarification Statement: Emphasis is on functions at the organism system level such as nutrient uptake, water delivery, and organism movement in response to neural stimuli. An example of an interacting system could be an artery depending on the proper function of elastic tissue and smooth muscle to regulate and deliver the proper amount of blood within the circulatory system.] [Assessment Boundary: Assessment does not include interactions and functions at the molecular or chemical reaction level.]

HS-LS1-3. Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. [Clarification Statement: Examples of investigations could include heart rate response to exercise, stomate response to moisture and temperature, and root development in response to water levels.] [Assessment Boundary: Assessment does not include the cellular processes involved in the feedback mechanism.]

HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms. [Assessment Boundary: Assessment does not include specific gene control mechanisms or rote memorization of the steps of mitosis.]

HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy. [Clarification Statement: Emphasis is on illustrating inputs and outputs of matter and the transfer and transformation of energy in photosynthesis by plants and other photosynthesizing organisms. Examples of models could include diagrams, chemical equations, and conceptual models.] [Assessment Boundary: Assessment does not include specific biochemical steps.]

HS-LS1-6. Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules. [Clarification Statement: Emphasis is on using evidence from models and simulations to support explanations.] [Assessment Boundary: Assessment does not include the details of the specific chemical reactions or identification of macromolecules.]

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HS-LS1-7. Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy. [Clarification Statement: Emphasis is on the conceptual understanding of the inputs and outputs of the process of cellular respiration.] [Assessment Boundary: Assessment should not include identification of the steps or specific processes involved in cellular respiration.]

HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales. [Clarification Statement: Emphasis is on quantitative analysis and comparison of the relationships among interdependent factors including boundaries, resources, climate, and competition. Examples of mathematical comparisons could include graphs, charts, histograms, and population changes gathered from simulations or historical data sets.] [Assessment Boundary: Assessment does not include deriving mathematical equations to make comparisons.]

HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales. [Clarification Statement: Examples of mathematical representations include finding the average, determining trends, and using graphical comparisons of multiple sets of data.] [Assessment Boundary: Assessment is limited to provided data.]

HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions. [Clarification Statement: Emphasis is on conceptual understanding of the role of aerobic and anaerobic respiration in different environments.] [Assessment Boundary: Assessment does not include the specific chemical processes of either aerobic or anaerobic respiration.]

HS-LS2-4. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem. [Clarification Statement: Emphasis is on using a mathematical model of stored energy in biomass to describe the transfer of energy from one trophic level to another and that matter and energy are conserved as matter cycles and energy flows through ecosystems. Emphasis is on atoms and molecules such as carbon, oxygen, hydrogen and nitrogen being conserved as they move through an ecosystem.] [Assessment Boundary: Assessment is limited to proportional reasoning to describe the cycling of matter and flow of energy.]

HS-LS2-5. Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere. [Clarification Statement: Examples of models could include simulations and mathematical models.] [Assessment Boundary: Assessment does not include the specific chemical steps of photosynthesis and respiration.]

HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. [Clarification Statement: Examples of changes in ecosystem conditions could include modest biological or physical changes, such as moderate hunting or a seasonal flood; and extreme changes, such as volcanic eruption or sea level rise.]

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.* [Clarification Statement: Examples of human activities can include urbanization, building dams, and dissemination of invasive species.]

HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce. [Clarification Statement: Emphasis is on: (1) distinguishing between group and individual behavior, (2) identifying evidence supporting the outcomes of group behavior, and (3) developing logical and reasonable arguments based on evidence. Examples of group behaviors could include flocking, schooling, herding, and cooperative behaviors such as hunting, migrating, and swarming.]

HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring. [Assessment Boundary: Assessment does not include the phases of meiosis or the biochemical mechanism of specific steps in the process.]

HS-LS3-2. Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors. [Clarification Statement: Emphasis is on using data to support arguments for the way variation occurs.] [Assessment Boundary: Assessment does not include the phases of meiosis or the biochemical mechanism of specific steps in the process.]

HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population. [Clarification Statement: Emphasis is on the use of mathematics to describe the probability of traits as it relates to genetic and environmental factors in the expression of traits.] [Assessment Boundary: Assessment does not include Hardy-Weinberg calculations.]

HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. [Clarification Statement: Emphasis is on a conceptual understanding of the role each line of evidence has relating to common ancestry and biological evolution. Examples of evidence could include similarities in DNA sequences, anatomical structures, and order of appearance of structures in embryological development.]

HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment. [Clarification Statement: Emphasis is on using evidence to explain the influence each of the four factors has on number of organisms, behaviors, morphology, or physiology in terms of ability to compete for limited resources and subsequent survival of individuals and adaptation of species. Examples of evidence could include mathematical models such as simple distribution graphs and proportional reasoning.] [Assessment Boundary: Assessment does not include other mechanisms of evolution, such as genetic drift, gene flow through migration, and co-evolution.]

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behaviors, morphology, or physiology in terms of ability to compete for limited resources and subsequent survival of individuals and adaptation of species. Examples of evidence could include mathematical models such as simple distribution graphs and proportional reasoning.] [Assessment Boundary: Assessment does not include other mechanisms of evolution, such as genetic drift, gene flow through migration, and co-evolution.]

HS-LS4-3. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. [Clarification Statement: Emphasis is on analyzing shifts in numerical distribution of traits and using these shifts as evidence to support explanations.] [Assessment Boundary: Assessment is limited to basic statistical and graphical analysis. Assessment does not include allele frequency calculations.]

HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations. [Clarification Statement: Emphasis is on using data to provide evidence for how specific biotic and abiotic differences in ecosystems (such as ranges of seasonal temperature, long-term climate change, acidity, light, geographic barriers, or evolution of other organisms) contribute to a change in gene frequency over time, leading to adaptation of populations.]

HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species. [Clarification Statement: Emphasis is on determining cause and effect relationships for how changes to the environment such as deforestation, fishing, application of fertilizers, drought, flood, and the rate of change of the environment affect distribution or disappearance of traits in species.]

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HS-LS4-6. Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.* [Clarification Statement: Emphasis is on designing solutions for a proposed problem related to threatened or endangered species, or to genetic variation of organisms for multiple species.]

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3. Key Assignments:

Unit 1: Interactive Population Dynamics: Students determine where mice, rabbits, foxes, and owls fit into a food chain. The classroom is set-up to present a various number of these animals are posted; students calculate the population density of each organism, then evaluate the effect of density-dependent and density-independent limiting factors.

Unit 2: Life is in the Blood: Evaluate how multiple human body systems maintain homeostasis in am multicellular organism focusing on the transfer of material through the circulatory system via blood cells. Instructional strategies used are using visuals to model the systems, small group collaborative research, and presentation.

Unit 3: Floating Leaf Disk: An inquiry lab opportunity for students to collect and record the number of floating disks under different treatments. Using the collected data, students model the results in a graph to indicate the rate of photosynthesis. As photosynthesis occurs oxygen is released inside the leaf causing the disks to rise, however, different variables can be manipulated (color or light, light intensity, type of leaf, water temperature, CO_2 concentration, etc.)

Unit 4: It's not Fair: Modeling how mutations contribute to natural selection, based on traits and random environmental factors. Students choose traits each round with potential to be beneficial or harmful; it's a visual representation of evolution (change of organism throughout the rounds).

Unit 5: Super Baby Genetics: Connecting concepts of co-dominance, multiple alleles, Punnett Squares, 2-factor cross, sex-linked in inheritance; Students choose a male a female superhero and determine phenotypic traits. Then demonstrating recombination by rolling dice to determine offspring traits. Potential assessment will include, but not limited to, a poster, storyline/biography, and illustration (made by hand or computer).

Unit 6: Analyzing Climate Change Data: Interpreting data and making predictions using artic sea ice satellite data from the 1980's to current day. Students predict trends based on prior knowledge; then analyze data from "science on a sphere" website, and compare actual graphical representation to their initial predictions. Students are then tasked with creating an argument to justify the importance of using data collected over long periods of time vs. short periods of time.

4. Instructional Methods and/or Strategies:

- Lab-based learning (skills based labs as well as student designed and implemented labs)
- Cross Cutting Concepts (Patterns, Similarity & Diversity; Cause & Effect; Scale, Proportion & Quantity; Systems & Systems Models; Energy & Matter; Structure & Function; Stability & Change)
- Science & Engineering Practices (Asking Questions & Defining Problems; Developing & Using Models; Planning & Carrying out Investigations; Analyzing & Interpreting Data; Using Mathematics, Information & Computer Technology & Computational Thinking; Constructing Explanations & Designing Solutions; Engaging in Argument from Evidence; Obtaining, Evaluating & Communication Information)
- Four Corners discussions (Agree, Strongly Agree, Disagree, Strongly Disagree)
- Data interpretation and predictions
- Jig Saw research projects (students or student groups research different aspects of a topic and report their learning back to the whole class, e.g. different types of invasive species or genetic disorders)
- Computer based research projects: individual students or groups research
- Evidence based data interpretation (Claim, Evidence and Reasoning writing from labs or research projects)
- Student centered and created activities (e.g. Evolution Island where students determine changes over time to organisms (e.g. rats) on islands with different ecosystems)
- Scientific article reading, annotation and/or class report/presentation
- Using CER (claims, evidence, and reasoning) graphic organizer
- Project Based Learning
- Argument Driven Instruction
- "5 E" Lessons (Engage, Explore, Explain, Elaborate & Evaluate)
- Phenomena

5. Assessment Including Methods and/or Tools:

The fall final exam will cover the first two units and will assess students' understanding through the use of multiple choice questioning, short answer responses, and long answer responses.

The spring final exam will be a cumulative exam, consisting of all four units and all concepts covered. Students will be assessed through multiple choice, short answer responses, and long answer responses. Both mathematical and conceptual concepts will be assessed, with the long answer responses focusing primarily on the application of mathematics and the integration of various chemistry concepts. Additionally, students will also be assessed through a laboratory final, which will assess students' ability as it applies to hands on performance. The laboratory final will be drawn from one of the last five units and will likely cover titrations, calorimetry, and/or galvanic/voltaic cells. Students will be assessed not only on their performance in the lab, but on post-lab questions that delve into the core mathematical and conceptual concepts at hand. Students will submit a written final report that will serve as a portion of their final examination grade.

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: CHEMISTRY IN THE EARTH SYSTEM**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Chemistry in the Earth System is part of the high school three course model that is aligned to the Next Generation Science Standards. The course explains how chemical processes help drive the earth's system. The course emphasizes the following instructional segments: combustion, heat and energy in the earth's system; atoms, elements, and molecules; chemical reactions; chemistry of climate change; and dynamics of chemical reactions and ocean acidifications. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Chemistry in the Earth System.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Chemistry in the Earth System
2. Transcript Title/Abbreviation:	Chem in Earth Syst
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Science
6. Grade Level(s):	9-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	
13. Brief Course Description: Chemistry in the Earth Systems entails the understanding of the nature of matter and its transformations when they study atomic and molecular structure, the effects of electron interaction, chemical bonds, and stoichiometry. Additionally, the course offers the study of the properties of gases, acids and bases, solutions, and organic and inorganic compounds and an exploration of chemical systems through reactions and nuclear processes.	
14. Prerequisites:	Biology; Co-requisite: Integrated Math1 or Higher
15. Context for Course: Chemistry in the Earth System Honors is one of three courses in California's three-course model for high schools implementing NGSS. To highlight the nature of Earth and space sciences (ESS) as an interdisciplinary pursuit with crucial importance in California, the course presents an integration of ESS and Chemistry.	
16. History of Course Development: The course was developed to meet the 2013 state adopted NGSS standards for the advanced learner. It is one course from a three-course model that combines all high school performance expectations into three courses.	
17. Textbooks:	Wilbraham, A. C., & Prentice-Hall, Inc. (2007). Prentice Hall Chemistry. Upper Saddle River, NJ: Prentice Hall.
18. Supplemental Instructional Materials:	Teacher-created materials as needed
C. COURSE CONTENT	
1. Course Purpose: This course is a laboratory science course designed for the college-bound student that emphasizes students' ability to demonstrate their knowledge of chemistry within the context of the Science and Engineering Practices delineated in the Next Generation Science Standards. This course specifically examines the role of chemical properties and processes in driving the Earth system.	

The sequence of this course is based on a specific storyline about climate ***change*** modeled in the CA State Science Framework. It begins with a tangible example of combustion and food calorimetry, and indeed the combustion of fossil fuels and release of heat, carbon dioxide, and water is a fundamental thread that ties together most of the sections of the course and ensures that chemistry concepts are able to be placed in the context of Earth's systems.

While many chemistry courses begin with the study of the atom, this course begins with macroscopic observations of a familiar phenomenon (combustion) and then zooms into the microscopic, but begins with simple interactions between particles to explain thermal ***energy*** and how it is exchanged within systems. Students then apply their understanding of heat flow to see its role in driving plate tectonics within the Earth system and only after students are firmly thinking about matter as particles do they zoom in and look at the nature of the particles themselves by studying atoms and how their behaviors are categorized into the periodic table. Once students are equipped to model simple chemical reactions, they return to the combustion chemical reaction and consider the impact its reaction product, carbon dioxide, has on the global climate system and students consider more advanced chemical reactions, then applying their understanding of chemical equilibrium to the very real problem of ocean acidification, which is also due to changes in carbon-dioxide concentrations in the atmosphere. In the end, students will have explored the fundamentals of chemistry and essential roles that these processes play in Earth's solid geosphere, its liquid hydrosphere, and its gaseous atmosphere.

2. Course Outline:

Instructional Segment 0 - Science Skills and Engineering Practices

Sample Guiding Questions:

- How do scientists and engineers collect data?
- What skills are necessary to be a scientist or an engineer?

Learning Targets:

- Students will to build upon foundational skills in scientific inquiry and strengthen mathematical skills needed to analyze data, skills to present data, and refine their understanding of engineering principles needed to develop a solution to a problem within given constraints. These skills will be called upon and further developed throughout the course.
- Topics of study and coursework will include engaging in arguments from evidence, systems and system models, accuracy and precision, types of data, mathematical manipulation, recording of results, analyzing raw data, constructing tables, drawing graphs, describing statistics and the spread of data, and engineering principles (define->develop->optimize).

Unit 1: COMBUSTION

In this unit students will work to answer the guiding questions:

- "What is energy, how is it measured, and how does it flow within a system?"
- "What mechanisms allow us to utilize the energy of our foods and fuels?"
- Learning Targets:
- Students investigate the amount of stored chemical potential energy in food. They make observations of material properties at the bulk scale that they will later explain in the atomic scale. The themes of combustion and CO_2 introduced in this unit will tie together several of the units throughout the course.

- Students will begin by examining nutrition labels of different foods where they will find a surprising amount of chemistry and develop and ***ask questions*** about what different items mean, like calories, and why they are included on the label. These questions will drive an investigation using a standard calorimetry experiment to measure the energy output of different foods. Students will ***analyze the data*** from the whole class, notice ***patterns, and*** represent this system with a pictorial ***model*** of the components and interactions including ***energy flows*** and an explanation of the ***cause and effect*** relationships articulating how the energy transfers from one place to another. The experimental results tend to systematically underestimate of the energy of the

food compared to nutrition labels. Students can use their model to speculate about the reasons for the difference.
- Before moving on, students should relate the combustion in this experiment to the real world. They should make a list of all the places that they know where things burn and they will revisit them in unit 5 as they discuss the impact of burning fossil fuels on global climate.

Unit 2: HEAT AND ENERGY IN THE EARTH SYSTEM

In this unit students will work to answer the guiding questions:
- "How is energy transferred and conserved?"
- "How can energy be harnessed to perform useful tasks?"

Learning Targets:
- Students will **develop models** of ***energy*** conservation within ***systems*** and the mechanisms of heat flow. They relate macroscopic heat transport to atomic scale interactions of particles, which they will apply in later units to **construct models** of interactions between atoms. They **use evidence** from Earth's surface to infer the heat transport processes at work in the planet's interior.
- An inquiry-driven investigation to monitor temperatures culminates with a **scientific explanation** resembling the Second Law. Students perform experiments such as measuring the temperature of two bodies of water before and after mixing, and the temperatures of metal blocks and water prior to and following immersion. By repeating these **investigations** with differing quantities of materials, students will apply the concept of ***scale, proportion, and quantity*** to predict temperature ***changes***, equilibrium conditions, and magnitudes of energy transferred.
- Students will explore the 2nd Law of Thermodynamics and relate the processes of conduction, convection, and radiation to the motion of individual particles. Students will **construct an explanation** about why solids are much better at transferring heat by conduction than liquids or gases because of their greater density.
- Students must **develop a model** of Earth's interior and use evidence to **support the claim** that its interior is convicting.
- Students will apply their **model** of density driven flow in rock not only to help understand heat transfer, but also to see how these flows give rise to plate tectonics.

Unit 3: ATOMS, ELEMENTS, AND MOLECULES

In this unit students will work to answer the guiding questions:
- "What is inside atoms and how does this affect how they interact?"
- "What models can we use to predict the outcomes of chemical reactions?"

Learning Targets:
- Students recognize patterns in the properties and behavior of elements, as illustrated on the periodic table. They use these patterns to develop a **model** of the interior structure of atoms and to predict how different atoms will interact based on their electron configurations. They use chemical equations to represent these interactions and begin to make simple stoichiometric calculations.

- Students will build a mental model of how the periodic table is arranged by using a physical model to arrange color chips from a paint store into a matrix based on color and hue. Students will understand the power of such models by predicting the existence of color/hue chips that were removed from the final matrix before the chips were distributed, mirroring the process Mendeleev used to predict the existence of elements not yet known.
- As students **analyze** plots of the properties of the elements as a function of atomic number, they should notice and discuss trends and patterns such as the comparatively low ionization energies of the alkali metals versus the high ionization energies of the noble gasses.

- Students should understand the basis for trends and ***patterns*** in the periodic table, and be able to **explain** the types of chemical reactions and resulting bonds that occur between elements.
- Students will use chemical equations as mathematical models to illustrate the cycle of matter within these chemical systems. Students will apply these basic principles of stoichiometry through laboratory **investigations**, problem solving, and reinforcement with apps and programs.

Unit 4: CHEMICAL REACTIONS

In this unit students will work to answer the guiding questions:

- "What holds atoms together in molecules?"
- "How do chemical reactions absorb and release energy?"

Learning Targets:

- Students compare the strength of different types of bonds and attractions and develop **models** of how ***energy*** is stored and released in chemical reactions.
- When students **conduct an investigation** to measure the conductivity of different solutions (salts, acids, bases, hydrocarbons, and oxides), they gather evidence that there must be some relationship between electricity and material properties and when they **investigate** the boiling points of water with different concentrations of salt and other solutes, they gather evidence that the salt must somehow be 'attracting' the water and preventing it from escaping as a gas. Students also notice patterns in the results of these experiments where materials that conduct electricity when they dissolve have a larger effect on boiling point.
- Students will use this evidence to support a **model** of different types of chemical bonds and attractions and learn how the nucleus of one atom has enough attractive force to pull one, two, or three electrons away from nuclei that does not have the same attractive force on its own electrons. Students will also **investigate** other forms of attraction such as polar attractions and intermolecular forces, **investigate** properties like surface tension and viscosity, and provide a model-based explanation of how these properties relate to microscopic electromagnetic attractions. Students will also develop and **explain models** of covalent, polar covalent, and ionic bonding and build on their model of the ionic bond breaking between sodium and chlorine when salt is dissolved in water.
- Students conduct **investigations** to **collect and analyze data** (both quantitative and descriptive observations) to discover that some reactions appear to release energy to their environment while others absorb it. By comparing the bond energy of the products with the bond energy of the reactants, students will construct mathematical **models** of the ***energy*** in the ***system*** and predict whether or not energy will be absorbed or released. Students observed differences in the relative strength of different types of bonds and attractions and students will **analyze data** about binding energy from published data tables or from their own investigations to look for ***patterns***.

Unit 5: CHEMISTRY OF CLIMATE CHANGE

In this unit students will work to answer the guiding questions:

- "What regulates weather and climate?"
- "What effects are humans having on the climate?"

Learning Targets:

- Students develop **models** of energy flow in Earth's climate as they revisit combustion reactions from Unit 1 to focus on emissions from fossil fuel energy sources. They apply **models** of the structures of molecules to explain how different molecules trap heat in the atmosphere and then **evaluate** different chemical engineering solutions that can reduce the impacts of climate change.
- Students will make a **conceptual model** of Earth's energy budget using accessible analogies like the line for a ride at an amusement park and the constant stream of eager visitors arriving at the end of the line represents solar radiation.

- Students will research the recent major Methane leak in southern California and **ask questions** about how gases other than CO_2 interact with infrared energy. Students will begin to develop **models** of how greenhouse gases absorb infrared energy with a basic computer simulation showing how molecules can absorb energy as the atoms in the bond vibrate towards and away from one another. Students will then use **evidence** from the simulator to construct an **argument** about why methane, water vapor, and carbon dioxide are strong greenhouse gases while oxygen and nitrogen are not.
- Students next **analyze** the past data related to earth's climate including atmospheric composition, average temperature, solar cycles, and Milankovitch cycles to refine and inform their models of energy flow in Earth's Climate system.
- Students will **evaluate** the scientific arguments made in media sources using a checklist called the Science Toolkit, discuss the content and graphs from different sources and construct an **argument** about which graph contains stronger **evidence**. To conclude the lesson, students write letters articulating their arguments about the claims in the articles to the editors of the media sources**.**

Unit: 6 THE DYNAMICS OF CHEMICAL REACTIONS AND OCEAN ACIDIFICATION

In this unit students will work to answer the guiding questions:

- "How can you alter chemical equilibrium and reaction rates?"
- "How can you predict the relative quantities of products in a chemical reaction?"

Learning Targets:

- Students will investigate the effects of fossil fuel combustion on ocean chemistry, develop models of equilibrium in chemical reactions, and design systems that can shift the equilibrium. During this unit, students conduct original research on the interaction between ocean water and shell-building organisms.
- Throughout the unit, students will gather evidence to construct a **scientific explanation** about what ***causes*** these variations in the rates of chemical changes in the ocean and **investigate** the response of reaction rates to varying temperatures and concentrations of reactants.
- Once students understand the ***effect*** of changing the concentration of reactants and products on reaction rates, they are ready to apply their understanding to novel situations. By applying *Le Chatlier's principle*, students can predict ways to increase the amount of product in a chemical reaction and refine the design of a chemical system by first measuring the output and then testing the effectiveness of changing the temperature and relative concentrations of reactants and products.
- Students will examine data showing trends in CO_2 concentrations in the ocean and atmosphere as evidence of a balancing feedback between two of Earth's ***systems*** that slows the rate of climate change and then design a simple **investigation** to generate CO_2 (gas released by a baking soda/vinegar reaction, a combusting candle, or yeast foaming) and measure the resulting pH. Students will also investigate the ***effect*** that temperature and salinity have on the ability of CO_2 to dissolve into the water and then apply their **models** of chemical equilibrium to predict the impacts of changing CO_2 levels in the ocean on these organisms.
- As students apply their **model** of equilibrium reactions from Le Chatelier's principle, they see that as the concentration of CO_2 increases, the ***system*** compensates by producing more products on the right side. Students will observe these effects themselves by planning an **investigation** to measure the rate of shell dissolution at different pH levels and they will obtain **information** on the health of coral reefs and coral bleaching, due in part to these pH changes.

3. Key Assignments:

- Various labs including; Measurement lab, Density lab, and Burning the Candle lab
- Using a simple calorimeter, students light a nut or other high Calorie snack food on fire below a metal can containing a measured amount of water. By measuring the temperature increase in the water and change in mass of the food item, students calculate the amount of ***energy*** transferred, which can be measured in the familiar unit of Calories, pool and analyze their class data, and represent their understanding of energy transfer

in a pictorial model with labels.

- Warm Embrace – Students explore how life has become more convenient as the fundamentals of thermochemistry are used to make instant hot and cold packs; along with which particular chemical process is most economically viable.
- Students dehydrate copper sulfate pentahydrate ($CuSO_4$-$5H_2O$) into the anhydrous salt ($CuSO_4$) by heating, and measure the mass of the resulting copper sulfate and water.
    - Students will present their observations, describe trends, construct explanations, and argue from evidence about the ratio of the mass of the resulting copper sulfate (dry mass) to water (the mass lost in dehydration). Students will have to defend with evidence and reasoning the claim that because the ratio of the component molecules in such a dehydration reaction remains constant, then the ratio of component elements must also remain constant. By **applying mathematical thinking**, students learn to balance chemical reactions and predict relative quantities of products.
- Students **plan and conduct investigations** to continuously monitor the temperature change accompanying the following reactions:

    1. $CaO(s) + H_2O(l) \rightarrow Ca(OH)_2(s)$ (lime + water)
    2. $NH_4NO_3(s) + H_2O(l) \rightarrow NH_4^+(aq) + NO_3(aq)$ (ionization of ammonium nitrate, a fertilizer)
    3. $HCl(dilute) + NaOH(dilute) \rightarrow H_2O(l) + NaCl$ (neutralization)
    4. $NaCl(s) + H_2O(l) \rightarrow Na^+(aq) + Cl^-(aq)$ (dissolving table salt)
    5. $CaCl_2(s) + H_2O \rightarrow Ca+(aq) + 2Cl^-(aq)$ (de-icing roads)
    6. $NaHCO_3(s) + HCl(aq) \rightarrow H_2O(l) + CO_2(g) + NaCl(aq)$ (neutralization)
    7. $CH_3COOH(aq) + NaHCO_3(s) \rightarrow CH_3COONa(aq) + H_2O(l) + CO_2(g)$ (baking soda& vinegar)
    8. $C_{12}H_{22}O_{11} + H_2O$ (in 0.5M HCl) $\rightarrow C_6H_{12}O_6$ (glucose) + $C_6H_{12}O_6$ (fructose)(decomposing table sugar)
    9. $KCl(s) + H_2O(l) \rightarrow K^+(aq) + Cl^-(aq)$ (dissolving potassium chloride)
    10. $NaCl(s) + CH_3COOH(aq) \rightarrow Na^+(aq) + CH_3COO^-(aq) + HCl$ (preparing HCl to clean tarnished metals)
    11. $2H_2O_2 \rightarrow 2H_2O + O_2$ (Decomposition Reaction using a catalyst)

    - Students take screen captures of the temperature plots, classify each reaction as endothermic or exothermic, and represent it using two or more of the specified model-types, or an additional model type that they develop on their own. When writing their lab reports, students apply scientific principles and evidence to construct explanations for the thermal ***changes*** that they have observed in each reaction.
- Students will plot historic climate data provided by the teacher on chart paper and display their posters around the classroom. Students will next **analyze** the past data and draw a graph predicting the next 5 years, extrapolating both the long-term trend of increasing CO_2 and the annual variation and then **calculate** the year in which atmospheric CO_2 will reach 540 ppm (approximately double the pre-industrial CO_2 levels), assuming that current trends continue. Students will compare their predictions and discuss assumptions they made

about how quickly the CO_2 would increase.

- By mixing baking soda (sodium bicarbonate, $NaHCO_3$) and vinegar (acetic acid, CH_3COOH) in sealed sandwich bags, students will gauge the speed and degree of reaction by the rate and amount of CO_2 gas produced as indicated by the swelling of the bag measured by volume of water displacement: $NaHCO_3$ (aq) + CH_3COOH (aq) ---> CO_2 (g) + H_2O (l) + CH_3COONa (aq). Students **investigate** the role of the quantity of molecular collisions by repeating the activity with differing concentrations of vinegar and then **investigate** the role of temperature by warming or cooling the reactants while keeping their concentrations constant. By observing the swelling of the bags in response to varying temperatures and concentrations, students will discover that those factors that increase the number and ***energy*** of molecular collisions (increased concentration and temperature of reactants) result in increased reaction rates. Combining a **conceptual model** with experimental evidence, students will then write reasoned **explanations** for factors influencing chemical reaction rates.

4. Instructional Methods and/or Strategies:

- Lab-based learning (skills based labs as well as student designed and implemented labs)
- Cross Cutting Concepts (Patterns, Similarity & Diversity; Cause & Effect; Scale, Proportion & Quantity; Systems & Systems Models; Energy & Matter; Structure & Function; Stability & Change)
- Science & Engineering Practices (Asking Questions & Defining Problems; Developing & Using Models; Planning & Carrying out Investigations; Analyzing & Interpreting Data; Using Mathematics, Information & Computer Technology & Computational Thinking; Constructing Explanations & Designing Solutions; Engaging in Argument from Evidence; Obtaining, Evaluating & Communication Information)
- Four Corners discussions (Agree, Strongly Agree, Disagree, Strongly Disagree)
- Data interpretation and predictions
- Jigsaw research projects (students or student groups research different aspects of a topic and report their learning back to the whole class, e.g. different types of invasive species or genetic disorders)
- Computer based research projects: individual students or groups research
- Evidence based data interpretation (Claim, Evidence and Reasoning writing from labs or research projects)
- Student centered and created activities (e.g. Evolution Island where students determine changes over time to organisms (e.g. rats) on islands with different ecosystems)
- Scientific article reading, annotation and/or class report/presentation
- Using CER (claims, evidence, and reasoning) graphic organizer
- Project Based Learning
- Argument Driven Instruction
- "5 E" Lessons (Engage, Explore, Explain, Elaborate & Evaluate)
- Phenomena

5. Assessment Including Methods and/or Tools:

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: CHEMISTRY IN THE EARTH SYSTEM HONORS**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Chemistry in the Earth System Honors is part of the high school three course model that is aligned to the Next Generation Science Standards. The course explains how chemical processes help drive the earth's system. The honors course emphasizes the following instructional segments with depth and complexity: combustion, heat and energy in the earth's system; atoms, elements, and molecules; chemical reactions; chemistry of climate change; and dynamics of chemical reactions and ocean acidifications. This item was presented to the Board of Education on April 19, 2018, as information.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the new course Chemistry in the Earth System Honors.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Chemistry in the Earth System Honors
2. Transcript Title/Abbreviation:	Chem Earth Sys H
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	Yes
5. Subject Area/Category:	Meets UC/CSU "d" Laboratory Science requirement
6. Grade Level(s):	9-12
7. Unit Value:	5 credits per semester/ 10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	
13. Brief Course Description: Chemistry in the Earth Systems Honors entails the advanced understanding of the nature of matter and its transformations when they study atomic and molecular structure, the effects of electron interaction, chemical bonds, and stoichiometry. Additionally, the course offers the study of the properties of gases, acids and bases, solutions, and organic and inorganic compounds and an exploration of chemical systems through reactions and nuclear processes.	
14. Prerequisites:	Biology; Co-requisite: Integrated Math 1 or Higher
15. Context for Course: Chemistry in the Earth System Honors is one of three courses in California's three-course model for high schools implementing the Next Generation Science Standards (NGSS). To highlight the nature of Earth and space sciences (ESS) as an interdisciplinary pursuit with crucial importance in California, the course presents an integration of ESS and Chemistry. The honors course in Chemistry is distinguished by the depth and scope of work required to show mastery of the skills with increased rigor and complexity beyond the scope of a general course.	
16. History of Course Development: The course was developed to meet the 2013 state adopted NGSS standards for the advanced learner. It is one course from a three-course model that combines all high school performance expectations into three courses.	
17. Textbooks:	Wilbraham, A. C., & Prentice-Hall, Inc. (2007). Prentice Hall Chemistry. Upper Saddle River, NJ: Prentice Hall.
18. Supplemental Instructional Materials:	Teacher-created materials as needed
C. COURSE CONTENT	
1. Course Purpose:	

This course is a laboratory science course designed for the college-bound student that emphasizes students' ability to demonstrate their knowledge of chemistry within the context of the Science and Engineering Practices delineated in the Next Generation Science Standards. This course specifically examines the role of chemical properties and processes in driving the Earth system.

The sequence of this course is based on a specific storyline about climate change modeled in the CA State Science Framework. It begins with a tangible example of combustion and food calorimetry, and indeed the combustion of fossil fuels and release of heat, carbon dioxide, and water is a fundamental thread that ties together most of the sections of the course and ensures that chemistry concepts are able to be placed in the context of Earth's systems.

While many chemistry courses begin with the study of the atom, this course begins with macroscopic observations of a familiar phenomenon (combustion) and then zooms into the microscopic, but begins with simple interactions between particles to explain thermal energy and how it is exchanged within systems. Students then apply their understanding of heat flow to see its role in driving plate tectonics within the Earth system and only after students are firmly thinking about matter as particles do they zoom in and look at the nature of the particles themselves by studying atoms and how their behaviors are categorized into the periodic table. Once students are equipped to model simple chemical reactions, they return to the combustion chemical reaction and consider the impact its reaction product, carbon dioxide, has on the global climate system and students consider more advanced chemical reactions, then applying their understanding of chemical equilibrium to the very real problem of ocean acidification, which is also due to changes in carbon-dioxide concentrations in the atmosphere. In the end, students will have explored the fundamentals of chemistry and essential roles that these processes play in Earth's solid geosphere, its liquid hydrosphere, and its gaseous atmosphere.

2. Course Outline:

Unit 0: Science and Engineering Practices

In this introductory unit, students will get reacquainted with the science and engineering practices from prior science and/or engineering classes. In this unit students will design a small experiment, and in doing so will learn the following important scientific skills: safety procedures and policies, research background information and prior findings, design an experiment, identify independent and dependent variables, conduct experiment, read measuring instruments (temperature, length, weight/mass), log data into notebook, organize data into tables, convert data tables into graphs, analyze and evaluate results, account for experimental error, and communicate results using CLAIM, EVIDENCE, and REASON and through a FORMAL LAB REPORT.

The scientific process allows scientists to be able to study natural phenomena by following a collective series of steps, in which observations lead to questions, questions to possible hypotheses, then testing of the hypothesis by only changing one variable, analyzing the results, and drawing conclusions to determine the validity of both the data (experiment) and the hypothesis. Experiments may not yield the desired results, and that is complete normal. Most experiments completed by scientist do not lead to a positive hypothesis. However, the data collected from the experiment can tell us a lot about the natural world. A negative hypothesis can tell us just as much as a positive hypothesis. Eventually, in the scientific community, if a hypothesis has obtained substantial evidence, then it can become a theory. On the other hand, a law is a statement (can be mathematical) that describes (not explains) natural phenomena.

When conducting an experiment, it is important to note the quality of the data. There will always be human error, and this should always be noted in the discussion part of a lab report. It is important to be both accurate AND precise. (Accuracy is how close you are to the true value, and precise is how exact your measurement is.) Significant figures will be used to reflect the exactness of such measurements. Significant figures are important because they indicate the "certain" versus the "uncertain" values that you obtain from a measuring tool. In addition, percent error is used to calculate the accuracy of the data, how close you are to the actual value. The formula for percent error is the following:

% Error = ((Theoretical Value - Experimental Value)/Theoretical Value) x 100
It is important to understand how to read instruments in science, especially in Chemistry where things are read at a smaller scale. The ability to read and collect data both accurately and precisely will determine the quality of the data. Chemistry studies matter and its properties, which can be measured in multiple ways. The volume (the amount of space an object occupies) matter takes up can be determined by using several measuring tools, (beaker, erlenmeyer flask, graduated cylinder, pipette, burette, etc. Matter can also be measured by determining its mass, which is different than the weight. Mass is the amount of matter/substance, while weight is how the gravitational force acts on the matter. A balance is used to determine the mass of a substance (electronic balance, triple-beam balance, etc).

Chemistry uses the SI units: meter for length, kilogram for mass, second for time, kelvin for temperature, and mole for amount of substance. It also uses prefixes to easily convert between a large unit and a small unit. Some of the prefixes are as follow: Kilo- (k) is for 1000, centi- (c) is for 1/100, and milli- (m) is for 1/1000. Some units are derived, meaning they come from a combination of units. Volume is one of these units: 1L = 1000 ml = 1000cm3.

Unit 1: Combustion
The focus of this unit will be nutrition and combustion. Students will start by looking at the nutrition facts of different "groups" of food: lipids, carbohydrates, and protein. Students will use explore how each different type of macromolecule provides energy to the body. This exploratory assignment is to determine students' current understanding of nutrition, specifically calories, what chemical components of food actually gives us energy. Students will explore questions like: What are Calories? and How do we measure Calories?

Guiding Questions:
- What is energy, how is it measured, and how does it flow within a system?
- What mechanisms allow us to utilize the energy of our foods and fuels?

Learning Targets:
- Students will use the questions they obtain from this engagement assignment to construct their own calorimetry experiment.
- Students will be asked to analyze the data from their experiment and to determine temperature and mass patterns, and eventually come up with the conclusion that 'large mass = more energy.'
- Students will investigate what happens to mass during combustion, while learning about conservation of mass.
- Students will also develop a model to represent to flow of energy in the system to understand where the unaccounted for mass/energy went, and prompted to ask questions that will lead them to ask about how changing their experimental design can change their results. Will a different can cause different increases in temperature (specific heat capacity)? Will using something other than water cause a different change in temperature (specific heat capacity and thermal conductivity)?
- This sub-section will end by having students revise their design and repeat their experiment using one of their new questions to discover more information about specific heat capacity and combustion.

NGSS Standards:
- HS-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.
- HS-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.
- HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.

- HS-PS3-1. Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.

Unit 2: Heat and Energy in the Earth System
This unit's focus in on the laws of thermodynamics at the atomic scale, but also a system as large as the Earth. Students will start to investigate the different forms of energy, and classify them as either potential or kinetic. Students will also connect energy to motion, motion of atoms (microscale) and the motion of the planet (macroscale). The amount of energy can be measured using temperature. Students will conduct a last Calorimetry experiment in which they will use the temperature to calculate the total amount of energy that transferred from one system into another. Temperature is the measurement of the average kinetic energy. Molecules are constantly moving, and the more energy they have, the more they move. But also, as such molecules collide, they can interact. Also, energy is always moving from an area of high energy, into an area of low energy, until both (closed) systems have reached equilibrium. The energy is transferred through the collision of the molecules. Yet, no energy is created nor destroyed, it is only transformed from one form into another.

This unit will allow students to connect the chemistry to the earth science. Students will understand that the First Law of Thermodynamics applies to all earth systems, and systems in the universe. Energy comes into the biosphere as solar energy, which is then converted into chemical energy by photosynthetic organisms, it can then be transferred between one living organism into another. Also, such energy can cause the movement of wind and ocean currents.

The Second Law of Thermodynamics states that the amount of entropy in the universe (energy equilibrium and energy unavailability) is constantly increasing. Entropy is the driving force for diffusion and equilibrium. A system at equilibrium has no energy. However, two systems with different energy distributions have available energy. Students will use their knowledge to expand on their Energy Flow Model from unit 1.

NGSS Standards:

- HS-PS3-1. Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.
- HS-PS3-2. Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as either motions of particles or energy stored in fields.
- HS-PS3-4. Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).
- HS-ESS2-3. Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.
- HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth's systems.
- HS-ESS2-3. Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.
- HS-ETS1-4. Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

Guiding Questions:

- How is energy transferred and conserved?
- How can energy be harnessed to perform useful tasks?

Learning Targets:

- Students will spend a good amount of time in this section taking a look at the macroscopic scale (the earth systems). The Second Law of Thermodynamics is the driving force for conduction, convection, and radiation. Because of the constant input of energy from either the Sun or radiation, the Earth system is constantly trying to reach equilibrium, but will never do unless all internal and external energy sources are depleted.
- To better understand convection, students will complete a simple convection lab, with water at different temperatures. Students will use this to develop a model that illustrates how convection affects the Earth's interior. These constant convections of the earth's mantle can cause seismic waves. The path of seismic waves can be determined based on the data from different parts of the world.
- Students will analyze such data to determine the epicenter of seismic activity.
- Students will finish this unit by connecting the motion of plate tectonics to energy flow, and the changes that occur to the Earth over both short and long periods of time.

Unit 3: Atoms, Elements, and Molecules

In this unit, students will finally take a look at the particles and properties of particles that account for the microscopic change in energy in the previous unit. They will start by exploring the development of the periodic table and the atomic model. Demitri Mendeleeve was one of the scientists that looked at the patterns of both physical and chemical properties of elements, and used it to re-organize the periodic table by placing them into columns and rows. Students will be given similar information as Mendeleeve. Students will be given cards with several pieces of information, asked to sort and categorize them, and lastly organize them in a way that makes sense. Students should be able to point out the repeating patterns: atomic mass, chemical properties, radius of atom, etc. Students will use their models, along with research they have conducted on their own, to connect the patterns to the atom's structure: protons, neutrons, and electrons.

NGSS Standards:

- HS-PS1-1. Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.
- HS-PS1-2. Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.
- HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.

Guiding Questions:

- What is inside atoms and how does this affect how they interact?
- What models can we use to predict the outcomes of chemical reactions?

Learning Targets:

- Students will take a look at the noble gases to determine the best electron configuration.
- Students will determine that atoms need a total of 8 valence electrons to be stable. Electrons that do not have such a configuration can either share electrons, or steal or lose electrons to obtain similar configurations to that of noble gasses. Such information can be used to predict which atoms are most likely to lose or gain electrons, and/or which atoms are most likely to create bonds by looking at the element's position within the periodic table.
- Students will connect electronegativity to the type of bond that it will make: non-polar covalent, polar covalent, ionic bond.

- Students will also look at metallic bonding and its special properties. There will be a greater emphasis on students using both SEP 6 and SEP 7, to construct explanations and argue from evidence, as they understand and recognize patterns that can be used to explain both physical and chemical properties of elements.
- Students will also take a look at the conservation of matter and the Law of Definite proportions.
- Students will study what the mole is, and how to use the periodic table to calculate the amount of moles of a substance.
- Students will eventually use stoichiometry to show proof of the law of conservation of mass, from understanding how ratios (molar ratios) can be used to calculate and predict the total amount of products from the total amount of reactants obtained.

Unit 4: Chemical Reactions
In this unit, students will focus on chemical energy. At this point, students should know that both mass and energy are conserved. And they will also determine that the same is true for a chemical reaction. So where is such energy stored? Students will start with an activity in which they will measure the conductivity of a solution of salts, acids, bases, hydrocarbons and oxides. They will take a look at the different boiling points to determine what is preventing gas from escaping. Students will also take a look at the different states of matter, and connect this to kinetic energy. Using Coulomb's Law, students will apply the principles of electrostatic attraction to predict the attraction occurs due to ionic bonds. Students will investigate the different forms of attractions. There are different types of intermolecular forces, these forces are what causes surface tension and viscosity.

NGSS Standards:

- HS-PS1-3. Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.
- HS-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.
- HS-PS2-4. Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.
- HS-PS3–5. Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.
- HS-PS1-5. Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.
- HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.

Guiding Questions:

- What holds atoms together in molecules?
- How do chemical reactions absorb and release energy?

Learning Targets:

- Students will take a look at endothermic and exothermic chemical reactions.
- Students will use the information they gather from the experiment to form a model that explains why there was an energy increase in one and an energy decrease in another.
- Students will form a model that shows the amount of energy in the system over time, by obtaining the temperature as such reactions happen over time.
- After students have looked at the different types of bonds and attractions, they will try to connect this to the amount of energy that is stored in the different types of forces (and bonds).

- Students will analyze data from their investigation, along with data provided to them from other investigations.
- Students will use the information they that have obtained so far to make calculations.
- Students will calculate the total amount of energy in chemical bonds, or predict the amount of energy that will be release in the form of heat.

Unit 5: Chemistry of Climate Change

This unit is extremely heavy on the Earth Science NGSS standards. In this unit, students will use all the understanding they have gathered about energy, combustion, chemical reactions, convection, etc. to get a better understanding of Climate Change. After taking a look at chemical reactions, students will take a look at combustion and the amount of energy and matter it gives off. However, combustion can occur in many types of material, not just in burning wood or the breaking down of carbohydrates. Today, most of the energy comes from hydrocarbon fuels. For example, cars use internal combustion to cause small pistons in the engine to move, which in turn moves the tires, and therefore the car. Combustion releases both carbon dioxide and water vapor. Due to the increase in hydrocarbon consumption in the world, the amount of carbon dioxide in the atmosphere is increasing. Because carbon dioxide is a greenhouse gas, combustion has a great impact on the Earth's climate. The greenhouse gases disrupt the flow of energy, entrapping energy in the atmosphere.

NGSS Standards:

- HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth's systems.
- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS2-6. Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.
- HS-ESS3-2. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.*
- HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.
- HS-ESS3-6. Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

Guiding Questions:

- What regulates weather and climate?
- What effects are humans having on the climate?

Learning Targets:

- Students will take a look at different forms of data to determine the effects of combustion on the environment. Where is most of the Earth's energy coming from? Once that energy comes in, where does it go? How does it circulate the earth? How do small changes to the atmosphere affect the earth's climate?
- Students will look at the change in the amount of greenhouse gases over the years and correlate this to the change in the atmosphere, hydrosphere, and biosphere.
- Students will investigate feedback loops, and look at cause and effects. There will be a major focus on the Earth's increasing temperature and its effect on the climate. For example, the amount of ice on our planet is shrinking, seawater is rising, but the concentration of salinity in the oceans is also decreasing. Also, the constant energy input is increasing the temperature of the ocean and the ocean is absorbing more carbon

dioxide, making it more acidic. This has caused mass coral bleaching, and is also responsible for endangerment of species, such as those of the Great Barrier Reef.
- Students will conduct a research study in which they will investigate the magnitude of how human activity has harmed the earth. The increase in temperature also has caused more ocean water evaporation, which eventually precipitates back into the earth in the form of heavy rain, storms, snow and snowstorms, and most recently tropical storms and hurricanes (cyclones).
- Students will focus on how feedback loops can intensify over the years, but also, how the earth is a extremely dynamic system.
- Students will also research and build devices that use alternative energy, and how technology in general can help or harm the environment.
- Students will connect Le Chatelier's principle to the increase of carbon dioxide in the atmosphere, and its absorption into the ocean.

Unit 6: The Dynamics of Chemical Reactions and Ocean Acidification
This unit will have students focusing on the ocean systems and chemical equilibrium. Previously, students looked at how an increase in energy means an increase in ocean water temperature. Students will dive in deeper into the topic to fully understand how feedback loops (positive and negative) contribute to the changes we are now experiencing in our ocean.

Not all reactions reach completion, but just as the forward reaction is happening, so is the reverse reaction. When the rate of the forward reaction is equal to that of the reverse reaction, it is said that the system has reached dynamic equilibrium. Our oceans for many years have been able to maintain dynamic equilibrium. However, there has been more disruption to the system, and is unable to maintain equilibrium.

NGSS Standards:
- HS-PS1-5. Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.
- HS-PS1-6. Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.*
- HS-PS1-7. Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.
- HS-ESS2-2. Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth's systems.
- HS-ESS2-6. Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.

Guiding Questions:
- How can you alter chemical equilibrium and reaction rates?
- How can you predict the relative quantities of products in a chemical reaction?

Learning Targets:
- Students will gather evidence and construct a scientific explanation to determine what causes the speed variations.
- Students will form a model that shows what is happening at the microscopic level, including atomic collision and bond formation.
- Students will conduct a lab in which they will take a look at what factors affect the rate of reaction: temperature, concentration, and surface area.

- Students will then take a look at Le Chatelier's principle to predict a reaction at equilibrium will respond to changes. Will products increase; will reactants increase? What happens when the temperature of the reactants increase? Does it speed up the reaction, or does it slow it down? And how is this explained by Le Chatelier's principle? What effects does increased carbon dioxide have on the ocean?
- Students will take a look at how increase in carbon dioxide in the ocean increases carbonic acid. Increase in carbonic acid means that shells, which are made of calcium carbonate, will dissolve.
- Students will also study current and future carbon dioxide projections to determine the extent to which humans have been dramatically changing the climate, and harming and destroying important ecosystems.

3. Key Assignments:

Unit 0:

Where in the World is Carbon Dioxide? Assignment

- Major Focus Question: How does water's adhesive and cohesive properties affect its ability to travel through a string?
- Assignment Overview: Students will be taking a look at the amount of carbon dioxide that is released from different sources. Now that students are aware that carbon dioxide is a greenhouse gas that is a major cause for today's climate change, they will be able to determine where most of the carbon dioxide is coming from. Using a balloon, students (or teacher) will collect carbon dioxide from breathing (cellular respiration), fossil fuels (car exhaust), and outside air. They will determine the amount of carbon dioxide in each solution using Bromothymol Blue solution, in which CO2 reacts.

Unit 1:

Combustion Machines Research (Machine Efficiency) Assignment

- Major Focus Question: What is internal-combustion? How do car engines work, and why is gasoline a very inefficient way of making a car move?
- Assignment Overview: In this assignment, students will work in groups to research different combustion machines. Students will pick one of the following combustion machines: automobile, steam engine, coal facility plant, ships, motorcycles, water vehicles, airplanes, etc. Students will research the efficiency of obtaining the energy from each engine. They will take a look at how much energy is lost to the environment within the system. Students will create PPT to present their findings to their classmates. As students present, students not presenting will be required to obtain the information presented to further their research and make adjustments to existing designs. Their goal is to make sure their adjustments increase the machine efficiency with water to form carbonic acid, and the carbonic acid will change the color of the solution from blue to green and then to yellow. Students will use this information to identify the pH of the solution, and therefore the amount of carbon dioxide in each of the tested variables. Students will be placing their data in a designated bound notebook. Student will need to submit a finalized lab report on their findings. In addition, students will research the current carbon dioxide levels are for Los Angeles, have heavily populated cities and compare it to rural cities. Students will also look at whether the amount of carbon dioxide has increased throughout the years.

Calorimetry Lab Part 1

- Major Focus Question: Where does the mass of the food go after combustion?
- Lab Overview: Students will be working on the Calorimetry experiment twice this semester, especially because there is now a greater emphasis on combustion this year. During this initial Calorimetry experiment, students will be comparing reactions such as combustion to food digestion and cellular respiration. Students will also focus on where both energy and mass goes after combustion. Students will conduct the calorimetry lab to explore where the energy stored in food goes. Students will draw a model that illustrates the flow of energy within the system. The goal is for students to recognize that energy never created or destroyed, but that it is transferred from one system to another. From the food into the water. Students will only be collecting initial

mass of food, final mass of food, initial temperature of water, and final temperature of water. They should note that the temperature of water has increased, so therefore the calories in food has been transferred to the water. Some more advanced students might also note that the mass has decreased, and after being prompted to research, also determine that the mass did not disappear but has been released in the form of gas.

Unit 2:

POGIL- Gas Variables Assignment

- Major Focus Question: How does energy disperse within a container?
- Assignment Overview: As students are taking a look at conventions, they will also take a look at the properties of gas. What can cause implosion, explosion within reactions? What causes the movement of the earth's mantle? What causes ocean currents or wind currents? This activity will help students understand and determine the gas laws that govern the earth. Students will work in groups to analyze different models in which they will determine the role in which factors such as volume, pressure, and temperature play on each other and molecular collisions. This assignment will also help students identify independent, dependent and controlled variables. In model 1, students will look at the gases in a non-flexible container. In model 2, students will look at gas inside a flexible (balloon) container. Using the models, students will work together to determine the relationships between the pressure and temperature, temperature and volume, and volume and pressure. Students will also be able to identify the Ideal Gas Law (from a list of several, all but one correct) that correctly indicates the relationship between all the three variables. Lastly, students will draw their own model to predict what happens if all three given examples were to cool down.

Calorimetry Lab Part -2

- Major Focus Question: Which types of fuels are the most efficient?
- Lab Overview: Students will once again explore Calorimetry, but this time using different types of biodiesel fuels, and now also calculate the total number of joules (calories) in each of the different types. Students will also be given the opportunity to design their experiment and to change their soda can with something else, or the water inside of the soda can with something else. This in turn will prompt students to think about specific heat capacity of metals and water. Nonetheless, they should notice that using the Specific Heat Capacity Formula will still heed similar results. Some substances students might want to test are: vegetable oil, olive oil, rubbing alcohol, ethanol, etc. Lastly, students will share and compare their group results to the rest of the class to evaluate the data obtained from the experiment from the expected outcome (what the research says) to determine where the rest of the energy escaped. Students will be placing their data in a designated bound notebook. Student will need to submit a finalized lab report on their findings.

Epicenters and Magnitude Lab Activity

- Major Focus Question: Where Did the Earthquake Originate?
- Lab Overview: After learning about conventions, students will dive deeper into the flow of energy within the earth systems. In this activity, student will use their gained knowledge to analyze seismogram measurements to determine the epicenter of two earthquakes, and determine the magnitude of the earthquakes according to Richter and Mercalli scales. In this lab, students will identify the p-wave and s-wave data, and determine the lag time for each seismogram. Students will also determine the distance using the Earthquake P-wave and S-wave travel time graph. Lastly, students will create a model that represents how the flow of energy in the earth systems can cause the movement of the tectonic plates. Students will not be required to turn in a finalized lab report, instead, they will be graded on the lab practices (including their bound notebook).

Unit 3:

POGIL- Bond Enthalpies Assignment

- Major Focus Question: Where is the energy in chemicals stored?
- Assignment Overview: The purpose of this activity is to help students relate the breaking or forming of bond with the absorption of energy (endothermic) or a release of energy (exothermic), define fond energy as energy needed to break ONE mole of bonds of a particular type, and calculate the approximate enthalpy change for a reaction using a table of average bond enthalpies. Students will look at several models. In model 1, students will compare two tables (bond breaking and bond forming) to conclude that these reactions are exact opposites of each other. The amount of energy that is needed to break a bond the amount of energy need to make a bond of the same but reverse reaction. Students will also connect bond making to exothermic reactions and bond forming to endothermic reactions. Students will also be able to compare the bond enthalpies of single to double to triple bonds. Students will be able to work together to determine that the bond enthalpy for a double bond is NOT simply double that of a single bond, but that in fact, it has a tested enthalpy of it's own. Lastly, students will use their knowledge to learn how to calculate the net energy change of a reaction, and compare this to a single versus double carbon bond.

3D Molecule Activity Assignment

- Major Focus Question: How can simple elements make large three-dimensional molecules?
- Assignment Overview: Students will have the opportunity to pick an organic molecule to research and build three-dimensionally. Students will conduct this activity after looking at Lewis Dot Structures and completing an assignment that will help them understand hybridization of orbitals. Students will be able to use online technology, along with molecular kits to determine the shape of their molecule. All molecules must have a minimum of 15 atoms. In addition, they will need to make sure that the atoms in the molecule have the correct color and hybridization (bond angles). They will need to research the following: a description, a picture of it's current use, history, the structure, the chemical formula, the scientific name, the function it has on the human body (or other functions), fun facts, and citations. Students will complete their assignment on a poster and present their molecule and their findings to the rest of the class. Students will be graded based on their peers for the presentation and by the teacher for their poster and molecule design.

Atomic Theory Lab

- Major Focus Question: How were scientists able to determine the structure of the atom without being able to directly observe it?
- Lab Overview: In this activity, students will follow in the footsteps of major scientists that helped develop today's atomic theory. There are three parts to this lab, each part exploring a subatomic particle that was discovered. Students will explore negative and positive charges using tape and balloon. Students will conclude that depending on the treatment of the tape, it will either be neutral (does not attract nor repel), negative or positive. In addition, students will determine whether like things or dislike things repel or attract. In turn, they will use this information to see how JJ Thompson determined that there must have been an electron in the atom. In the second activity, students will be trying to determine the shape of Styrofoam hidden under a board. The only way they can determine the shape is by tossing small marbles and tracking its path along the sand. Students will use this to understand how significant it was for Rutherford to see alpha particles both going through the gold foil and bouncing back. What did this say about the structure of the atom? Lastly, students will look at the nucleus. They will take a look at containers that are opened versus similar containers that are closed. The open containers represent what scientists knew; they knew that there were protons. However, the closed containers represent what scientists encountered. The mass that they expected was never the one that they obtained. Students will also have to hypothesize what makes the mass different.

Interpreting the Periodic Table Lab

- Major Focus Question: How can the periodic table be used to make useful predictions?

- Lab Overview: Students will explore the most important properties of the periodic table through the following four activities. During Activity 1, students will rotate around the room in stations to gather information about the physical properties of certain specific elements. They will use their information to determine if any of the elements share properties. In Activity 2, students will explore the Halide Family. Students will add drops of Silver Nitrate into medicine cups with NaCl, KBr, and KI. These three compounds have elements from the Halide family that will react in a similar way (they will get cloudy), but also differently (different colors). Students should be able to conclude that elements from the same family react in a similar way. In Activity 3, students will explore the reactivity of several metals. They will explore reactivity of calcium, copper, magnesium, and zinc. Three of these metals are in the same period, and two of the metals are in the same group. Students will gather information about the overall reactivity of the metals to predict where the most reactive metals are on the periodic table. Students should conclude reactivity increases going down the periodic table and decreasing moving from left to right on the periodic table. Students will later investigate their predictions to see if they were close the expected outcome. The last activity, 4, students will be given several cards which are color coded, have the first ionization energy, electronegativity, atomic radius, atomic mass, and reactions with oxygen and chlorine. They will need to find a way to organize the cards so that it displays the physical and chemical properties in a categorical order. The ideal outcome would be one in which students organize the data using ALL of the properties and come up with a table similar to that of the modern periodic table. Students will be placing their data in a designated bound notebook. Student will need to submit a finalized lab report on their findings.

Unit 4:

Chemical Reactions Calculator Assignment

- Major Focus Question: Which products will come out of a chemical reaction?
- Assignment Overview: Students will be asked to be able to make simple predictions using the periodic table about possible chemical reactions. Students will work together to predict the products given the reactants. They will use a slide-chart from Flinn Scientific to determine the type of reaction that will occur when two substances are mixed. Students will be using their findings of this assignment to make predictions for the labs of the same unit.

Stoichiometric Predictions Assignment

- Major Focus Question: How many products will there be? What are molar ratios? How are moles used to calculate the outcome? How is the estimated outcome compared to the experimental outcome?
- Assignment Overview: This assignment will help students practice their fundamental skills in stoichiometry. It will be the last assignment for this unit, and will have students using all gained knowledge to apply their understanding to different scenarios. In this activity, students will need to 1) balance an unbalanced equation, 2) use the periodic table to calculate the molar mass of a substance, 3) find the limiting reagent in the reaction 4) predict the amount of product that will come out of a reaction. Students will use these steps, for example, to determine what happens to all the excess carbon dioxide that is not being absorbed by plants through the photosynthetic process. Students will research and make a proposition on how measures needed increase the net process of photosynthesis. (Most students will determine that it is necessary to plant trees, create roof gardens, etc.) Students will share their findings in a Socratic-circle.

Balancing Chemical Equations Lab

- Major Focus Question: How does chemical reaction affect matter?
- Lab Overview: Students have already looked the conservation of mass. However, students will now take a look at it through the representation of a chemical reaction. Students will analyze different types of chemical reactions and work in groups to determine the products that are formed. Students will use the data that they gather from the reactions to determine possible chemical equations that account for both reactant and

product mass. They will use this information to add coefficients to the formulas and classify the type of chemical reaction observed. At the end of the activity, students should be able to observe and record chemical changes in substances, determine the product(s) of a chemical reaction, write and balance a chemical equation, and design and conduct an experiment to determine the type of reaction that is being observed. Students will not be required to turn in a finalized lab report, instead, they will be graded on the lab practices (including their bound notebook).

Stoichiometry and Limiting Reactants Lab

- Major Focus Question: What is a Limiting reactant and how does it affect the chemical reaction?
- Lab Overview: In this activity, students will observe and record data for different types of chemical reactions. They will learn about the mole ratio and how it can be used to calculate the expected chemical reaction outcome. To do this, students will have 0.10 M of CaCl2, Na2C2O4, and Na3PO4. Students will take a look at the amount of reactants that turn into products to determine the perfect combination of drops of reactant 1 to reactant 2 ratio. At the end of this, students will be able to understand what limiting reactants are, determine the combining ratios of calcium chloride and sodium oxalate and sodium phosphate, and write balance equations for each reaction. Students will be placing their data in a designated bound notebook. Student will need to submit a finalized lab report on their findings.

Unit 5:

Veganism vs. Vegetarianism vs. Omnivorism Assignment

- Major Focus Question: Do the choice of the human diet affect the environment?
- Assignment Overview: As students take a look at the different types of diets, students will research the carbon footprint that each diet has. Students will first of all examine their own carbon footprint and their impact on the environment. Students will research the pros and cons for each of the different diets to prepare for class debate. Students will need to be well informed about each of the diets, and so will be placed in groups to prepare. Students will be notified of which group they will support on the day before the debate. Students will need to be able to support their data with information by giving RELEVANT and strong evidence for or against a particular diet.

Climate Change Debate Assignment

- Major Focus Question: Is climate change happening? Or we just misinterpreting data? What type of human activity may be causing the climate change we see today?
- Assignment Overview: Students will investigate the current evidence for climate change. Students will be given different sources of data and different viewpoints to determine where or not humans have been causing the climate change we see today, and whether or not climate change is happening. The purpose of this activity is to get students acquainted with the environmental impact that humans have on the environment. In the second part of the activity, students will investigate alternative energy options that are not as harmful for the environment, and propose them as solutions to their classmates.

Carbon Cycle Lab (Combustion Part 2)

- Major Focus Question: Where does all the carbon go? Where is the extra carbon (from carbon dioxide and monoxide) end up?
- Lab Overview: This lab will help students take a closer look at combustion and the extra carbon dioxide that is being produced. Students will look at the carbon cycle by going around to different carbon cycle stations. Each cycle station will have students explore the mechanisms in which carbon is using to move through the earth. Students will also explore which human factors increase the amount of carbon into the environment.

Greenhouse Effect and Global Warming Lab (Combustion Part 3)

- Major Focus Question: What is the greenhouse effect and how do greenhouse gases contribute to global warming?

- Lab Overview: Students will take a look at the lasting effects of greenhouse gases on global warming. During the first part of the lab, students will take a look at what happens when a bottle that is covered with black paper is exposed to light. The temperature of a clear and half-covered bottle will be compared to that of a full covered bottle. In part two, students will collect carbon dioxide samples from different sources. (Unlike the first activity, students will be asked to pick different everyday carbon dioxide releasers than the ones they used in Unit 1.) Students will use their understanding of the carbon cycle to complete a titration lab in which students will determine the amount of solution needed to be added to the solution (carbonic acid solution) that will return the solution back to its original color. Students will be placing their data in a designated bound notebook. Student will need to submit a finalized lab report on their findings.

Unit 6:

Acid Rain Assignment

- Major Focus Question: How is pollution affecting our freshwater?
- Assignment Overview: Students will research the effect of pollution on rainwater (and other freshwater sources). Students will explore significant historical structures and the effects of acid rain. Students will write a 4-5 page research paper in which they explore possible solutions to improve the rainwater.

Ocean Acidification Assignment

- Major Focus Question: How do higher temperature and extra carbon dioxide harm the coral reefs?
- Assignment Overview: In this assignment, students will be taking a look at the toll climate change is having on the ocean ecosystems. Students will research what coral bleaching is, how it is impacting the species, what chemicals causes coral bleaching, and what can be done to reverse the effects? Students will present their unique solutions to the class. Students will grade each other with the evaluation rubric.

Alka-Seltzer Reaction Time Lab

- Major Focus Question: What factors can speed up chemical reactions?
- Lab Overview: As students are learning about the environment, and human influence on the environment, they will also take a look at the factors that can speed up or slow down chemical reactions. There are many chemical reactions happening around the globe at all times, however, some chemical reactions are happening because of chemical exposure caused by man-made products. Some countries have restrictions, while other countries do not. Students will take a look at different factors that can affect a chemical reaction: temperature, concentration, pressure, and surface area. Students will plan and conduct their own experiment to test which factors can speed up chemical reactions and which factors can slow down chemical reactions by using Alka-Seltzer tablets. Students will be placing the tablets into film canisters to test the time it takes for the canister to increase in pressure and explode into the air. Students will be placing their data in a designated bound notebook. Students will need to submit a finalized lab report on their findings.

Ocean Acidification Red Cabbage pH Indicator Lab

- Major Focus Question: How does natural selection work?
- Lab Overview: This experiment will help students learn about alkalinity, which helps seawater resist changes in pH. Students will test different waters (just as they did for the air) to their own made Red Cabbage pH indicator. The larger emphasis is on Le Chatelier's principle about what happens to a system at equilibrium that encounters stress. Students will look at the pH as a way to determine how well a body of water has been able to resist stress. There will be a greater focus on carbonic acid, and its forward and reverse reaction. The major types of water students will be testing are: seawater, tap water, distilled water, and Alka-Seltzer Water.

Students will rank the fluids based how much alkalinity they believe the water has. Students will then test the water using the red cabbage indicator to determine its true alkalinity. Students will be placing their data in a designated bound notebook. Student will need to submit a finalized lab report on their findings.

4. Instructional Methods and/or Strategies:

- Lab-based learning (skills based labs as well as student designed and implemented labs)
- Cross Cutting Concepts (Patterns, Similarity & Diversity; Cause & Effect; Scale, Proportion & Quantity; Systems & Systems Models; Energy & Matter; Structure & Function; Stability & Change)
- Science & Engineering Practices (Asking Questions & Defining Problems; Developing & Using Models; Planning & Carrying out Investigations; Analyzing & Interpreting Data; Using Mathematics, Information & Computer
- Technology & Computational Thinking; Constructing Explanations & Designing Solutions; Engaging in Argument from Evidence; Obtaining, Evaluating & Communication Information)
- Four Corners discussions (Agree, Strongly Agree, Disagree, Strongly Disagree)
- Data interpretation and predictions
- Jigsaw research projects (students or student groups research different aspects of a topic and report their learning back to the whole class, e.g. different types of invasive species or genetic disorders)
- Computer based research projects: individual students or groups research
- Evidence based data interpretation (Claim, Evidence and Reasoning writing from labs or research projects)
- Student centered and created activities (e.g. Evolution Island where students determine changes over time to organisms (e.g. rats) on islands with different ecosystems)
- Scientific article reading, annotation and/or class report/presentation
- Using CER (claims, evidence, and reasoning) graphic organizer
- Project Based Learning
- Argument Driven Instruction
- "5 E" Lessons (Engage, Explore, Explain, Elaborate & Evaluate)
- Phenomena

5. Assessment Including Methods and/or Tools:

The fall final exam will cover the first three units and will assess students' understanding through the use of multiple choice questioning, short answer responses, and long answer responses.

The spring final exam will be a cumulative exam, consisting of all six units and all concepts covered. Students will be assessed through multiple choice, short answer responses, and long answer responses. Both mathematical and conceptual concepts will be assessed, with the long answer responses focusing primarily on the application of mathematics and the integration of various chemistry concepts. Additionally, students will also be assessed through a laboratory final, which will assess students' ability as it applies to hands on performance. The laboratory final will be drawn from one of the last five units and will likely cover titrations, calorimetry, and/or galvanic/voltaic cells. Students will be assessed not only on their performance in the lab, but also on post-lab questions that delve into the core mathematical and conceptual concepts at hand. Students will submit a written final report that will serve as a portion of their final examination grade.

Assessment Method: Evaluation Rubric

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations
Anna G. Hamilton, Director, Purchasing

SUBJECT: PURCHASE ORDER REGISTER

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BACKGROUND

Board Policy 3310 Business and Noninstructional Operations – Purchasing requires approval/ratification of purchase orders by the Board of Education. A purchase order is a legal contract between a district and vendor, containing a description of each item listed and/or a statement to the effect that supplies, equipment or services furnished herewith shall be in accordance with specifications and conditions.

Purchase orders represent a commitment of funds. No item on this register will be processed unless within budgeted funds. The actual payment for the services or materials is made with a warrant (check) and reported on the warrant register report.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve/ratify the purchase order register, provided under separate cover.

FISCAL IMPACT

$1,600,993.77 to all District funding sources.

WMJ:GJS:AGH:pw

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations
Anna G. Hamilton, Director, Purchasing

SUBJECT: AGREEMENTS FOR CONTRACTOR/CONSULTANT SERVICES

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BACKGROUND

All contracts between the District and outside agencies shall conform to standards required by law and shall be prepared under the direction of the Superintendent or designee. To be valid or to constitute an enforceable obligation against the District, all contracts must be approved and/or ratified by the Board of Education.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve/ratify the Agreements for Contractor/Consultant Services.

FISCAL IMPACT

As indicated.

WMJ:GJS:AGH:pw

CURRICULUM, INSTRUCTION, INNOVATION, AND SUPPORT	FISCAL IMPACT
CIIS-1718-127 Rushworks. To provide LogMeIn remote access software subscription renewal. Submitted by: Technology Duration of Agreement: March 9, 2015 – April 10, 2019	Contract amount: $2,112.00 Funding source: LCAP
CIIS-1718-128 FastBridge Learning. To provide universal screening for Multi-Tiered Systems of Support (MTSS) A and B licenses and training. Submitted by: Access and Equity/Elementary Curriculum Duration of Agreement: July 1, 2018 – June 30, 2019	Contract amount: Per rate sheet Funding source: Title I
CIIS-1718-143 Burlington English Inc. To provide English language acquisition online interactive courses. Submitted by: Adult School Duration of Agreement: July 1, 2018 – June 30, 2019	Contract amount: $8,573.00 Funding source: Adult School Fund
CIIS-1718-144 SHI. To provide ManageEngine ADManager Plus Professional Edition annual software subscription. Submitted by: Technology Duration of Agreement: May 19, 2018 – May 31, 2019	Contract amount: $7,395.00 Funding source: General Fund
CIIS-1718-146 Chaffey Community College District. To provide 2018 Summer school program. Submitted by: Alternative Education Center Duration of Agreement: April 1, 2018 – July 31, 2020	Contract amount: $17,000.00 Funding source: Summer School
CIIS-1718-147 AVID Center. To provide AVID to elementary and secondary programs, adding two elementary and two junior high schools to existing plan. Submitted by: Elementary and Secondary Curriculum Duration of Agreement: July 1, 2018 – June 30, 2019	Contract amount: $70,426.00 Funding source: LCAP
CIIS-1718-148 Foundation for California Community Colleges/California College Guidance Initiative. To provide electronic format for students grades 8 thru 12 to build college and career folios. Submitted by: Secondary Curriculum Duration of Agreement: July 1, 2018 – June 30, 2019	Contract amount: $29,566.00 Funding source: CTE Incentive Grant
CIIS-1718-149 SHI. To provide Microsoft Office 365, Exchange, SharePoint, and Client management services. Submitted by: Technology Duration of Agreement: May 4, 2018 – June 30, 2019	Contract amount: $98,397.00 Funding source: General Fund
CIIS-1718-150 Carahsoft Technology Corp. To provide assessment, design, deployment, and optimization of Nutanix environment. Submitted by: Technology Duration of Agreement: April 30, 2018 – April 25, 2019	Contract amount: $93,070.18 Funding source: LCAP

HUMAN RESOURCES	FISCAL IMPACT
HR-1718-015 Frontline Technologies Group LLC. To provide absence and substitute management subscription service. Submitted by: Human Resources Duration of Agreement: July 1, 2017 – June 30, 2018	Contract amount: $24,940.14 Funding source: General Fund

MASTER CONTRACTS	FISCAL IMPACT
MC-1718-094 Dave Stuart Consulting LLC. To provide online student motivation course. Submitted by: Buena Vista HS Duration of Agreement: May 4, 2018 – June 30, 2019	Contract amount: $150.00 Funding source: School Site Budget
MC-1718-095 Design Science, Inc. To provide online software to create mathematical notation for Microsoft Office 365. Submitted by: Chino HS Duration of Agreement: May 4, 2018 – June 30, 2021	Contract amount: $20.00 Funding source: School Site Budget
MC-1718-096 Interact a Division of Social Studies School Service. To provide downloadable social studies supplemental learning materials. Submitted by: Rhodes ES Duration of Agreement: May 4, 2018 – June 30, 2021	Contract amount: $140.00 Funding source: School Site Budget
MC-1718-097 Mind Research. To provide online math software program. Submitted by: Liberty ES Duration of Agreement: May 4, 2018 – June 30, 2021	Contract amount: Per rate sheet Funding source: School Site Budget
MC-1718-099 24-Hour Fitness. To provide discounted employee membership including 12 month open enrollment period. Submitted by: Purchasing Department Duration of Agreement: May 4, 2018 – May 3, 2019	Contract amount: Varies Funding source: Employee Paid

APPROVED CONTRACTS TO BE AMENDED	AMENDMENT
CIIS-1718-072 2 Teach LLC. To provide professional development for teachers. Submitted by: Canyon Hills JHS, Ramona JHS, Chino HS, and Don Lugo HS Duration of Agreement: July 1, 2017 – June 30, 2018 Original Agreement Board Approved: August 17, 2017	Increase contract amount from $21,346.05 to $38,774.05 Funding source: Various
SBC 11-510 A-7 San Bernardino County Probation Department. To provide school probation officers for 2018/2019 school year. Submitted by: Human Resources Duration of Agreement: July 1, 2018 – June 30, 2019 Original Agreement Board Approved: June 30, 2011	Increase contract amount from $392,544.00 to $422,072.00 Funding source: General Fund

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations

SUBJECT: SURPLUS/OBSOLETE PROPERTY

==========

BACKGROUND

The Board of Education recognizes that the District may own personal property which is unusable, obsolete, or no longer needed by the District. The Superintendent or designee shall arrange for the sale or disposal of District personal property in accordance with Board policy and the requirements of Education Code 17545.

Lists of surplus items are emailed to the Facilities/Planning Department to be placed on an upcoming Board agenda. After Board approval, items may be picked up by District warehouse or a liquidation company for public auction. Proceeds of the sale are deposited into the General Fund.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education declare the District property surplus/obsolete and authorize staff to sell/dispose of said property.

FISCAL IMPACT

Increase to the General Fund from proceeds of sale.

WMJ:GJS:pw

CHINO VALLEY UNIFIED SCHOOL DISTRICT
SURPLUS/OBSOLETE PROPERTY
May 3, 2018

DESCRIPTION	MAKE/MODEL	I.D./SERIAL	DEPT/SITE
Metal Desk			Assessment
Metal Bookcase			Assessment
Desk Chair	8QKWAT		Human Resources
Laminating Machine	GBC	29108	Rhodes ES
Projector	Epson	26855	Rhodes ES
Doc Camera	Aver Media	34625	Rhodes ES
Overhead Projector	Epson	JXJF752502L	Rolling Ridge ES
Monitor	Dell	CNOPT22273731793L625	Rolling Ridge ES
Monitor	Dell	S110170001000A3T2064A	Rolling Ridge ES
Monitor	Dell	S1101700A3T1287A	Rolling Ridge ES
Computer Tower	Intel CPU	21574	Rolling Ridge ES
Piano	Baldwin	423080	Rolling Ridge ES
Printer	HP 1300	18081	Wickman ES
Printer	HP 1300	18086	Wickman ES
Printer	HP 1300	18084	Wickman ES
Printer	HP 1300	18090	Wickman ES
Printer	HP 1300	18084	Wickman ES
Printer	HP 1300	18083	Wickman ES
Printer	HP 1300	18093	Wickman ES
Printer	HP 2015	CNRC6BC1SP	Wickman ES
Printer	HP 2015	CRNC6BT720	Wickman ES
Wall Clocks (2)	Latham		Canyon Hills JHS
Computer	Dell		Canyon Hills JHS
Projector Screen	Bretford		Boys Republic HS
Projector Screen	Dalite		Boys Republic HS
Projector Screen	Radiant		Boys Republic HS
TV/VCR	Panasonic	A25753	Boys Republic HS
TV Cart			Boys Republic HS
VGA switch	FSR		Boys Republic HS
Server cover	Supermicro		Boys Republic HS
Server cover	Supermicro		Boys Republic HS
Server cover	Supermicro		Boys Republic HS
Server cover	Supermicro		Boys Republic HS

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations
Anna G. Hamilton, Director, Purchasing

SUBJECT: **RESOLUTIONS 2017/2018-69, 2017/2018-70, AND 2017/2018-71 FOR AUTHORIZATION TO UTILIZE PIGGYBACK CONTRACTS**

==========

BACKGROUND

Public Contract Code (PCC) 20111 requires school district governing boards to competitively bid and award any contracts involving an expenditure of more than $86,000.00 to the lowest responsible bidder.

Notwithstanding PCC 20111, PCC 20118 and Administrative Regulation 3311 state that without advertising for bids and upon a determination that it is in the best interest of the District, the Board may authorize District staff by contract, lease, requisition, or purchase order of another public corporation or agency, to lease data-processing equipment, or to purchase materials, supplies, equipment, automotive vehicles, tractors and other personal property for the District in the manner that the other public corporation or agency is authorized to make the leases or purchases from a vendor (piggyback).

Alternatively, if there is an existing contract between a public corporation or agency and a vendor for the lease or purchase of personal property, the District may authorize the lease or purchase of personal property directly to the vendor under the same terms that are available to the public corporation or agency under the contract.

Staff requests approval of the following resolutions to provide authorization for the District to participate by piggyback in contracts as itemized below:

Resolution	Contract	Contractor	Description	Term
2017/2018-69	CAMSA via Simi Valley Unified School District Agreement A15.151	SHI	Microsoft Products and Licensing Support Services	12/1/2014-12/9/2018

Resolution	Contract	Contractor	Description	Term
2017/2018-70	State of California Multiple Awards (CMAS) 4-18-78-0089A	KYA Services, LLC	Brand: Mondo, Haro, Mats Inc., RB Rubber Products, UBU Products: Hardwood Floor Covering, Mats/Matting, Rubber Sheeting/Tile, Sport Flooring, Synthetic Turf, Synthetic Track	2/2/2018-1/22/2019
2017/2018-71	State of California Multiple Awards (CMAS) 3-12-70-2247E	Carahsoft Technology Corp.	Brand: Adobe, EMC, F5 Networks, Fireeye, Hewlett Packard, Red Hat, SAP, Symantec, and VMWare Hardware: Computer Software, and Software as a service	8/28/2012-3/31/2022

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education adopt Resolutions 2017/2018-69, 2017/2018-70, and 2017/2018-71 for authorization to utilize piggyback contracts.

FISCAL IMPACT

Unknown.

WMJ:GJS:AGH:pw

Chino Valley Unified School District
Resolution 2017/2018-69
Authorization to Utilize the CAMSA via Simi Valley Unified School District
Agreement A15.151
With SHI
to Purchase Microsoft Products and Licensing Support Services
Through the Piggyback Contract

WHEREAS, the Board of Education (Board) of the Chino Valley Unified School District (District) has determined that a true and very real need exists to procure Microsoft products and licensing support services for the District;

WHEREAS, CAMSA via Simi Valley Unified School District currently has a piggyback contract, Agreement A15.151, in accordance with Public Contract Code 20118 with Shi that contains the materials, supplies, equipment and/or other personal property the District currently requires;

WHEREAS, the board of education of a school district, without advertising for bids, if the board has determined it to be in the best interests of the district, may authorize by contract, lease, requisition, or purchase order of any public corporation or agency, including any county, city, town, or district, to lease data-processing equipment, purchase materials, supplies, equipment, automotive vehicles, tractors, and other personal property for the district in the manner in which the public corporation or agency is authorized by law to make the leases or purchases from a vendor;

WHEREAS, the board of education of a school district is required to make a determination that a purchase and/or lease through a public corporation or agency is in the best interests of the district to take advantage of this exception; and

WHEREAS, the Board has determined that it is in the best interest of the District to authorize the purchase of Microsoft products and licensing support services through the piggyback contract procured by the CAMSA via Simi Valley Unified School District Agreement A15.151.

NOW, **THEREFORE**, **BE IT RESOLVED** the Board hereby finds, determines, and declares as follows:

Section 1. Determination re: Recitals. All of the recitals set forth above are true and correct.

Section 2. Determination re: Purchase through Other Public Agency. Pursuant to Public Contract Code 20118, that authorizing the purchase of Microsoft products and licensing support services through the piggyback contract originally procured by the CAMSA via Simi Valley Unified School District Agreement A15.151 is in the best interests of the District because there is volume pricing that can be used to reduce the District's overall price.

Section 3. Authorization. The Board hereby authorizes the acquisition of Microsoft products and licensing support services in accordance with Public Contract Code 20118 through the piggyback contract originally procured by the CAMSA via Simi Valley Unified School District Agreement A15.151.

Section 4. Other Actions. The Superintendent or his designee are each hereby authorized and directed, jointly and severally, to do any and all things and to execute and deliver any and all documents which they may deem necessary or advisable in order to consummate the purchase, sale, and lease, and otherwise to carry out, give effect to and comply with the terms and intent of this Resolution, and that any and all such prior actions by the District's Superintendent, or his designee, are hereby ratified by the Board.

Section 5. Effective Date. This resolution shall be effective as of December 1, 2014, for the term ending December 9, 2018.

APPROVED, **PASSED**, **AND ADOPTED** by the Board of Education of the Chino Valley Unified School District this 3rd day of May 2018 by the following vote:

Blair	_____
Cruz	_____
Feix	_____
Na	_____
Orozco	_____

I, Wayne M. Joseph, Secretary of the Chino Valley Unified School District Board of Education, do hereby certify that the foregoing is a full, true, and correct copy of the Resolution passed and adopted by said Board at a regularly scheduled and conducted meeting held on said date, which Resolution is on file in the office of said Board.

_____
Wayne M. Joseph, Superintendent
Secretary, Board of Education

Chino Valley Unified School District
Resolution 2017/2018-70
Authorization to Utilize the California Multiple Awards (CMAS)
Contract 4-18-78-0089A
With KYA Services, LLC
to Purchase Brand: Mondo, Haro, Mats Inc., RB Rubber Products, and UBU
Products: Hardwood Floor Covering, Mats/Matting, Rubber Sheeting/Tile,
Sport Flooring, Synthetic Turf, and Synthetic Track
Through the Piggyback Contract

WHEREAS, the Board of Education (Board) of the Chino Valley Unified School District (District) has determined that a true and very real need exists to procure Brand: Mondo, Haro, Mats Inc., RB Rubber Products, and UBU. Products: hardwood floor covering, mats/matting, rubber sheeting/tile, sport flooring, synthetic turf, and synthetic track for the District;

WHEREAS, CMAS currently has a piggyback contract, Contract 4-18-78-0089A, in accordance with Public Contract Code 20118 with KYA Services, LLC that contains the materials, supplies, equipment and/or other personal property the District currently requires;

WHEREAS, the board of education of a school district, without advertising for bids, if the board has determined it to be in the best interests of the district, may authorize by contract, lease, requisition, or purchase order of any public corporation or agency, including any county, city, town, or district, to lease data-processing equipment, purchase materials, supplies, equipment, automotive vehicles, tractors, and other personal property for the district in the manner in which the public corporation or agency is authorized by law to make the leases or purchases from a vendor;

WHEREAS, the board of education of a school district is required to make a determination that a purchase and/or lease through a public corporation or agency is in the best interests of the district to take advantage of this exception; and

WHEREAS, the Board has determined that it is in the best interest of the District to authorize the purchase of Brand: Mondo, Haro, Mats Inc., RB Rubber Products, and UBU. Products: hardwood floor covering, mats/matting, rubber sheeting/tile, sport flooring, synthetic turf, and synthetic track through the piggyback contract procured by the CMAS Contract 4-18-78-0089A.

NOW, **THEREFORE**, **BE IT RESOLVED** the Board hereby finds, determines, and declares as follows:

Section 1. Determination re: Recitals. All of the recitals set forth above are true and correct.

Section 2. Determination re: Purchase through Other Public Agency. Pursuant to Public Contract Code 20118, that authorizing the purchase of Brand: Mondo, Haro, Mats Inc., RB Rubber Products, and UBU. Products: hardwood floor covering, mats/matting, rubber sheeting/tile, sport flooring, synthetic turf, and synthetic track through the piggyback contract originally procured by the CMAS Contract 4-18-78-0089A is in the best interests of the District because there is volume pricing that can be used to reduce the District's overall price.

Section 3. Authorization. The Board hereby authorizes the acquisition of Brand: Mondo, Haro, Mats Inc., RB Rubber Products, and UBU. Products: hardwood floor covering, mats/matting, rubber sheeting/tile, sport flooring, synthetic turf, and synthetic track in accordance with Public Contract Code 20118 through the piggyback contract originally procured by the CMAS Contract 4-18-78-0089A.

Section 4. Other Actions. The Superintendent or his designee are each hereby authorized and directed, jointly and severally, to do any and all things and to execute and deliver any and all documents which they may deem necessary or advisable in order to consummate the purchase, sale, and lease, and otherwise to carry out, give effect to and comply with the terms and intent of this Resolution, and that any and all such prior actions by the District's Superintendent, or his designee, are hereby ratified by the Board.

Section 5. Effective Date. This resolution shall be effective as of February 2, 2018, for the term ending January 22, 2019.

APPROVED, **PASSED**, **AND ADOPTED** by the Board of Education of the Chino Valley Unified School District this 3rd day of May 2018 by the following vote:

Blair	_____
Cruz	_____
Feix	_____
Na	_____
Orozco	_____

I, Wayne M. Joseph, Secretary of the Chino Valley Unified School District Board of Education, do hereby certify that the foregoing is a full, true, and correct copy of the Resolution passed and adopted by said Board at a regularly scheduled and conducted meeting held on said date, which Resolution is on file in the office of said Board.

_____
Wayne M. Joseph, Superintendent
Secretary, Board of Education

Chino Valley Unified School District
Resolution 2017/2018-71
Authorization to Utilize the California Multiple Awards (CMAS)
Contract 3-12-70-2247E
With Carahsoft Technology Corp.
to Purchase Brand: Adobe, EMC, F5 Networks, Fireeye, Hewlett Packard, Red Hat, SAP, Symantec, and VMWare
Hardware-Computer
Software, Software as a service
Through the Piggyback Contract

WHEREAS, the Board of Education (Board) of the Chino Valley Unified School District (District) has determined that a true and very real need exists to procure Brand: Adobe, EMC, F5 Networks, Fireeye, Hewlett Packard, Red Hat, SAP, Symantec, and VMWare. Hardware-computer. Software, Software as a service. for the District;

WHEREAS, CMAS currently has a piggyback contract, Contract 3-12-70-2247E, in accordance with Public Contract Code 20118 with Carahsoft Technology Corp. that contains the materials, supplies, equipment and/or other personal property the District currently requires;

WHEREAS, the board of education of a school district, without advertising for bids, if the board has determined it to be in the best interests of the district, may authorize by contract, lease, requisition, or purchase order of any public corporation or agency, including any county, city, town, or district, to lease data-processing equipment, purchase materials, supplies, equipment, automotive vehicles, tractors, and other personal property for the district in the manner in which the public corporation or agency is authorized by law to make the leases or purchases from a vendor;

WHEREAS, the board of education of a school district is required to make a determination that a purchase and/or lease through a public corporation or agency is in the best interests of the district to take advantage of this exception; and

WHEREAS, the Board has determined that it is in the best interest of the District to authorize the purchase of Brand: Adobe, EMC, F5 Networks, Fireeye, Hewlett Packard, Red Hat, SAP, Symantec, and VMWare. Hardware-computer. Software, Software as a service through the piggyback contract procured by the CMAS Contract 3-12-70-2247E.

NOW, **THEREFORE**, **BE IT RESOLVED** the Board hereby finds, determines, and declares as follows:

Section 1. Determination re: Recitals. All of the recitals set forth above are true and correct.

Section 2. Determination re: Purchase through Other Public Agency. Pursuant to Public Contract Code 20118, that authorizing the purchase of Brand: Adobe, EMC, F5 Networks, Fireeye, Hewlett Packard, Red Hat, SAP, Symantec, and VMWare. Hardware-computer. Software, Software as a service through the piggyback contract originally procured by the CMAS Contract 3-12-70-2247E is in the best interests of the District because there is volume pricing that can be used to reduce the District's overall price.

Section 3. Authorization. The Board hereby authorizes the acquisition of Brand: Adobe, EMC, F5 Networks, Fireeye, Hewlett Packard, Red Hat, SAP, Symantec, and VMWare. Hardware-computer. Software, Software as a service in accordance with Public Contract Code 20118 through the piggyback contract originally procured by the CMAS Contract 3-12-70-2247E.

Section 4. Other Actions. The Superintendent or his designee are each hereby authorized and directed, jointly and severally, to do any and all things and to execute and deliver any and all documents which they may deem necessary or advisable in order to consummate the purchase, sale, and lease, and otherwise to carry out, give effect to and comply with the terms and intent of this Resolution, and that any and all such prior actions by the District's Superintendent, or his designee, are hereby ratified by the Board.

Section 5. Effective Date. This resolution shall be effective as of August 28, 2012, for the term ending March 31, 2022.

APPROVED, **PASSED**, **AND ADOPTED** by the Board of Education of the Chino Valley Unified School District this 3rd day of May 2018 by the following vote:

Blair	_____
Cruz	_____
Feix	_____
Na	_____
Orozco	_____

I, Wayne M. Joseph, Secretary of the Chino Valley Unified School District Board of Education, do hereby certify that the foregoing is a full, true, and correct copy of the Resolution passed and adopted by said Board at a regularly scheduled and conducted meeting held on said date, which Resolution is on file in the office of said Board.

_____
Wayne M. Joseph, Superintendent
Secretary, Board of Education

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations
Anna G. Hamilton, Director, Purchasing

SUBJECT: **BID 17-18-19F, AYALA HS, CHINO HILLS HS, AND DON LUGO HS TENNIS COURT RESURFACING**

==========

BACKGROUND

Public Contract Code 20111 requires that contracts for public works exceeding $15,000.00 be legally advertised and awarded to the lowest responsible bidder, who shall have such surety as the Board requires.

A Notice to Contractors Calling for Bids for Bid 17-18-19F, Ayala HS, Chino Hills HS, and Don Lugo HS Tennis Court Resurfacing was published in the Inland Valley Daily Bulletin on March 27, 2018, and April 3, 2018. Bids were opened at 2:00 p.m. on April 17, 2018. The results are as follows:

Contractor	Bid Amount
Trueline Construction & Surfacing, Inc.	$167,156.00
California Surfacing	$168,500.00

The basic scope of work for this project includes tennis court resurfacing and striping at Ayala HS, Chino Hills HS, and Don Lugo HS; painting tennis posts at Ayala HS; and removing and replacing windscreens and nets at Ayala HS and Chino Hills HS.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education award Bid 17-18-19F, Ayala HS, Chino Hills HS, and Don Lugo HS Tennis Court Resurfacing to Trueline Construction & Surfacing, Inc.

FISCAL IMPACT

$167,156.00 to Capital Facilities Fund 25.

WMJ:GJS:AGH::pw

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations
Anna G. Hamilton, Director, Purchasing

SUBJECT: **BID 17-18-17F, INTERACTIVE FLAT PANEL DISPLAYS AND ACCESSORIES**

==========

BACKGROUND

Public Contract Code 20111 requires competitive bidding for most public contracts. School districts are required to competitively bid any contracts for the lease or purchase of equipment, materials, supplies or services which do not constitute a public project and which are not exempted from competitive bidding and expenditure of more than $90,200.00 be legally advertised and awarded to the lowest responsible bidder.

A Notice Calling for Bids for Bid 17-18-17F, Interactive Flat Panel Displays and Accessories was published in the Chino Champion on March 10, 2018, and March 17, 2018. Bids were opened at 1:00 p.m. on March 26, 2018.

Twelve (12) companies submitted sealed bids for the requested products. Staff participated in demonstrations with products proposed by the four (4) lowest bidders (as indicated in the table below) and after ranking each vendor by product price, it was determined that the entire bid be awarded to CDW-G. The original term of this agreement will be for twelve (12) months starting May 4, 2018, through May 3, 2019.

CDW Government LLC	Unit Cost	DI Technology Group Inc. dba Data Impressions	Unit Cost	Troxell Communications, Inc.	Unit Cost	Sufian Munir Inc. dba Clary Business Machines*	Unit Cost
Viewsonic Advanced 75" Ultra HD ViewBoard Interactive Flat Panel	$ 2,915.00	Viewsonic Advanced 75" Ultra HD ViewBoard Interactive Flat Panel	$3,149.00	Viewsonic Advanced 75" Ultra HD ViewBoard Interactive Flat Panel	$3,096.38	Clary Icon OneScreen Touchscreen	$2,759.00
(Mfg. IFP7550)		(Mfg. IFP7550)		(Mfg. IFP7550)		Mfg t4-75	
Viewsonic Advanced 65" Ultra HD ViewBoard Interactive Flat Panel	$ 2,079.00	Viewsonic Advanced 65" Ultra HD ViewBoard Interactive Flat Panel	$2,195.00	Viewsonic Advanced 65" Ultra HD ViewBoard Interactive Flat Panel	$2,219.49	Clary Icon OneScreen Touchscreen	$1,895.00
(Mfg. IFP6550)		(Mfg. IFP6550)		(Mfg. IFP6550)		Mfg t4-65	
Viewsonic all-in-one 55" free-standing digital ePoster Kiosk	$ 1,559.00	Viewsonic all-in-one 55" free-standing digital ePoster Kiosk	$1,750.00	Viewsonic all-in-one 55" free-standing digital ePoster Kiosk	$1,602.59	Clary Icon OneScreen Signage	$1,295.00
(Mfg. EP5520)		(Mfg. EP5520)		(Mfg. EP5520)		Mfg OSF55	
Viewsonic Windows Slot in PC ViewBoard	$ 745.00	Viewsonic Windows Slot in PC ViewBoard	$ 745.00	Viewsonic Windows Slot in PC ViewBoard	$ 810.01	Clary Icon OneScreen	$ 595.00
(Mfg. VPC14-WP)		(Mfg. VPC14-WP)		(Mfg. VPC14-WP)		Mfg OPS PC i5	
Viewsonic 70" Full HD Commercial LED Interactive Flat Panel Display	$ 2,599.00	Viewsonic 70" Full HD Commercial LED Interactive Flat Panel Display	$2,684.00	Viewsonic 70" Full HD Commercial LED Interactive Flat Panel Display	$2,361.61	Viewsonic 70" Full HD Commercial LED Interactive Flat Panel Display	N/B
(Mfg. CDE7061T)		(Mfg. CDE7061T)		(Mfg. CDE7061T)		(Mfg. CDE7061T)	
Viewsonic Mobile Trolley Cart for Commercial Display w/tray & mount.	$ 319.00	Viewsonic Mobile Trolley Cart for Commercial Display w/tray & mount.	$ 350.00	Viewsonic Mobile Trolley Cart for Commercial Display w/tray & mount.	$ 349.26	Viewsonic Mobile Trolley Cart for Commercial Display w/tray & mount.	$ 595.00
(Mfg. VB-STND-001)		(Mfg. VB-STND-001)		(Mfg. VB-STND-001)		(Mfg. VB-STND-001)	
Viewsonic Display Stand	$ 319.00	Viewsonic Display Stand	$ 375.00	Viewsonic Display Stand	$ 349.26	Viewsonic Display Stand	$ 575.00
(Mfg. LB-STND-003)		(Mfg. LB-STND-003)		(Mfg. LB-STND-003)		(Mfg. LB-STND-003)	
Installation Services – building carts and installing panels.	$235 - $375	Installation Services – building carts and installing panels.	$ 98.00	Installation Services – building carts and installing panels.	$ 375.00	Installation Services – building carts and installing panels.	$ -
Viewsonic 22" LED Monitor	$ 109.50	Viewsonic 22" LED Monitor	$ 117.00	Viewsonic 22" LED Monitor	$ 110.45	Viewsonic 22" LED Monitor	$ 125.00
(Mfg. VX2252MH)		(Mfg. VX2252MH)		(Mfg. VX2252MH)		(Mfg. VX2252MH)	
ViewSonic Wall Mount	$ -	ViewSonic Wall Mount	$ 0.95	ViewSonic Wall Mount	$ -	Clary Icon One Screen	$ -
(Mfg. WMK-047-2)		(Mfg. WMK-047-2)		(Mfg. WMK-047-2)		Mfg Wall Mount	

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education award Bid 17-18-17F, Interactive Flat Panel Displays and Accessories to CDW-G.

FISCAL IMPACT

To be determined, contingent upon site/department orders.

WMJ:GJS:AGH:pw

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations

SUBJECT: **AMENDMENT TO LAND LEASE AGREEMENT WITH VERIZON WIRELESS**

==========

BACKGROUND

On May 15, 2003, the Board of Education approved a land lease agreement with Verizon Wireless to construct and install stadium lighting at Chino Hills HS in exchange for the installation of six (6) cellular antennas on one stadium light standard. The agreement was amended in 2015 to allow DSA approved modifications and improvements to the existing antenna array and related on-site equipment.

Verizon Wireless is requesting approval of the attached amendment, which will allow further DSA approved modifications and improvements to the existing antenna arrays and related on-site equipment.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the amendment to the Land Lease Agreement with Verizon Wireless.

FISCAL IMPACT

$5,000.00 one-time fee (income) to the District.

WMJ:GJS:pw

THIRD AMENDMENT TO CALIFORNIA LAND LICENSE AGREEMENT

THIS THIRD AMENDMENT TO CALIFORNIA LICENSE AGREEMENT ("**Amendment**"), dated as of the latter of the signature dates below, is by and between Chino Valley Unified School District ("**Landlord**") and Los Angeles SMSA Limited Partnership, d/b/a Verizon Wireless ("**Tenant**").

WHEREAS, Landlord and Tenant entered into a California License Agreement dated February 15th, 2004, whereby Landlord leased to Tenant certain Premises, therein described, that are a portion of the Property located at 16150 Pomona Rincon Rd, Chino Hills, CA 91709, Assessor's Parcel Number 1028-351-36 ("**Agreement**"); and

WHEREAS, Tenant desires to significantly expand and modify Tenant's Antenna Space, which Landlord is willing to approve; and

WHEREAS, Landlord and Tenant, in their mutual interest, wish to amend the Agreement as set forth below accordingly.

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

1. **New Exhibit**. Tenant shall have the right, in its sole discretion, to expand and modify the Antenna Space as more completely described on attached Exhibit A-3 (collectively, the "Improvements"). Landlord's execution of this Amendment will signify Landlord's approval of Exhibit A-3 to the Agreement.

2. **Construction Period & Staging Area**. In consideration for Landlord consenting to the construction, installation, operation and maintenance of the Improvements and Tenant's use of the Working Area and Staging Area (defined below) in connection with installation of the same, Tenant shall pay to Landlord a one-time fee in the amount of Five Thousand Dollars and No/100 Dollars ($5,000.00) as additional rent (the "Additional Fee"). The Additional Fee will be paid within forty-five (45) days following the date that Tenant commences installation of the Improvements. Tenant shall be permitted to complete installation of the Improvements described and depicted in Exhibit A-3 attached hereto at no additional cost to Tenant if completed within forty-five (45) days (the "Initial Term"), subject to the following sentence. Although Landlord and Tenant both endeavor to complete the Improvements within the Initial Term, Landlord understands that delays caused by Landlord, Acts of God, adverse weather conditions, school event/construction scheduling conflicts, and Department of State Architect unexpected delays (collectively, the "Improvement Delays") shall not apply or impact the Initial Term allotted to Tenant to complete the Improvements. Tenant shall notify Landlord of any Improvement Delays as noted above within three (3) days of such delay and Tenant shall be permitted additional days to install the Improvements beyond the Initial Term commensurate with the number of days Tenant was delayed as a result of the Improvement Delays at no additional cost. Notwithstanding the foregoing, construction delays beyond the Initial Term caused by Tenant and or their contractors, sub-contractors or others under the control of the Tenant (a "Tenant-Caused Delay") shall be subject to the following additional terms and conditions, (a) Tenant must give notice to Landlord seven (7) days prior to the end of the Initial Term and (b) Tenant shall pay to Landlord a one month fee in the amount of Two Thousand Dollars ($2,000.00) (the "Extension Payment") for a 30 day extension. The First Extension Payment shall be paid within thirty (30) days following the start of this 30 day extension. Should the installation of the Improvements extend past sixty (60) days, Tenant must give notice to Landlord seven (7) days prior to the end of the 60 day term and (c) Tenant shall pay to Landlord an additional fee in the amount of Five Hundred Dollars ($500.00) per day (the "Delay Fee") for each day beyond sixty (60) days that is due to a Tenant-Caused Delay. Tenant shall not be obligated to pay the foregoing Delay Fee for any delays due to Improvement Delays as set forth above.

Upon completion of installation of the Improvements and Tenant's submission of Landlord's final inspection to the Department of State Architect, Tenant's installation of the Improvements shall be deemed completed and Tenant shall have no further obligations with respect to this Section 2 or otherwise provided herein.

Landlord and Tenant acknowledge and agree that Tenant shall be permitted to use the immediate portion of ground space directly beneath light standard/antenna standard as a temporary construction area (the "Working

Area") and a 16 space parking lot located on the North end of Landlord's property for construction vehicle parking and construction staging (the "Staging Area") during Tenant's installation of the Improvements, which Working Area and Staging Area are described and depicted in Exhibit A-4 attached hereto. Upon completion of installation of the Improvements, Tenant shall remove its equipment and all personal property from the Working Area and Staging Area and restore the Working Area and Staging Area to their original condition, reasonable wear and tear and casualty damage accepted. Tenant shall use commercially reasonable efforts to complete installation of the Improvements in a timely manner, subject to unforeseeable construction delays or delays caused by Landlord.

3. **Other Terms and Conditions Remain.** In the event of any inconsistencies between the Agreement and this Amendment, the terms of this Amendment shall control. Except as expressly set forth in this Amendment, the Agreement otherwise is unmodified and remains in full force and effect. Each reference in the Agreement to itself shall be deemed also to refer to this Amendment.

4. **Capitalized Terms.** All capitalized terms used but not defined herein shall have the same meanings as defined in the Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be effective as of the last date written below.

LANDLORD:	**TENANT:**
Chino Valley Unified School District	Los Angeles SMSA Limited Partnership d/b/a Verizon Wireless
	By: AirTouch Cellular Its: General Partner
By: _____	By: _____
Print Name: _____	Print Name:
Its: _____	Its:
Date: _____	Date: _____

EXHIBIT A-3

CHINO HILLS HS

MTX 51 / BSC 4
16150 POMONA RINCON RD
CHINO HILLS, CA 91709
CHINO VALLEY UNIFIED SCHOOL DISTRICT

PCS LTE / 850 LTE / AWS-3 PROJECT

811 Know what's below. Call before you dig.
TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN CALIFORNIA (SOUTH), CALL DIG ALERT
TOLL FREE: 1-800-227-2600 OR www.digalert.org
CALIFORNIA STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

PROJECT TEAM

SITE ACQUISITION:
CORE DEVELOPMENT SERVICES
3350 E. BIRCH STREET #250
BREA, CA 92821
PHONE: 714.729.8404

PLANNING:
CORE DEVELOPMENT SERVICES
3350 E. BIRCH STREET #250
BREA, CA 92821
PHONE: 714.729.8404

ARCHITECT:
CORE DEVELOPMENT SERVICES
3350 E. BIRCH STREET #250
BREA, CA 92821
CONTACT: WALLACE FU
PHONE: 714.729.8404

SURVEYOR:
N/A

UTILITY COORDINATOR:
N/A

PROFESSIONAL ENGINEER:
CORE DEVELOPMENT SERVICES
3350 E. BIRCH STREET #250
BREA, CA 92821
CONTACT: JOSHUA YJ KANG
PHONE: 949.351.5020

VERIZON WIRELESS SIGNATURE BLOCK

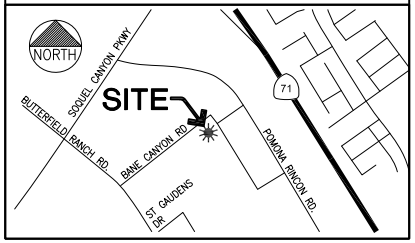
DISCIPLINE:	SIGNATURE:	DATE:
RE VENDOR:		
A&E VENDOR:		
A&E COORDINATOR:		
UTILITY VENDOR:		
RF:	DESIGN BASED ON RFDS	07-14-17
RE:		
CE:		
EE:		
TRANSPORT:		

PROJECT DESCRIPTION

VERIZON WIRELESS IS SUBMITTING AN APPLICATION FOR A BUILDING PERMIT AND ALL OTHER RELATED APPROVALS FOR THE:

- REMOVAL OF (6) PANEL ANTENNAS AND INSTALLATION OF (6) REPLACEMENT PANEL ANTENNAS MOUNTED ON THE EXISTING MONOPOLE.
- REMOVAL OF (3) RRUS 12 MOUNTED ON THE EXISTING MONOPOLE.
- INSTALLATION OF (1) T-ARM MOUNTED ON THE EXISTING MONOPOLE.
- RELOCATION OF (2) EXISTING POWER/FIBER DEMARCATION BOX; (1) TO (N) H-FRAME IN EQUIPMENT AREA AND (1) TO (N) T-ARM MOUNTED ON THE EXISTING MONOPOLE.
- INSTALLATION OF (4) POWER/FIBER DEMARCATION BOXES; (2) MOUNTED TO THE NEW T-ARM AND (2) WITHIN THE (E) EQUIPMENT AREA.
- INSTALLATION OF (6) DIPLEXERS MOUNTED ON THE EXISTING MONOPOLE.
- INSTALLATION OF (3) IN-BAND DIPLEXERS MOUNTED ON THE EXISTING MONOPOLE.
- INSTALLATION OF (12) RRUS 2212 MOUNTED ON THE EXISTING MONOPOLE.
- INSTALLATION OF (6) RRUS 32 MOUNTED ON THE EXISTING MONOPOLE.

VICINITY MAP



DRIVING DIRECTIONS

FROM: VERIZON WIRELESS OFFICE
TO: 16150 POMONA RINCON RD
CHINO HILLS, CA 91709

- TURN LEFT ONTO SAND CANYON AVE
- USE THE LEFT 2 LANES TO MERGE ONTO I-5 N
- USE THE RIGHT 2 LANES TO TAKE EXIT 103A FOR CA-55 N
- MERGE ONTO CA-91E
- TAKE EXIT 45 FOR CA-71 N
- TAKE EXIT 7 FOR SOQUEL CANON PKWY/CENTRAL AVE
- TURN LEFT ONTO SOQUEL CANYON PKWY
- USE THE LEFT 2 LANES TO TURN LEFT ONTO POMONA RICON RD
- 16150 POMONA RINCON RD WILL BE ON THE RIGHT

PROJECT SUMMARY

APPLICANT/LESSEE:
verizon
15505 SAND CANYON AVENUE, D1
IRVINE, CA 92618
OFFICE: 949.286.7000

APPLICANT REPRESENTATIVE:
CORE DEVELOPMENT SERVICES
3350 E. BIRCH STREET #250
BREA, CA 92821
CONTACT: RAMON SALAZAR
PHONE: 714.729.8404

PROPERTY OWNER:
CHINO UNIFIED SCHOOL DISTRICT
5130 RIVERSIDE DR.
CHINO, CA 91710
CONTACT: RICK GALLOUAY
PHONE: 909.628.1201 EXT. 1450

PROPERTY INFORMATION:
SITE NAME: CHINO HILLS HS
SITE ADDRESS: 16150 POMONA RINCON RD CHINO HILLS, CA 91709
JURISDICTION: DSA

ASSESSOR'S PARCEL NUMBER:
APN: 1028-351-36

CONSTRUCTION INFORMATION:

AREA OF CONSTRUCTION:	EXISTING
OCCUPANCY:	A-5
TYPE OF CONSTRUCTION:	I
CURRENT ZONING:	BUSINESS PARK
ADA COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. MACHINERY SPACES ARE EXEMPT FROM ACCESSIBILITY REQUIREMENTS PER THE CBC SECTION 11B-203.5.

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND/OR ENGINEERS IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CODE COMPLIANCE

- 2016 CALIF. ADMINISTRATIVE CODE (INCL. TITLES 24 & 25)
- 2016 CALIFORNIA BUILDING CODES
- 2016 CALIFORNIA ELECTRICAL CODES
- 2016 CALIFORNIA MECHANICAL CODES
- 2016 CALIFORNIA PLUMBING CODES
- 2016 CALIFORNIA FIRE CODES
- 2016 CALIFORNIA ENERGY CODES
- TIA-222-G STANDARD
- LOCAL BUILDING CODES
- CITY/COUNTY ORDINANCES

SHEET	DESCRIPTION	REV
T-1	TITLE SHEET	B
T-2	GENERAL NOTES AND SPECIFICATIONS	B
A-1	SITE PLAN	B
A-2	ENLARGED SITE PLAN & EQUIPMENT PLANS	B
A-3	ANTENNA PLANS	B
A-4	EAST ELEVATIONS	B
A-5	SOUTH ELEVATIONS	B
D-1	DETAILS	B
D-2	DETAILS	B
E-1	ELECTRICAL NOTES AND SPECIFICATIONS	B
E-2	GROUNDING PLANS & DETAILS	B

CONSTRUCTION DRAWINGS

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	09/12/17	90% CONSTRUCTION	ESQ
B	11/30/17	100% CONSTRUCTION	AIE

core
DEVELOPMENT SERVICES
A&E SERVICES
3350 E. Birch Street #250
Brea, CA 92821
(714)729-8404 (714)333-4441 fax
www.core.us.com

verizon
15505 SAND CANYON AVENUE, D1
IRVINE, CALIFORNIA 92618
949.286.7000

CHINO HILLS HS
16150 POMONA RINCON RD.
CHINO HILLS, CA 91709
SAN BERNARDINO COUNTY

SHEET TITLE:
TITLE SHEET

T-1

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

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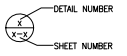
NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

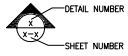
ABBREVIATIONS & SYMBOLS

AB	ANCHOR BOLT
AC	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
A.F.F.	ADJUSTABLE ABOVE FINISH FLOOR
ARCH	ARCHITECTURAL
APPROX.	APPROXIMATELY ABOVE
A.G.L.	GRADE LEVEL ABOVE MEAN
A.M.S.L.	SEA LEVEL
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BSMT	BASEMENT
BTS	BASE TRANSCEIVER STATION
C	COURSE(S)
CEM	CEMENT
CL	CHAIN LINK
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT CORR	CONTINUOUS CORRIDOR
CO	CONDUIT ONLY
DIA	DIAMETER
DBL	DOUBLE
DEPT	DEPARTMENT
DEMO	DEMOLITION
DIM	DIMENSION
DN	DOWN
DR	DOOR
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING
EA	EACH
ELEC	ELECTRIC
ELEV	ELEVATION
EQUIP	EQUIPMENT
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FB	FLAT BAR
FF	FINISH FLOOR
FH	FLAT HEAD
FIN	FINISH(ED)
FOS	FLOOR FACE OF STUDS
FS	FINISH SURFACE
FT	FOOT, FEET
FTG	FOOTING
FW	FINISH WALL
F.G.	FINISH GRADE
FRP	FIBER REINFORCED PLASTIC
FUT	FUTURE
GA	GAUGE
GALV	GALVANIZED
GL	GLASS
GR	GRADE
GYP	GYPSUM
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HC	HOLLOW CORE
HDW	HARDWARE
HTR	HEATER
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HV	HIGH VOLTAGE
ID	INSIDE DIMENSION
INS	INSULATION
INT	INTERIOR
JT	JOINT
LAM	LAMINATED
LBS	POUNDS
LT	LIGHT
LA	LIGHTNING ARRESTER
LNA	LOW NOISE AMPLIFIER
MFR	MANUFACTURER
MAT	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	METAL LATH
MO	MASONRY OPENING
MS	MACHINE SCREW
MTD	MOUNTED
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OA	OVERALL
O.C.	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
PARTN	PARTITION
PL	PLATE
PLAS	PLASTER
PLYWD	PLYWOOD
POC	POINT OF CONNECTION
PROP	PROPERTY
PT	PRESSURE TREATED
R	RISER
REQD	REQUIRED
RD	ROOF DRAIN
RM	ROOM
RMS	ROOMS
RO	ROUGH OPENING
SC	SOLID CORE
SCH	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SPECS	SPECIFICATIONS
SS	STAINLESS STEEL
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
THK	THICK
TI	TENANT IMPROVEMENT
TMA	TOWER MOUNTED AMPLIFIER
TOS	TOP OF SURFACE
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
V.I.F.	VERIFY IN FIELD
VG	VERTICAL GRAIN
W/	WITH
WD	WOOD
WR	WATER RESISTANT
WT	WEIGHT
XFMR	TRANSFORMER

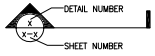
@	AT
[	CHANNEL
℄	CENTERLINE
∠	ANGLE
ℙ	PROPERTY LINE
(X)	KEY NOTE REFERENCE
X	DOOR NUMBER
XX	AREA AND/OR ROOM NUMBER
X/X	MECHANICAL UNIT
—— – – ——	PROPERTY LINE
—X—X—X—	FENCING
—E—E—E—E—	ELECTRICAL SERVICE
—T—T—T—T—	TELCO SERVICE



DETAIL REFERENCE



EXTERIOR ELEVATION REFERENCE



DETAIL SECTION REFERENCE

GENERAL NOTES:

1. THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS.
2. THE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, & NOTES PRIOR TO STARTING CONSTRUCTION, INCLUDING BUT NOT LIMITED BY DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT/ENGINEER.
3. PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK.
4. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDUM'S, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT/MARED DRAWINGS TO THE ARCHITECT/ENGINEER AT THE CONCLUSION OF THE PROJECT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.
6. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
7. ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE LATEST CALIFORNIA BUILDING CODE AND ALL OTHER GOVERNING CODES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR PROVIDE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
9. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING CONTRACTOR PROFESSIONAL KNOWLEDGE AND SKILLS. THEY ARE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR THEIR REPRESENTATIVE. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINAL PAYMENT OF SAID DOCUMENT.
11. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
13. THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
14. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
15. WHERE SPECIFIED, MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR RECORDING THE RESULTS.
16. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
17. ALL DEBRIS AND REFUGE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
18. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING THE ARCHITECT/ENGINEER SHALL BE NOTIFIED FOR CLARIFICATIONS.
19. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES AND SEQUENCES OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
20. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.
21. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSION, ELEVATION, ETC. NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTION OF THE WORK TO THE EXISTING WORK. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS NECESSARY FOR FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. AND DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.
22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND SHALL BE CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF THE ENGINEER.
24. NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE ARCHITECT/ENGINEER. UNAUTHORIZED CHANGES RENDER THESE DRAWINGS VOID.
25. ANY REFERENCE TO THE WORDS APPROVED, OR APPROVAL IN THESE DOCUMENTS SHALL BE HERE DEFINED TO MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIEVE THE CONTRACTOR AND/OR THEIR SUB-CONTRACTORS OF ANY LIABILITY IN FURNISHING THE REQUIRED MATERIALS OR LABOR SPECIFIED.
26. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK.
27. GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND WITHIN THE CONTRACT DOCUMENTS, PRIOR TO STARTING WORK.
28. ALL WORK SHALL CONFORM TO 2016 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
29. THE SCOPE OF WORK CLEARLY INDICATES THE SCOPE OF WORK ON THE COVER SHEET OR GENERAL NOTE SHEET OF THE DRAWINGS.
30. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
31. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
32. A DSA TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL REQUIRED THE TESTS AND INSPECTIONS FOR THE PROJECT.
33. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY CONSTRUCTION DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK (SECTION 4-317(c), PART 1, TITLE 24, CCR)

SUBMITTALS:

1. SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ETC. FOR ITEMS DESIGNED BY THE ARCHITECT/ENGINEER OF RECORD SHALL BE MADE TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW THE SUBMITTAL BEFORE FORWARDING TO THE ENGINEER. SUBMITTALS SHALL BE MADE IN TIME TO PROVIDE A TWO-WEEK REVIEW PERIOD FOR THE ARCHITECT/ENGINEER. SUBMITTALS REQUIRED FOR EACH SECTION OF THESE NOTES ARE SPECIFIED IN THAT SECTION.

NOTES:

1. THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
2. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGED AREAS.
3. WHEN REQUIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
4. BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING FACILITY, THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH EXISTING STRUCTURAL AND OTHER CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY BRACING, SHORING AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE EXISTING WORK IN A SAFE CONDITION DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING WORK WHICH ARE TO REMAIN.

SHOP DRAWING REVIEW:

1. REVIEW BY THE ARCHITECT/ENGINEER IS FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT AND THE CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THERE FROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS. WHEN SHOP DRAWINGS DIFFER FROM OR ADD TO THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS THEY SHALL BE DESIGNED AND STAMPED BY AN ENGINEER OF RECORD.

ACCESSIBILITY NOTE:

1. THE TELECOMMUNICATIONS EQUIPMENT SPACE SHOWN HEREON THESE PLANS IS NOT CUSTOMARILY OCCUPIED. WORK TO BE PERFORMED IN THIS FACILITY CANNOT REASONABLY BE PERFORMED BY PERSONS WITH A SEVERE IMPAIRMENT: MOBILITY, SIGHT, AND/OR HEARING. THEREFORE, PER CALIFORNIA BUILDING CODE THIS FACILITY SHALL BE EXEMPTED FROM ALL TITLE 24 ACCESS REQUIREMENTS.

PARTIAL LIST OF APPLICABLE CODES AS OF JULY 1, 2017:

2016 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.*
2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2015) INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
(2014) NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
(2015) UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
(2015) UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
2016 CALIFORNIA FIRE CODE PART 9, TITLE 24 C.C.R.
(2015) INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
2016 CALIFORNIA REFERENCE STANDARDS PART 12, TITLE 24 C.C.R.
TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
2013 ASME A17.1(W/A17.a/CSA B44a-08 ADDENDA) SAFETY CODE FOR ELEVATORS AND ESCALATORS

PARTIAL LIST OF APPLICABLE STANDARDS:

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS	2016 EDITION
NFPA 14	STANDPIPE SYSTEMS	2016 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2016 EDITION
NFPA 17a	WET CHEMICAL SYSTEMS	2016 EDITION
NFPA 20	STATIONARY PUMPS	2016 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2016 EDITION
NFPA 24	PRIVATE FIRE MAINS	2016 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2012 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2006 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2016 EDITION
ICC 300	ICC STANDARDS ON BLEACHERS, FOLDING AND TELESCOPING SEATING AND GRAND STANDS	2012 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS	2005 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS-2016 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS. * CALIFORNIA ADMINISTRATIVE CODE, PART 1, CHAPTER 10, ADMINISTRATIVE REGULATIONS FOR THE CALIFORNIA ENERGY COMMISSION (CEC).

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	09/12/17	90% CONSTRUCTION	ESQ
B	11/30/17	100% CONSTRUCTION	AIE

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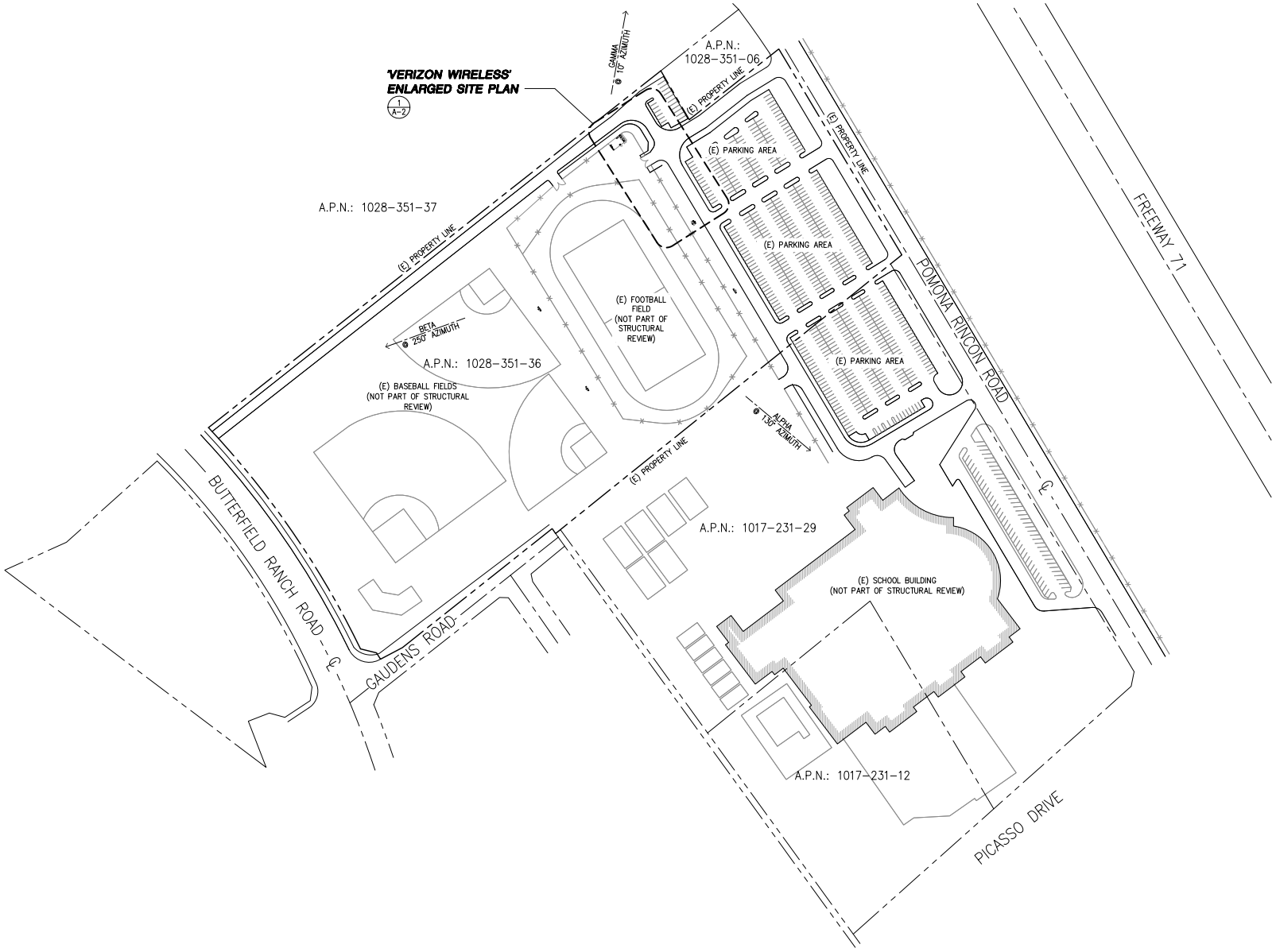
SAN BERNARDINO COUNTY

SHEET TITLE:
GENERAL NOTES AND SPECIFICATIONS

T-2



SITE PLAN

NORTH

SCALE
1"=100'-0"
0 50' 100' 200'

1

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	09/12/17	90% CONSTRUCTION	ESQ
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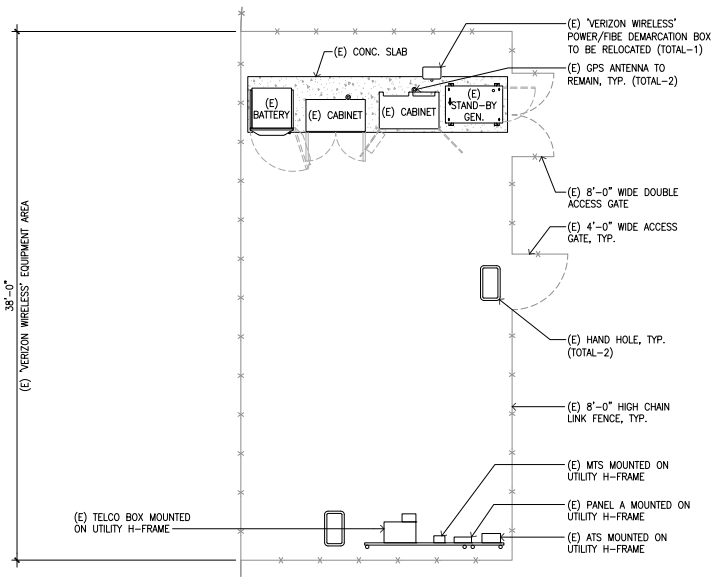
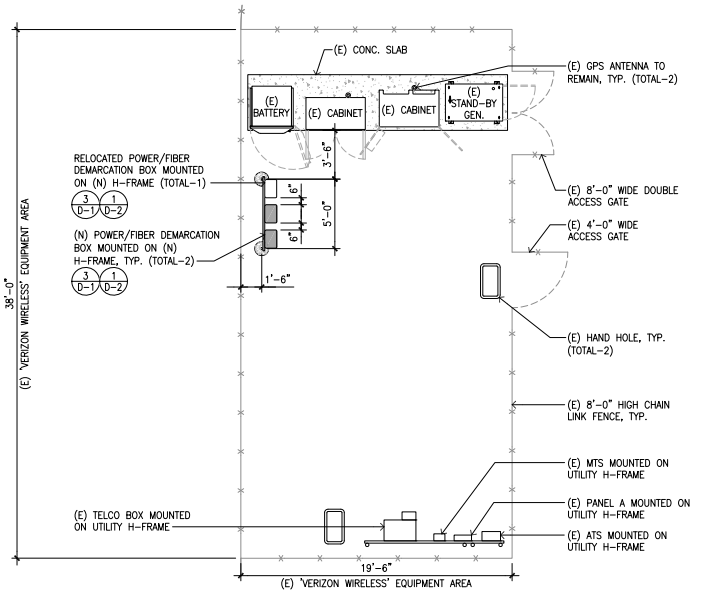
SHEET TITLE:
SITE PLAN

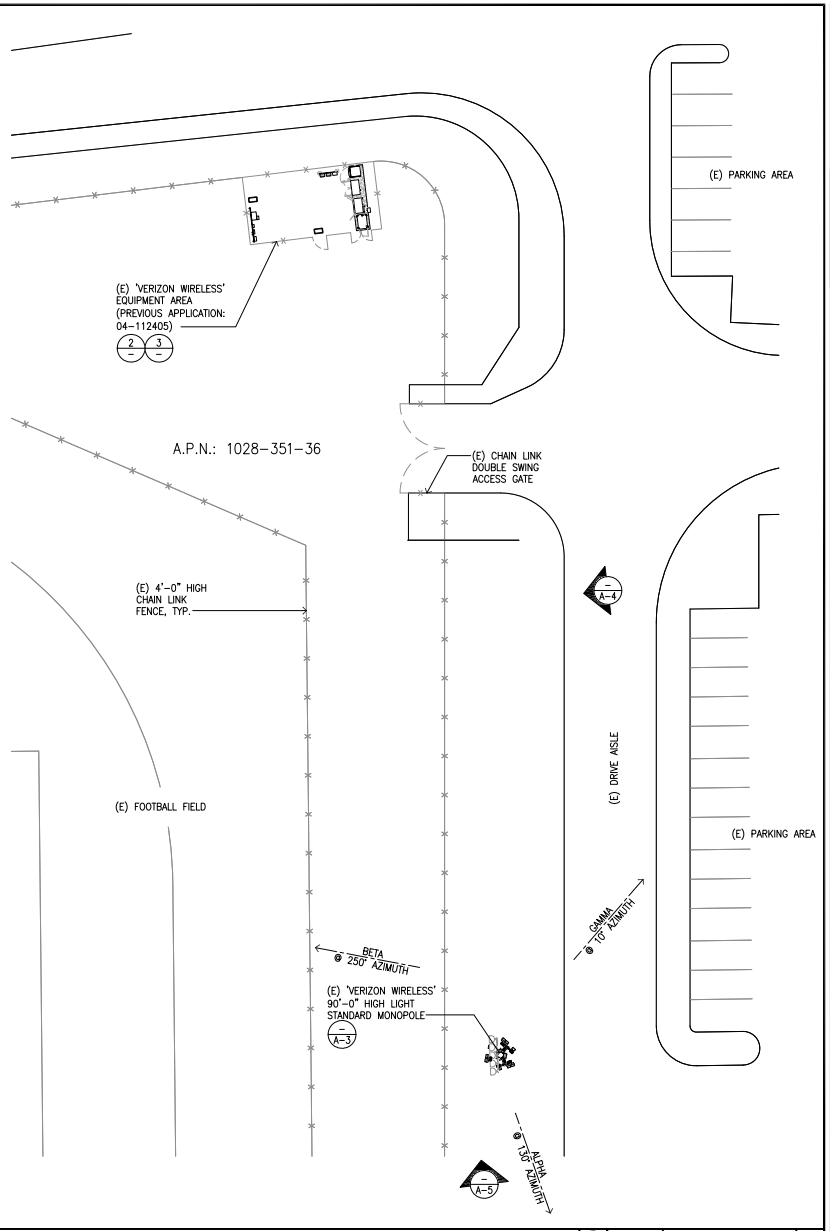
A-1



EXISTING EQUIPMENT PLAN — SCALE 1/4"=1'-0" — 2



NEW EQUIPMENT PLAN — SCALE 1/4"=1'-0" — 3



ENLARGED SITE PLAN — SCALE 1/16"=1'-0" — 1

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	09/12/17	90% CONSTRUCTION	ESQ
B	11/30/17	100% CONSTRUCTION	AIE

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SHEET TITLE:
ENLARGED SITE PLAN & EQUIPMENT PLANS

A-2

May 3, 2018
Page 161

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

NEW ANTENNA AND RRUS CONFIGURATION

	POS	TECHNOLOGY	AZIMUTH	CENTERLINE	ANTENNA MAKE	ANTENNA MODEL	PORT	ELECT. TILT	MECH. TILT	# OF RADIOS
ALPHA	A1	CDMA/LTE/850 LTE/ AWS/AWS-3	130°	58'-0"	ANDREW	NHH-65B-R2B	HEX	1° 2° 1° 0°	0°	– 1 1 1
	A2	LTE/850 LTE/PCS	130°	58'-0"	ANDREW	NHH-65B-R2B	HEX	2° 1° 1°	0°	1 1 1
BETA	B1	CDMA/LTE/ 850LTE/ AWS/AWS-3	250°	58'-0"	ANDREW	NHH-65B-R2B	HEX	1° 2° 1° 0°	0°	– 1 1 1
	B2	LTE/850 LTE/PCS	250°	58'-0"	ANDREW	NHH-65B-R2B	HEX	2° 1° 1°	0°	1 1 1
GAMMA	G1	CDMA/LTE/ 850LTE/ AWS/AWS-3	10°	58'-0"	ANDREW	NHH-65B-R2B	HEX	1° 2° 1° 0°	0°	– 1 1 1
	G2	LTE/850 LTE/PCS	10°	58'-0"	ANDREW	NHH-65B-R2B	HEX	2° 1° 1°	0°	1 1 1

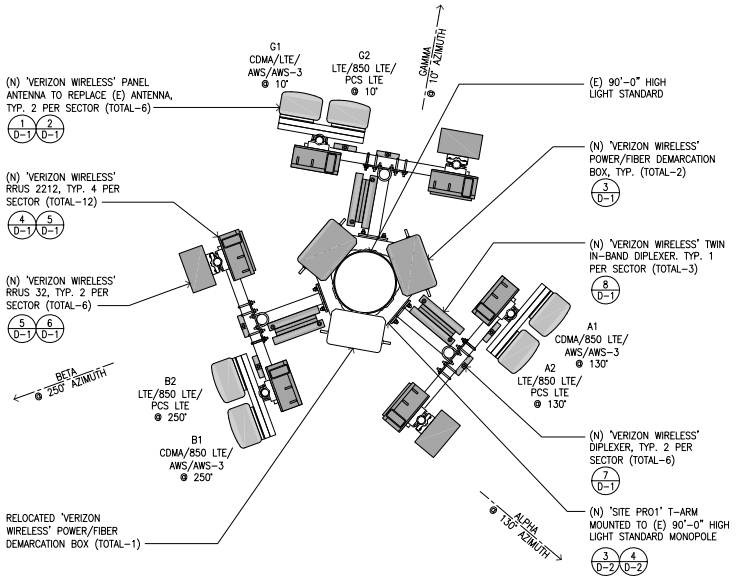
NEW & EXISTING TRANSMISSION LINES

TYPE	QUANTITY	LENGTH
(E) COAX	3	±360'-0"
(E) HYBRIFLEX	1	±360'-0"
(N) HYBRIFLEX	2	±360'-0"

TOTAL TOWER MOUNTED RADIO COUNT:

EXISTING RADIOS TO REMAIN:	0
NEW RADIOS TO BE INSTALLED:	18
TOTAL RADIOS AFTER INSTALLATION:	18

NOTE:
ALL (N) ANTENNAS AND EQUIPMENT TO BE PAINTED TO MATCH EXISTING.



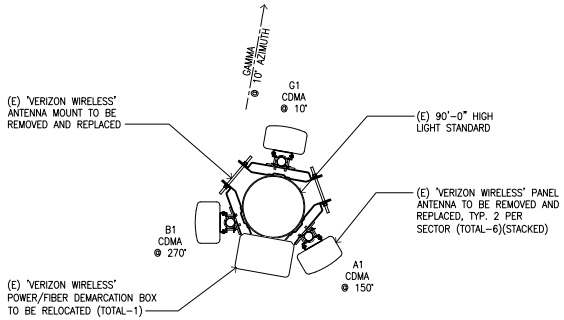
NEW ANTENNA PLAN — NORTH — SCALE 3/4"=1'-0" — 0 6" 1' 2' — 2

EXISTING ANTENNA AND RRUS CONFIGURATION

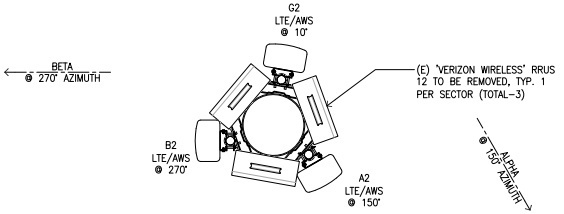
	POS	TECHNOLOGY	AZIMUTH	CENTERLINE	ANTENNA MAKE	ANTENNA MODEL	PORT	ELECT. TILT	MECH. TILT	# OF RADIOS
ALPHA	A1	CDMA	150°	58'-0"	ANDREW	SBNH-1D6565A	QUAD	0°	0°	–
	A2	LTE/AWS	150°	53'-0"	ANDREW	SBNH-1D6565A	QUAD	8° 5°	0°	– 1
BETA	B1	CDMA	270°	58'-0"	ANDREW	SBNH-1D6565A	QUAD	0°	0°	–
	B2	LTE/AWS	270°	53'-0"	ANDREW	SBNH-1D6565A	QUAD	4° 2°	0°	– 1
GAMMA	G1	CDMA	10°	58'-0"	ANDREW	SBNH-1D6565A	QUAD	0°	0°	–
	G2	LTE/AWS	10°	53'-0"	ANDREW	SBNH-1D6565A	QUAD	10° 4°	0°	– 1

EXISTING TRANSMISSION LINES

TYPE	QUANTITY	LENGTH
COAX	12	±360'-0"
HYBRIFLEX	1	±360'-0"



ANTENNAS @ 58'-0" CENTERLINE



ANTENNAS @ 53'-0" CENTERLINE

EXISTING ANTENNA PLAN — NORTH — SCALE 3/4"=1'-0" — 0 6" 1' 2' — 1

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
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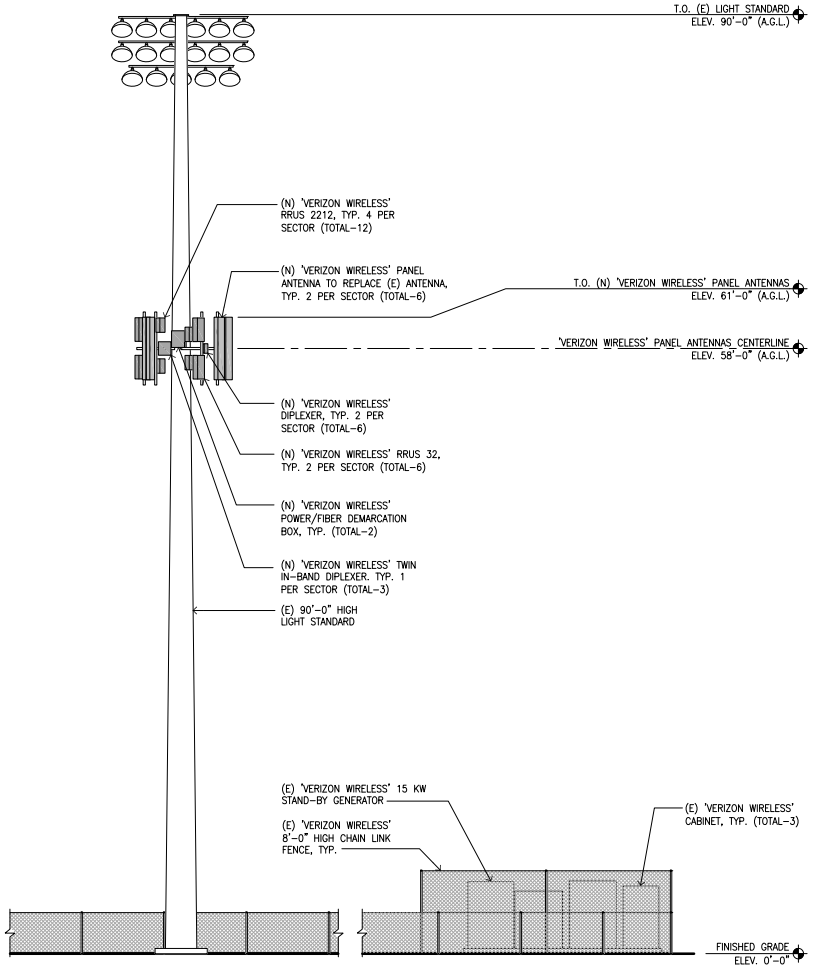
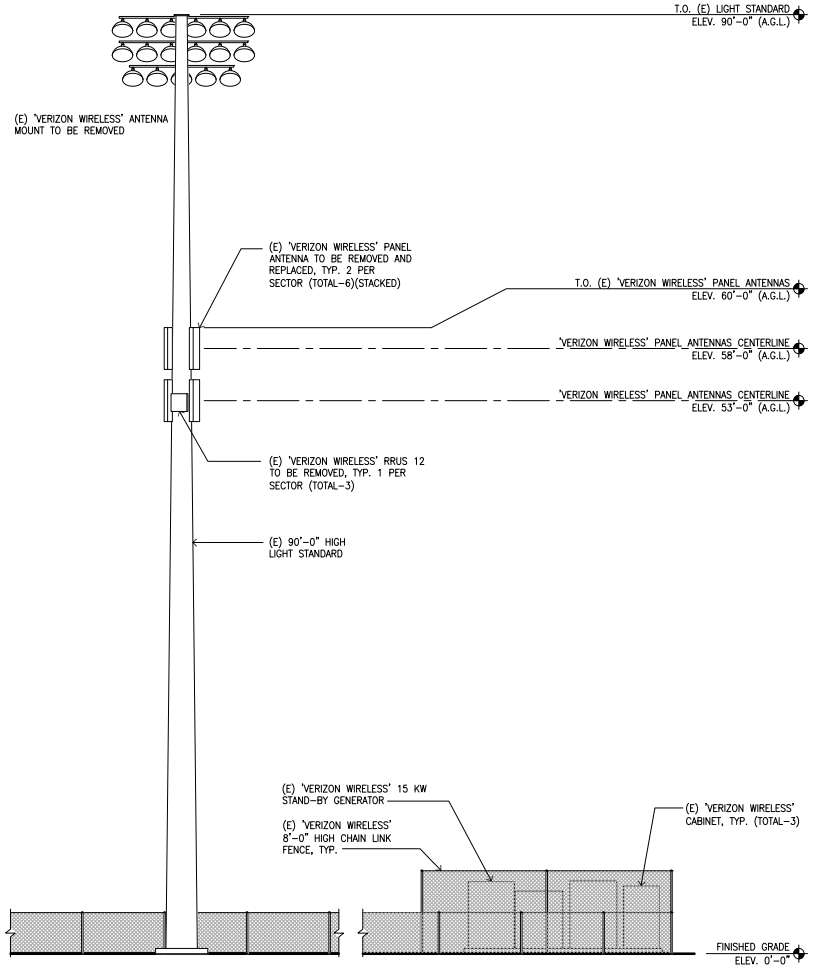
SHEET TITLE:
ANTENNA PLANS

A-3

NOTE:
ALL (N) ANTENNAS AND EQUIPMENT TO BE PAINTED TO MATCH EXISTING.



NEW EAST ELEVATION — SCALE 3/16"=1'-0" — 0 2' 4' 8' — 2



EXISTING EAST ELEVATION — SCALE 3/16"=1'-0" — 0 2' 4' 8' — 1

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

ISSUE STATUS

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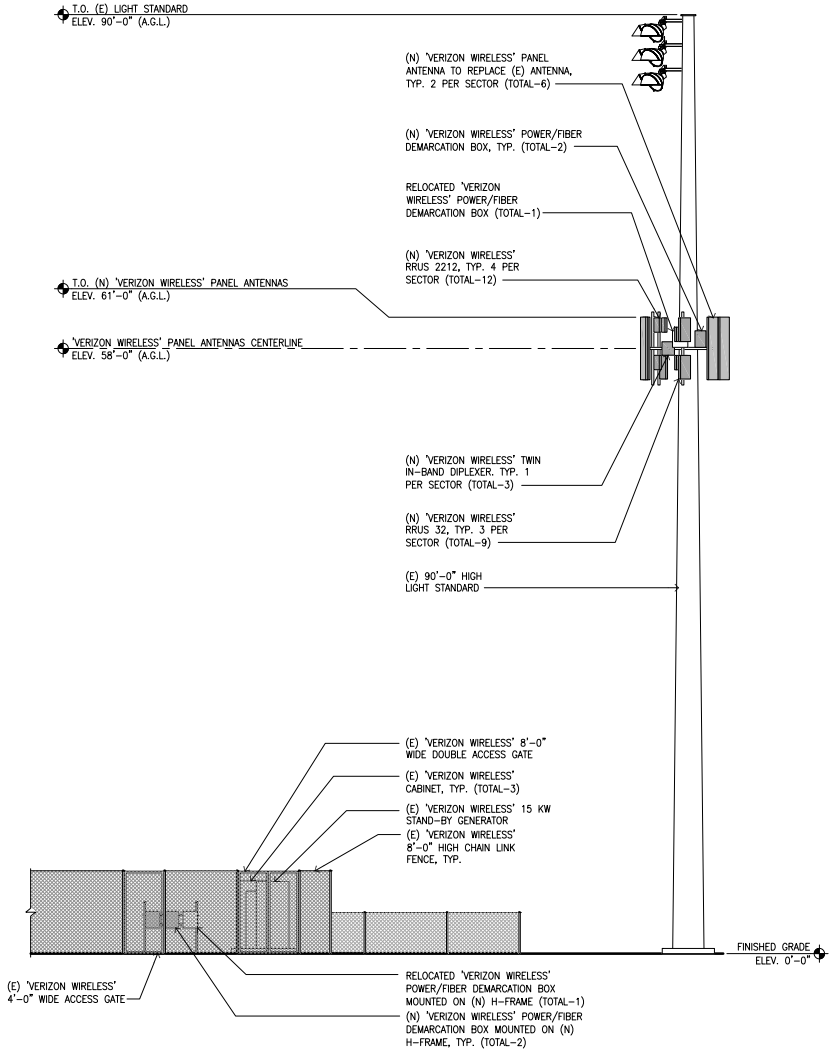
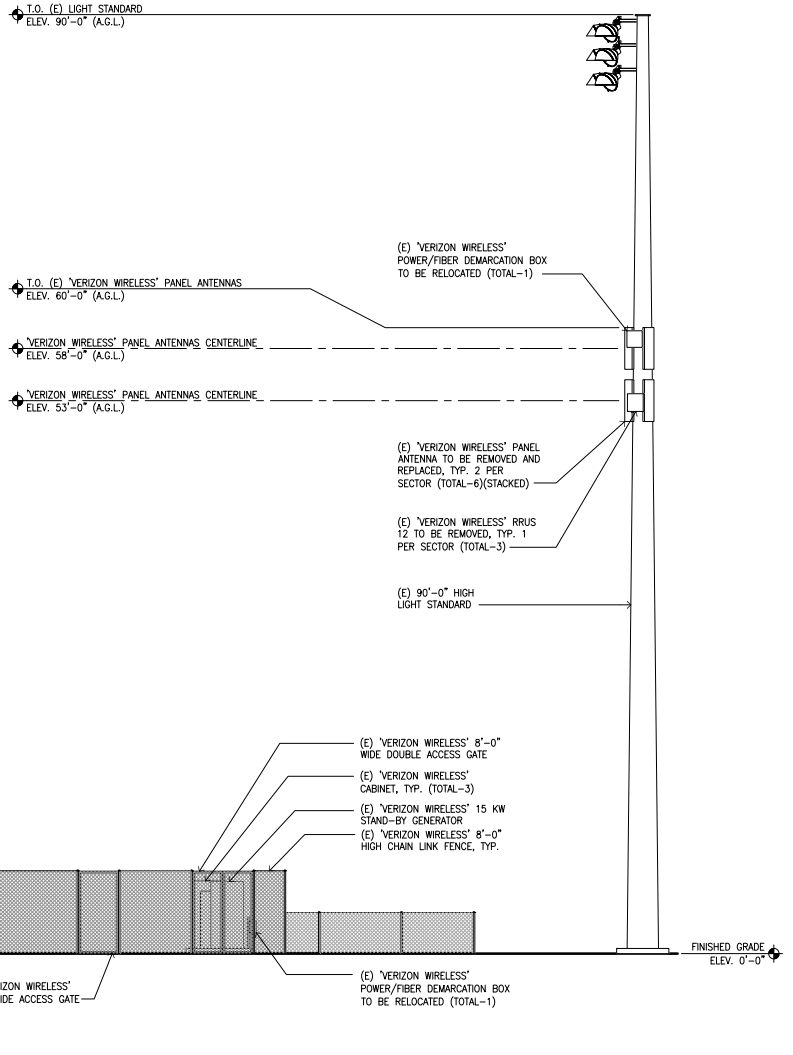
SHEET TITLE:
EAST ELEVATIONS

A-4

NOTE:
ALL (N) ANTENNAS AND EQUIPMENT TO BE PAINTED TO MATCH EXISTING.



NEW SOUTH ELEVATION — SCALE 3/16"=1'-0" (0 2' 4' 8') — 2



EXISTING SOUTH ELEVATION — SCALE 3/16"=1'-0" (0 2' 4' 8') — 1

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

ISSUE STATUS

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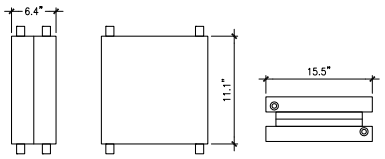
SHEET TITLE:
SOUTH ELEVATIONS

A-5

COMMSCOPE TD-850B-LTE78-43

SIZE (HxWxD) 15.5" x 15.3" x 6.4"
WEIGHT 53 LBS



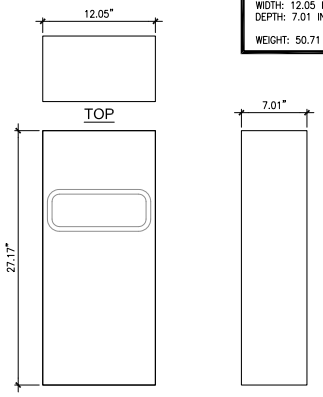
TWIN IN-BAND DIPLEXER SPEC — SCALE N.T.S. — 8

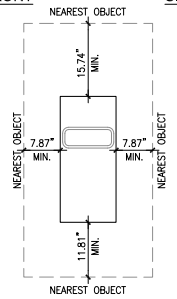
NOTE:
1. USE MANUFACTURER SUPPLIED MOUNTING HARDWARE FOR RRUS ATTACHMENT.

RRUS SPECIFICATIONS

MANUFACTURER: ERICSSON
MODEL: RRUS 32
HEIGHT: 27.17 IN
WIDTH: 12.05 IN
DEPTH: 7.01 IN

WEIGHT: 50.71 LBS





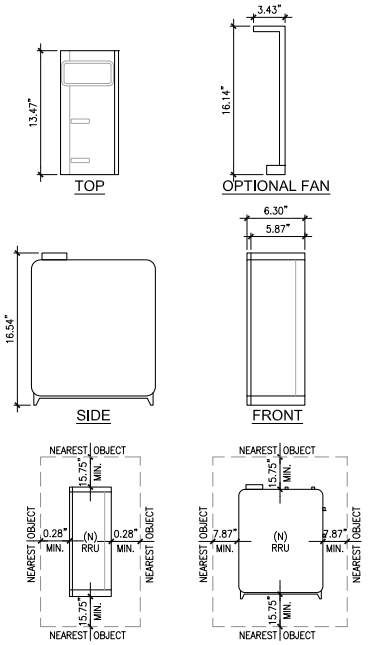
*KEEP 40" CLEAR FROM FRONT OF RRU

RRUS 32 SPECIFICATIONS — SCALE N.T.S. — 6

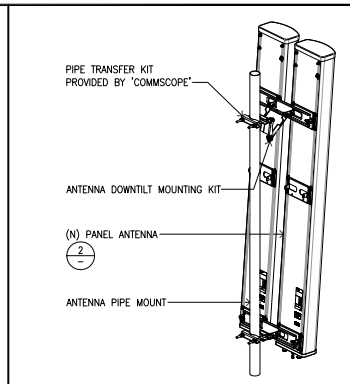
NOTES:
1. USE MANUFACTURER SUPPLIED MOUNTING HARDWARE.
2. OPTIONAL FAN REQUIRED ON ALL NON-VERTICAL INSTALLATIONS.

SPECIFICATIONS

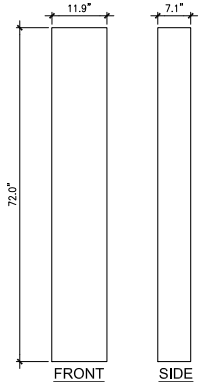
MFG: ERICSSON
MODEL: RRUS 2212
HEIGHT: 16.54 IN
WIDTH: 13.47 IN
DEPTH: 5.87 IN W/OUT FAN
6.30 IN WITH FAN
WEIGHT: 39.47 LBS. W/OUT FAN
42.77 LBS WITH FAN



RRUS 2212 SPECIFICATIONS — SCALE N.T.S. — 4



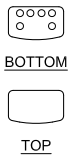
ANTENNA MOUNTING DETAIL — SCALE N.T.S. — 1



ANTENNA SPECIFICATIONS

MANUFACTURER: COMMSCOPE
MODEL: NHH-65B
LENGTH: 72 IN
WIDTH: 11.9 IN
DEPTH: 7.1 IN

WEIGHT: 43.7 LBS



ANTENNA SPECIFICATIONS — SCALE N.T.S. — 2

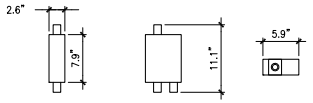
NOT USED — 9

NOT USED — 10

SPECIFICATIONS THE COMMSCOPE CBC78-DF SERIES OF DIPLEXERS ARE DESIGNED TO ENABLE FEEDER SHARING BETWEEN SYSTEMS IN 698-960 MHz RANGE AND 824-894 MHz RANGE.

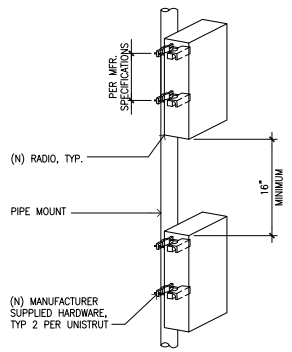
THE COMMSCOPE CBC78-DF SERIES

SIZE (HxWxD) 7.9" x 5.9" x 2.6"
WEIGHT 6.6 LBS
MOUNTING WALL, POLE



WWW.COMMSCOPE.COM

DIPLEXER SPECIFICATIONS — SCALE N.T.S. — 7



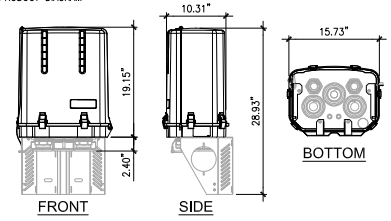
RADIO MOUNTING DETAIL — SCALE N.T.S. — 5

SPECIFICATIONS DC SURGE PROTECTION FOR RRUS/INTERGRATED ANTENNA RADIO HEAD TOWER/BASE/ROOFTOP/ROOFTOP DISTRIBUTION MODELS RCMDC-3315-PF-48

WEIGHT TOTAL: 32 LBS (14.51 KG)

NOTE:
1. USE MANUFACTURER SUPPLIED MOUNTING HARDWARE FOR ATTACHMENT.

PRODUCT DIAGRAM



Raycap WWW.RAYCAPSURGEPROTECTION.COM

POWER/FIBER DEMARCATION — SCALE N.T.S. — 3

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	09/12/17	90% CONSTRUCTION	ESQ
B	11/30/17	100% CONSTRUCTION	AIE

core
DEVELOPMENT SERVICES
A&E SERVICES
3350 E. Birch Street #250
Brea, CA 92821
(714)729-8404 (714)333-4441 fax
www.core.us.com

verizon
15505 SAND CANYON AVENUE, D1
IRVINE, CALIFORNIA 92618
949.286.7000

CHINO HILLS HS
16150 POMONA RINCON RD.
CHINO HILLS, CA 91709
SAN BERNARDINO COUNTY

SHEET TITLE:
DETAILS

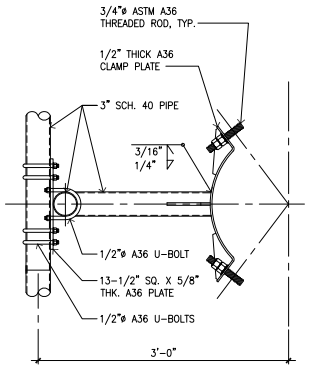
D-1

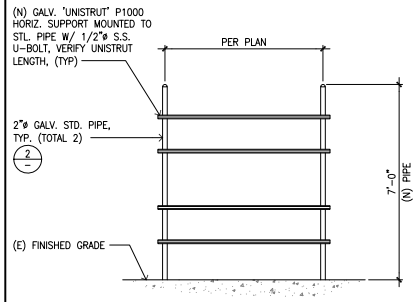
NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

May 3, 2018
Page 165

NOT USED 8

NOT USED 5





H-FRAME DETAIL — SCALE N.T.S. — 1

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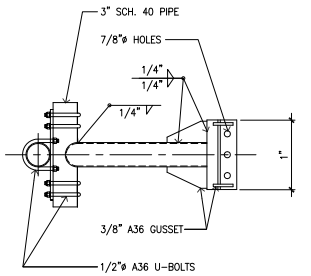
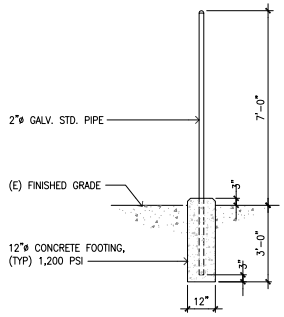


T-ARM ASSEMBLY DETAIL — SCALE N.T.S. — 4



FOOTING DETAIL — SCALE N.T.S. — 2

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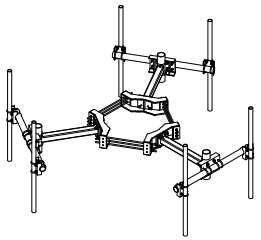
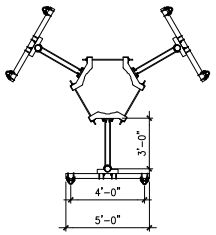


PART #	POLE DIAMETER	FACE WIDTH	MOUNTING PIPES
RMV5-3096	12"-45"	5'-0"	(6) 2 7/8" X 96"



NOTES:
1. "THIS DRAWING, INCLUDING RELATED PARTS, DESIGNS AND SPECIFICATIONS, IS THE EXCLUSIVE PROPERTY OF SITE PRO 1 AND PROVIDED SOLELY FOR THE PURPOSE OF SPECIFYING AND DEPICTING SITE PRO 1 PARTS ON PROPOSAL DRAWINGS, BIDS AND SITE PLANS. ANY OTHER USE OF THESE MATERIALS IS EXPRESSLY PROHIBITED.
2. THIS ELECTRONIC FILE MAY NOT BE DISTRIBUTED, TRANSMITTED OR STORED IN ANY RETRIEVAL SYSTEM WITHOUT THE EXPRESS WRITTEN CONSENT OF VALMONT COMMUNICATIONS."

SITE PRO 1

MONOPOLE TRIPLE T-ARM DETAIL — SCALE N.T.S. — 3

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D-2

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GENERAL NOTES:

1. THE SEISMIC BRACING AND ANCHORAGE OF ELECTRICAL CONDUITS AND WIRE WAY SHALL BE IN ACCORDANCE WITH THE 2016 CALIFORNIA BUILDING CODE AND "GUIDELINE FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS," PUBLISHED BY SMACNA AND PPIC, OR THE SUPER STRUT –SEISMIC RESTRAINT, OR THE KIN–LINE SEISMIC RESTRAINT SYSTEM.

2. ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY UNDERWRITER'S LABORATORIES (UL) AND BEAR THEIR LABEL, OR LISTED AND CERTIFIED BY A NATIONALLY RECOGNIZED TESTING AUTHORITY WHERE UL DOES NOT HAVE A LISTING. CUSTOM MADE EQUIPMENT SHALL HAVE COMPLETE TEST DATA SUBMITTED BY THE MANUFACTURER ATTESTING TO ITS SAFETY. IN ADDITION, THE MATERIALS, EQUIPMENT, AND INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING:

AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
INSULATED POWER CABLE ENGINEERS ASSOCIATION (IPCEA)
NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
AMERICAN STANDARD ASSOCIATION (ASA)
FIRE PROTECTION AGENCY (NFPA)
AMERICAN NATIONAL STANDARD INSTITUTE (ANSI)
CALIFORNIA ELECTRICAL CODE (CEC) – LATEST EDITION
CALIFORNIA CODE OF REGULATIONS TITLE 24 (CCR)
INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
ALL LOCAL CODES AND ORDINANCES OF AGENCIES HAVING JURISDICTION.
WHERE THE CODES HAVE DIFFERENT LEVELS OF REQUIREMENTS, THE MOST STRINGENT RULE SHALL APPLY.

3. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.

4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS AND SPECIFICATIONS. HE SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM DOING THE WORK IN COMPLETE ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

5. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.

6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.

7. THE CONTRACTOR SHALL PROVIDE AND KEEP UP–TO–DATE A COMPLETE RECORD SET OF DRAWINGS. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE ARCHITECT, AND ALL CHANGES AS NOTED ON THE RECORD SET OF DRAWINGS SHALL BE INCORPORATED THEREON WITH BLACK INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER. FAILURE TO KEEP RECORD DRAWINGS UP–TO–DATE SHALL CONSTITUTE CAUSE FOR WITHHOLDING OF PROGRESS PAYMENTS.

8. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER, WHEN AN INTERRUPTION IS NECESSARY, THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER 14 DAYS PRIOR TO THE OUTAGE. ANY OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANELBOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.

9. SHOP DRAWINGS SHALL BE SUBMITTED FOR ITEMS INDICATED ON PLANS. SHOP DRAWINGS SHALL INCLUDE ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS AND MANUFACTURER'S BROCHURES.

10. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH REPRESENTATIVE.

11. THE CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF SUBSTANTIAL COMPLETION.

12. ALL EQUIPMENT MOUNTED ON ROOF FOR CONNECTION TO PCS EQUIPMENT SHALL BE MOUNTED ON UNISTRUT STANDS UTILIZING APPROVED PITCH POCKETS, FLASHING, ETC.

13. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.

14. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. SUPPLY POWER AND MAKE CONNECTION TO EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. REVIEW THE DRAWINGS OF OTHER TRADES AND LOCATION OF EQUIPMENT.

15. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE U.L APPROVED. DO NOT CUT OR BREAK ANY EXISTING REINFORCING BARS IN EXISTING CONCRETE OR MASONRY. IF IN DOUBT REGARDING LOCATION OF REINFORCING, THEN CONTRACTOR, AT CONTRACTOR'S EXPENSE, SHALL UTILIZE X–RAY, ULTRA–SOUND, OR OTHER AVAILABLE TECHNOLOGY TO LOCATE EXISTING REINFORCEMENTS PRIOR TO DRILLING OR CORING OPERATIONS.

16. CONNECTIONS TO VIBRATING EQUIPMENT AND SEISMIC SEPARATIONS: LIQUID–TIGHT FLEXIBLE STEEL CONDUIT IN DRY INTERIOR LOCATIONS. LIQUID–TIGHT FLEXIBLE STEEL CONDUIT IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES, AND FINAL CONNECTIONS TO MOTORS. PROVIDE A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN FLEXIBLE CONDUIT RUNS. MAXIMUM LENGTH SHALL BE SIX FEET UNLESS OTHERWISE NOTED.

17. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT PIPING. ARRANGE CONDUIT TO MAINTAIN HEADROOM AND TO PRESENT A NEAT APPEARANCE.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAWCUTTING, TRENCHING, BACKFILLING, COMPACTION AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM HIS WORK. ATTENTION IS CALLED TO THE FACT THAT THERE ARE EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.

19. WHENEVER A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE, EQUIPMENT DEVICES, CIRCUIT BREAKERS, GROUND FAULT PROTECTION SYSTEMS, ETC. (ALL MATERIALS), ARISES ON THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.

20. UTILITY PENETRATIONS, OF ANY KIND, IN FIRE AND SMOKE PARTITIONS, NON–RATED CEILINGS, AND/OR NON–RATED WALLS, SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED MATERIAL SECURELY INSTALLED.

21. STRAIGHT FEEDER, BRANCH CIRCUIT, AND CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES OR JUNCTION BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 100 FEET. PULL BOXES SHALL BE SIZED PER CODE OR AS INDICATED ON DRAWINGS. LOCATIONS SHALL BE DETERMINED IN THE FIELD OR AS INDICATED ON THE DRAWINGS.

22. MAXIMUM NUMBER OF CONDUCTORS IN OUTLET OR JUNCTION BOXES SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, ARTICLE 370–6.

23. IDENTIFICATION NAMEPLATES SHALL BE MICARTA 1/8 INCH THICK AND OF APPROVED SIZE WITH BEVELED EDGES AND ENGRAVED WHITE LETTERS A MINIMUM OF 1/4 INCH HIGH ON BLACK BACKGROUND. NAMEPLATES SHALL BE PROVIDED FOR ALL CIRCUITS IN THE SERVICE DISTRIBUTION AND POWER DISTRIBUTION SWITCHBOARDS OR PANELBOARDS, DISCONNECTING SWITCHES, TRANSFORMERS, TERMINAL CABINETS, TELEPHONE CABINETS, ETC. ALL NAMEPLATES SHALL BE ATTACHED WITH SCREWS. PULL BOXES, JUNCTION BOXES, AND DEVICE BOXES SHALL BE MARKED WITH A PERMANENT MARKER.

24. THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE DETAILS, OR SECTIONS PRIOR TO INSTALLATION.

25. DRAWINGS ARE DIAGRAMMATIC ONLY. ROUTING OF CONDUITS, RACEWAYS, CABLE TRAYS, AND/OR LADDER RACKS SHALL BE AT THE DISCRETION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER SECTIONS. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL. OR MECHANICAL ITEMS OR FEATURES.

26. SPECIAL RECEPTACLE FOR CONNECTION TO PORTABLE EMERGENCY GENERATOR WHEN SPECIFIED SHALL BE 200 AMPERE, THREE–WIRE, THREE–POLE, REVERSE SERVICE, PIN AND SLEEVE TYPE WITH MOUNTING BOX. VERIFY TYPE OF EMERGENCY GENERATOR CONNECTION WITH CONSTRUCTION MANAGER.

27. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT THREADED TYPE. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILING SPACES WHERE NOT SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB OR BELOW GRADE. FLEXIBLE STEEL CONDUIT MAY BE USED AT OUTLET CONNECTIONS WITH NO RUNS LONGER THAN SIX FEET. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL CONDUITS.

28. RIGID GALVANIZED STEEL CONDUIT FITTINGS SHALL BE THREADED AND THOROUGHLY GALVANIZED. ELECTRICAL METALLIC TUBING (EMT) CONDUIT FITTINGS SHALL BE STEEL, RAINTIGHT THREADLESS COMPRESSION TYPE. DIE CAST, SET SCREW, OR INDENTER TYPES ARE NOT ACCEPTABLE. FLEXIBLE STEEL CONDUIT FITTINGS SHALL BE MALLEABLE IRON CLAMP, SQUEEZE TYPE OR STEEL TWIST–IN TYPE WITH INSULATED THROAT. SET SCREW TYPE IS NOT ACCEPTABLE.

29. ALL CONDUCTORS SHALL BE COPPER #10 AWG MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY AND U.L. LISTED UNLESS NOTED OTHERWISE. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED.

30. JUNCTION AND PULL BOXES: FOR INTERIOR DRY LOCATIONS, BOXES SHALL BE GALVANIZED ONE–PIECE, DRAWN STEEL, KNOCKOUT TYPE WITH REMOVABLE MACHINE SCREW SECURED COVERS. FOR OUTSIDE, DAMP, OR SURFACE LOCATIONS, BOXES SHALL BE HEAVY CAST ALUMINUM OR CAST IRON WITH REMOVABLE, GASKET, NON–FERROUS MACHINE SCREW SECURED COVERS. BOXES SHALL BE SIZED FOR THE NUMBER AND SIZES OF CONDUCTORS AND CONDUIT ENTERING THE BOX AND EQUIPPED WITH PLASTER EXTENSION RINGS WHERE REQUIRED. BOXES SHALL BE LABELED TO INDICATE PANEL AND CIRCUIT NUMBER, OR TYPE OF SIGNAL OR COMMUNICATIONS SYSTEM.

31. ALL OUTDOOR ELECTRICAL DEVICES OR EQUIPMENT SHALL BE OF WEATHERPROOF TYPE.

32. ALL CONNECTIONS TO GROUND BUSSES SHALL BE MADE W/CRIMP TYPE COMPRESSION CONNECTORS (2 HOLE LUGS). BUS SHALL BE DRILLED TO ACCOMMODATE ALL CONNECTORS.

GROUNDING NOTES:

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.

2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.

3. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE TIN COATED OR GREEN INSULATED WIRE.

4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE TO A RANGE OF 5 TO 10 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE GROUND CONDUCTOR FROM THE ANTENNA TO GROUNDING POINT. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE WIRELESS CARRIER REPRESENTATIVE.

5. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

6. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN TINNED COPPER SIZES AS NOTED ON PLAN.

7. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 30" BELOW GRADE IN TRENCH, U.N.O., AND BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT.

8. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.

9. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" WITH A MINIMUM NO. 6 TINNED COPPER CONDUCTOR AND (2) 2–HOLE COMPRESSION CONNECTOR AT BUS.

10. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
a. BURNDY, HY–GRADE U.L. LISTED CONNECTORS (MECHANICAL CONNECTIONS).
b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
c. TWO –(2) HOLE TINNED COPPER COMPRESSION FITTINGS (BUS BAR CONNECTIONS).

11. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP.

12. ALL GROUND CONNECTIONS SHALL BE BURNISHED AND SHALL HAVE A COATING OF "KOPR–SHIELD" OR "NO–OX–ID" APPLIED TO THE CONNECTION.

13. ALL CONNECTION HARDWARE AT EQUIPMENT SHALL BE TYPE 316 SS, OR DURIEM BRONZE. "KOPR–SHIELD" OR "NO–OX–ID" APPLIED TO THE CONNECTION.

14. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.

15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250–82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER PIPE WITHIN FIVE FEET OF WATER SERVICE IF APPLICABLE.

ELECTRICAL NOTES AND SPECIFICATIONS | 3

ABBREVIATIONS:

AWG	AMERICAN WIRE GAUGE	(N)	NEW
AFC	AVAILABLE FAULT CURRENT	ø	PHASE
BTCW	BARE TINNED COPPER WIRE	P	POLE
BTS	BASE TRANSMISSION SYSTEM	P.O.C.	POINT OF CONNECTION
C	CONDUIT	PVC	POLYVINYL CHLORIDE CONDUIT
CB	CIRCUIT BREAKER	(R)	REPLACE OR REWIRE WITH AS (E)
CO	CONDUIT ONLY	RGS	RIGID GALVANIZED STEEL
DWG	DRAWING	TEL	TELEPHONE
EMT	ELECTRICAL METALLIC TUBING	TYP.	TYPICAL
(E)	EXISTING EQUIPMENT	U.G.	UNDERGROUND
(F)	FUTURE EQUIPMENT	UNO	UNLESS NOTED OTHERWISE
GEN	GENERATOR	W	WIRE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	WP	WEATHERPROOF EQUIPMENT
GND	GROUND		
KAIC	THOUSAND AMPS INTERRUPTING CAPACITY		
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION		

ABBREVIATIONS | 1

SYMBOLS:

—G— GROUNDING WIRE, DASHED LINE INDICATES UNDERGROUND

—E— POWER LINE, DASHED INDICATES UNDERGROUND, 3/4"C–2#12&1#12GND, UNO

—T— TELEPHONE LINE, DASHED LINE INDICATES UNDERGROUND

—A— COAXIAL CABLE, DASHED LINE INDICATES UNDERGROUND

X / X–X DETAIL REFERENCE DETAIL NO. X ON SHEET X–X

GROUND ROD

GROUND ROD WITH ACCESS

FUSED DISCONNECT SWITCH, 240V, 2P, 30A, WEATHERPROOF, UNO

UTILITY METER

CIRCUIT BREAKER

FUSE

DUPLEX RECEPTACLE WITH GFCI IN WEATHERPROOF ENCLOSURE

SWITCH, 120AC, 20A
ab – SWITCH LEG
M – MANUAL MOTOR STARTER

CLAMP OR DOUBLE HOLE LUG TYPE GROUND CONNECTION

EXOTHERMIC CONNECTION (CADWELD) TO GROUND RING AND COMPRESSION CONNECTION TO GROUND HALO

SYMBOLS | 2

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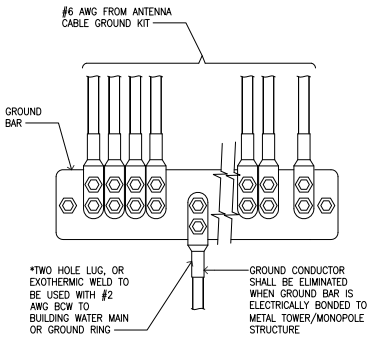
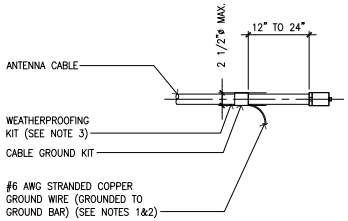
ELECTRICAL NOTES AND SPECIFICATIONS

E-1



GROUND WIRE DETAIL

SCALE N.T.S. | 6



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE ANDREW SUREGROUND TYPE KIT WITH TWO-HOLE LUG.
3. WEATHER PROOFING SHALL BE ANDREW TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED.

ANTENNA CABLE GROUND KIT

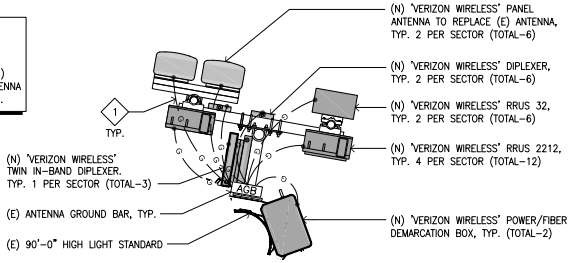
SCALE N.T.S. | 3

GROUNDING GENERAL NOTE:

1. ALL GROUNDING IS EXISTING UNLESS OTHERWISE NOTED.

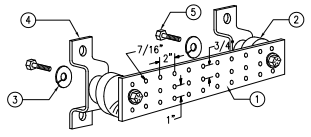
GROUNDING KEY NOTE:

(1) (N) #6 STRANDED COPPER GROUND WIRE FROM THE (N) EQUIPMENT TO THE (E) ANTENNA GROUND BUS BAR (TYPICAL).



ANTENNA GROUNDING PLAN TYP.

NORTH | SCALE 3/8"=1'-0" (0, 1', 2', 4') | 1

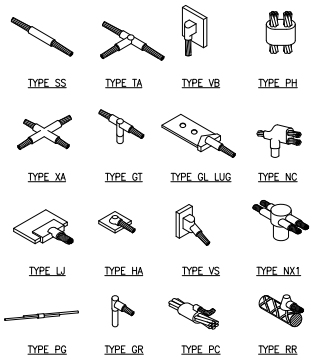


LEGEND:

1. COPPER GROUND BAR, ¼" x 4" x 20". NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
3. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
5. 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUAL
6. INSULATORS SHALL BE ELIMINATED WHEN BONDING DIRECTLY TO TOWER/MONOPOLE STRUCTURE. CONNECTION TO TOWER/MONOPOLE STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

GROUND BAR DETAIL

SCALE N.T.S. | 7



CADWELD CONNECTIONS

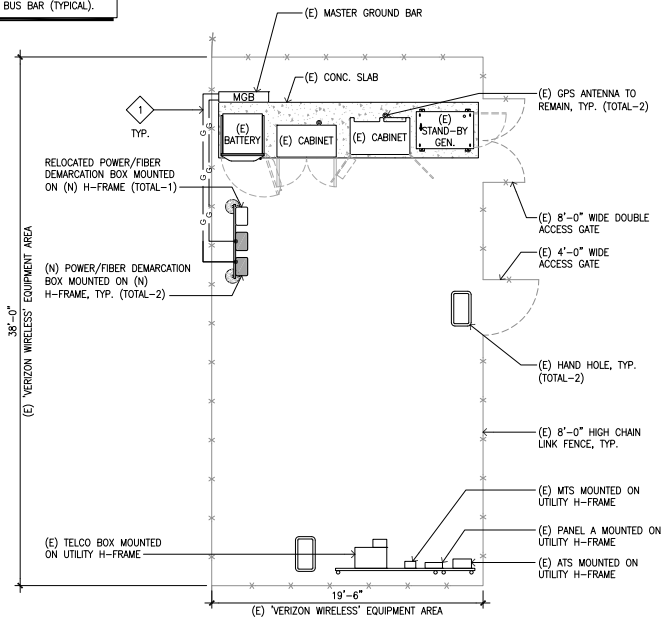
SCALE N.T.S. | 4

GROUNDING GENERAL NOTE:

1. ALL GROUNDING IS EXISTING UNLESS OTHERWISE NOTED.

GROUNDING KEY NOTE:

(1) (N) #2 STRANDED COPPER GROUND WIRE FROM THE (N) EQUIPMENT TO THE (E) MASTER GROUND BUS BAR (TYPICAL).

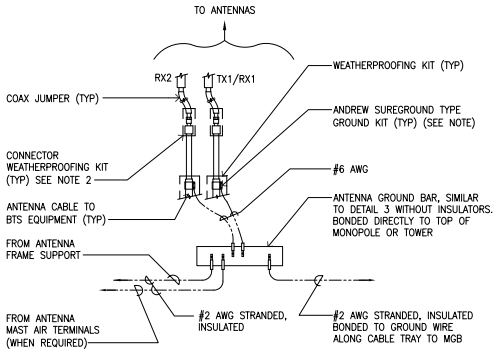


EQUIPMENT GROUNDING PLAN

NORTH | SCALE 1/4"=1'-0" (0, 2', 4', 8') | 1

NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE ANDREW TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.



GROUND WIRE TO GROUNDING BAR DETAIL

SCALE N.T.S. | 5

NOTE: THE ORIGINAL SIZE OF THIS PLAN IS 24" X 36". SCALE RATIO IS NOT VALID FOR REDUCED OR ENLARGED SHEET SIZES

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
A	09/12/17	90% CONSTRUCTION	ESQ
B	11/30/17	100% CONSTRUCTION	AIE

core
DEVELOPMENT SERVICES
A&E SERVICES
3350 E. Birch Street #250
Brea, CA 92821
(714)729-8404 (714)333-4441 fax
www.core.us.com

verizon
15505 SAND CANYON AVENUE, D1
IRVINE, CALIFORNIA 92618
949.286.7000

CHINO HILLS HS
16150 POMONA RINCON RD.
CHINO HILLS, CA 91709
SAN BERNARDINO COUNTY

SHEET TITLE:
GROUNDING PLANS & DETAILS

E-2

EXHIBIT A-4


Equipment Area
Staging/Parking Area
Antenna Space
Working Area

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations

SUBJECT: **APPROVAL OF MEMBERS FOR THE MEASURE G BOND CITIZENS' OVERSIGHT COMMITTEE**

==========

BACKGROUND

On November 8, 2016, voters within the Chino Valley Unified School District approved bond Measure G for the issuance and sale of general obligation bonds, the proceeds of which are to be used for school construction and improvements. Under the requirements of Proposition 39, on January 12, 2017, the Board of Education approved the District to establish, populate and empower an independent Measure G bond, citizens' oversight committee.

On February 2, 2017, the Board appointed ten (10) committee members. Per the accountability requirements of Proposition 39, members shall draw lots to select a minimum of two (2) members to serve for an initial one (1) year term and the remaining members for initial two (2) year terms. No member may serve more than three (3) consecutive terms.

At the Committee's first meeting in March 2017, all members drew lots to select two (2) members to serve for the one (1) and two (2) year terms respectively. Committee members Robert Basile (business organization representing the business community located within the school District's geographic boundary) and William Kolbow (parent/guardian of an enrolled CVUSD student residing in the community of Chino, Chino Hills or South Ontario) each drew one (1) year terms. Both members have expressed interest in continuing their terms for two (2) additional years as allowed by Proposition 39.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended that the Board of Education approve Robert Basile and William Kolbow to serve on the Measure G Bond Citizens' Oversight Committee in their currently represented categories through June 30, 2020.

FISCAL IMPACT

None.

WMJ:GJS:pw

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Lea Fellows, Assistant Superintendent, Human Resources
Suzanne Hernandez, Ed.D., Director, Human Resources
Richard Rideout, Director, Human Resources

SUBJECT: CERTIFICATED/CLASSIFIED PERSONNEL ITEMS

==========

BACKGROUND

Board approval of personnel transactions is required by Board Bylaw 9324 Bylaws of the Board - Minutes and Recordings and Education Code 35163. Included are new hires based on need, which includes replacements, growth, and/or class size reduction.

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve/ratify the certificated/classified personnel items.

FISCAL IMPACT

All personnel assignments are within the approved staffing ratio for the appropriate school year budget.

WMJ:LF:SH:RR:mcm

CERTIFICATED PERSONNEL

NAME	POSITION	LOCATION	EFFECTIVE DATE
CERTIFICATED MANAGEMENT PERSONNEL FOR THE 2017/2018 SCHOOL YEAR			
MEAD, Ron (29 years of service)	Assistant Principal	CVLA	06/16/2018
HIRED AT THE APPROPRIATE PLACEMENT ON THE CERTIFICATED SALARY SCHEDULE AND APPROPRIATE CREDENTIAL FOR THE 2017/2018 SCHOOL YEAR			
SANDERS, Marshall	Elementary PE Teacher	Elementary Curriculum	05/04/2018
LOYOLA, Brandy	School Nurse	Health Services	05/04/2018
RETIREMENT			
MAY, Christine (22 years of service)	Elementary Teacher	Borba ES	06/02/2018
SOHNS, Michelle (31 years of service)	Elementary Teacher	Country Springs ES	06/02/2018
LEVAC, Pamela (30 years of service)	Elementary Teacher	Dickson ES	06/30/2018
SMITH, Donna (16 years of service)	Elementary Teacher	Dickson ES	06/02/2018
WELLS, Joy (33 years of service)	Elementary Teacher	Dickey ES	06/02/2018
CINI, Jennifer (5 years of service)	Elementary Teacher	Eagle Canyon ES	06/02/2018
GUMAER, Denise (31 years of service)	Elementary Teacher	Hidden Trails ES	06/02/2018
KHADEMI, Joan (28 years of service)	Elementary Teacher	Wickman ES	06/02/2018
MORTON, Bradley (30 years of service)	Special Education Teacher	Townsend JHS	06/02/2018
BALL, Steven (17 years of service)	A.C.T. President	District Office	06/30/2018
SOMERS, Dorothy (7 years of service)	Speech/Lang. Pathologist	Special Education	06/02/2018
RESIGNATION			
JACOBO, Lizett	Elementary Teacher	Cattle ES	06/30/2018
APPOINTMENT-EXTRA DUTY			
GONZALES, Michael (NBM)	Football (B)	Don Lugo HS	05/04/2018
SINCLAIR, Timothy (NBM)	Baseball (B)	Don Lugo HS	05/04/2018
VERASTEGUI, Christopher (NBM)	Band (B)	Don Lugo HS	05/04/2018

CERTIFICATED PERSONNEL (cont.)

NAME	POSITION	LOCATION	EFFECTIVE DATE
APPOINTMENT – SUMMER SCHOOL ADMINISTRATORS			
CORDERO, Ibis	Principal	Litel ES/Walnut ES	06/05/2018
HINKLE, Christine	Principal	Litel ES/Walnut ES	06/25/2018
VASQUEZ, Rigoberto	Principal	Buena Vista HS	06/08/2018
BROWN, Melissa	Principal	Chino HS	06/05/2018
MOORE, Richard	Principal	Chino Hills HS	06/05/2018
APPOINTMENT – SUMMER SCHOOL TEACHERS			
BECKMAN, Hilda	4th Grade	Litel ES	06/05/2018
DUARTE, Kim	2nd Grade	Litel ES	06/05/2018
HARRISON, Renee	1st Grade	Litel ES	06/05/2018
MORSE, Karen	5th Grade	Litel ES	06/05/2018
VALENZUELA, Benito	6th Grade	Litel ES	06/05/2018
WASSERMAN, Sindi	3rd Grade	Litel ES	06/05/2018
BEARD, Daura	English	Buena Vista HS	06/08/2018
CHOI, Kevin	Math	Buena Vista HS	06/08/2018
LARNED, Kelly	Science	Buena Vista HS	06/08/2018
WALWORTH, Floyd	Social Science	Buena Vista HS	06/08/2018
BRISENO, Blanco	Health	Chino HS	06/08/2018
CASTRO, Marco	Algebra Intervention	Chino HS	06/05/2018
CHANDLER, Amelia	Health	Chino HS	06/28/2018
DEMING, Annette	English 11CP	Chino HS	06/08/2018
DUNGCA, Marilou	Integrated Math 2	Chino HS	06/08/2018
HALE, Sierra	English 7/8 Intensive	Chino HS	06/05/2018
LERMA, Breanne	English 10CP	Chino HS	06/08/2018
LIBBY, Gary	World History	Chino HS	06/08/2018
KIRWAN, James	Integrated Math 1	Chino HS	06/08/2018
NOVEK, Frank	Biology CP	Chino HS	06/08/2018
ROBLES, Daniel	PE	Chino HS	06/08/2018
SWANBERG, John	US History	Chino HS	06/08/2018
VIRAMONTES DORADO, Fernando	Integrated Math 3	Chino HS	06/08/2018
WRIGHT, Jonathan	English 9CP	Chino HS	06/08/2018
YLLANES, Samantha	Earth Science	Chino HS	06/08/2018
BARRETT, Arthur	Integrated Math 1	Chino Hills HS	06/08/2018
BROWN, Jamie	English 10CP	Chino Hills HS	06/08/2018
CALLACI, Robert	English 7/8 Intensive	Chino Hills HS	06/08/2018
DANG, Thom	Integrated Math 2	Chino Hills HS	06/08/2018
GOTTBRECHT, John	World History	Chino Hills HS	06/08/2018
GRANT, Donald	PE	Chino Hills HS	06/08/2018
LAWHORN, Brian	Earth Science	Chino Hills HS	06/08/2018
MONTANEZ, Antonio	English 11CP	Chino Hills HS	06/08/2018

CERTIFICATED PERSONNEL (cont.)

NAME	POSITION	LOCATION	EFFECTIVE DATE
APPOINTMENT – SUMMER SCHOOL TEACHERS (cont.)			
MURILLO, Christopher	Algebra Intervention	Chino Hills HS	06/08/2018
NELSON, Gregory	Integrated Math 3	Chino Hills HS	06/08/2018
NIEBLAS, Michael	English 9CP	Chino Hills HS	06/08/2018
ROBLEDO, Melissa	Health	Chino Hills HS	06/08/2018
ROCHE, Thomas	US History	Chino Hills HS	06/08/2018
SANDOVAL, Salvador	Biology CP	Chino Hills HS	06/08/2018
APPOINTMENT – SUMMER SCHOOL TEACHERS – EXTENDED SCHOOL YEAR			
ADAMS, Tracy	M/M 1st - 3rd Grade	Litel ES	06/05/2018
ARAGON, Loraine	M/M 1st - 3rd Grade	Litel ES	06/05/2018
BERGMANN, James	M/M 4th - 6th Grade	Litel ES	06/05/2018
BLISS, Julie	M/S K - 3rd Grade	Litel ES	06/05/2018
BROWN, Steven	M/M 4th - 6th Grade	Litel ES	06/05/2018
ESCOBEDO, Maggie	Autism Pre. K - K	Litel ES	06/05/2018
GONZALES, Denise	Autism 1st - 2nd Grade	Litel ES	06/05/2018
HAYS, Kristi	M/M 1st - 3rd Grade	Litel ES	06/05/2018
HIGA, Christine	M/M 1st - 3rd Grade	Litel ES	06/05/2018
LAIRD, Shae	M/M 4th - 6th Grade	Litel ES	06/05/2018
MURPHY, Erica	Autism 3rd - 4th Grade	Litel ES	06/05/2018
NEWMAN, Laura	Autism 5th - 6th Grade	Litel ES	06/05/2018
OLIVAS, Miranda	M/S 4th - 6th Grade	Litel ES	06/05/2018
SHARP, Erin	M/M 4th - 6th Grade	Litel ES	06/05/2018
TORDIFF, Rachelle	M/M K - 1st Grade	Litel ES	06/05/2018
GRISSOM, Austin	M/S K - 3rd Grade	Walnut ES	06/05/2018
MORALES, Dana	M/S 4th - 6th Grade	Walnut ES	06/05/2018
SAVARD, Susan	M/S Pre. K	Walnut ES	06/05/2018
KACY, Anthony	M/M Study Skills 9th - 12th Grade	Chino HS	06/08/2018
KNIGHT, Kristen	M/M 7th - 8th Grade	Chino HS	06/05/2018
MARNEIN, Michael	M/M Intervention ELA 9th - 12th Grade	Chino HS	06/08/2018
MONTIEL, Maria	M/M 7th - 8th Grade	Chino HS	06/05/2018
VALLEROY, Claudia	M/M Intervention Math 9th - 12th Grade	Chino HS	06/08/2018
BANUELOS, Marisela	M/S 7th - 8th Grade	Chino Hills HS	06/05/2018
CUADRAS, Cori	M/S Adult Transition	Chino Hills HS	06/08/2018
EUBANKS, Yi	M/S 9th - 12th Grade	Chino Hills HS	06/08/2018
GUTIERREZ, Eugene	M/S Adult Transition	Chino Hills HS	06/08/2018
LEMEN, Matthew	M/S 9th - 12th Grade	Chino Hills HS	06/08/2018

CERTIFICATED PERSONNEL (cont.)

NAME	POSITION	LOCATION	EFFECTIVE DATE
APPOINTMENT – SUMMER SCHOOL TEACHERS – EXTENDED SCHOOL YEAR (cont.)			
BADUM, Kristen	Psychologist	Litel ES Walnut ES Cal Aero K-8 Chino HS Chino Hills HS	06/08/2018
MC ENTIRE, Modell	Psychologist	Litel ES Walnut ES Cal Aero K-8 Chino HS Chino Hills HS	06/08/2018
REYES, Traci	Psychologist	Litel ES Walnut ES Cal Aero K-8 Chino HS Chino Hills HS	06/08/2018
SPRING, Joanne	Adaptive P.E.	Litel ES Walnut ES Chino HS Chino Hills HS	06/08/2018
STRAHAN, Thomas	Adaptive P.E.	Litel ES Walnut ES Chino HS Chino Hills HS	06/08/2018
HIRED AT THE APPROPRIATE PLACEMENT ON THE CERTIFICATED SALARY SCHEDULE AND APPROPRIATE CREDENTIAL FOR THE 2018/2019 SCHOOL YEAR			
CROWELL, James	Wood/Welding Teacher	Boys Republic	07/09/2018
LEAVE OF ABSENCE - 2018/2019			
LAWRENCE, Lynn	Intervention Teacher 50%	Dickson ES	2018/2019
ACEVEDO, Fiorella	Intervention Teacher	Dickson ES	2018/2019
DWYER, Martin	Elementary Teacher	Marshall ES	2018/2019
GONZALES, Shannon	Elementary Teacher	Oak Ridge ES	2018/2019
INGRAM, Dyan	Elementary Teacher	Wickman ES	2018/2019
LACHEMANN, Bret	PE Teacher 20%	Magnolia JHS	2018/2019
PITTMAN, Anthony	Science Teacher	Ayala HS	07/01/2018 thru 01/29/2019

CERTIFICATED PERSONNEL (cont.)

NAME	POSITION	LOCATION	EFFECTIVE DATE

LEAVE OF ABSENCE - 2018/2019 (cont.)

LARIOS-CONTRERAS, Zorayda	Spanish Teacher 20%	Chino HS	2018/2019
MOTT, Jenny	School Nurse 20%	Health Services	2018/2019
MURILLO, Denise	School Nurse 20%	Health Services	2018/2019
PARKS, Susan	School Nurse 8%	Health Services	2018/2019
CARR, Emily	Speech/Lang. Path. 24%	Special Education	2018/2019
RIDEOUT, Katasha	School Psychologist 40%	Special Education	2018/2019

APPOINTMENT OF CERTIFICATED SUBSTITUTES EFFECTIVE JULY 1, 2017, THROUGH JUNE 30, 2018

BECKER, Lindsey	CHOI, Alice	DINH, Jennifer
FLORES, Kellie	GARRETT, Kelleigh	REED, Maci
TOGNETTI, Wendy		

CLASSIFIED PERSONNEL

NAME	POSITION	LOCATION	EFFECTIVE DATE
APPOINTMENT			
SCHMIDT, Destoni	Playground Supervisor (GF)	Ramona JHS	05/04/2018
ADDITIONAL ASSIGNMENT			
AUBE, Karen	Typist Clerk I (GF)	Rhodes ES	05/04/2018
TORRES, Lucia	Custodian I (GF)	Buena Vista HS	05/04/2018
PROMOTION			
NELSON, Kimberly	FROM: Payroll Clerk III (GF) 8 hrs./261 contract days TO: Administrative Secretary I - CSEA (SELPA/GF) 8 hrs./261 contract days	Business Services Special Education	05/04/2018
CHANGE IN ASSIGNMENT			
CERDA, Misty	FROM: Health Tech. (GF) 3.5 hrs./185 work days TO: Health Tech. (GF) 5.5 hrs./ 185 work days	Marshall ES Woodcrest JHS	05/09/2018
PAYNE, Debra	FROM: Registrar (GF) 8 hrs./213 work days TO: Registrar (C) 8 hrs./261 contract days	Chino Hills HS Boys Republic HS	05/07/2018
APPOINTMENT – SUPPLEMENTAL INSTRUCTION – SUMMER SCHOOL			
GUZMAN, Lastelle	Custodian I (SS)	Litel ES	06/06/2018
REHRER, Lynn	Health Technician (SS)	Litel ES	06/05/2018
MATA, Anna	School Secretary I (SS)	Walnut ES	06/05/2018
ERMER, Carrie	Nutrition Srvcs. Mgr. II (SS)	Buena Vista HS	06/11/2018
RAYA, Darlene	School Secretary I (SS)	Buena Vista HS	06/08/2018
ELLSWORTH, Judy	Health Technician (SS)	Chino HS	06/05/2018
FREEMAN, Sandra	School Secretary I (SS)	Chino HS	06/05/2018
GONZALES, Gregory	Nutrition Srvcs. Mgr. II (SS)	Chino HS	06/06/2018
CASTILLO, Diane	Health Technician (SS)	Chino Hills HS	06/05/2018
GREENLER, Diane	Sec. Lib./Media Ctr. Asst. (SS)	Chino Hills HS	05/29/2018
MENESES, Lucy	High School Receptionist (SS)	Chino Hills HS	06/05/2018
NIXON, Angie	Nutrition Srvcs. Mgr. II (SS)	Chino Hills HS	06/06/2018

CLASSIFIED PERSONNEL

APPOINTMENT – SUPPLEMENTAL INSTRUCTION – SUMMER SCHOOL (cont.)

NAME	POSITION	LOCATION	EFFECTIVE DATE
NAVARRO, Cherrish	High School Receptionist (SS)	Chino HS	06/05/2018
THURLO, David	Custodian I (SS)	Chino HS	06/06/2018
VILLEGAS, Wendy	Sec. Lib./Media Ctr. Asst. (SS)	Chino HS	05/29/2018
ANCHONDO, Lori	IA/Special Education (SS)	Special Education	06/06/2018
BACON, Cassie	IA/Special Education (SS)	Special Education	06/06/2018
BAEZA, Marilyn	IA/Special Ed./SH (SS)	Special Education	06/06/2018
BAILEY, Rebecca	IA/Special Ed./SH (SS)	Special Education	06/06/2018
BARKLEY, Jennifer	IA/Special Ed./SH (SS)	Special Education	06/06/2018
BELLONIO, Lisa	IA/Special Ed./SH (SS)	Special Education	06/06/2018
BENNETT, Maria	IA/Special Ed./SH (SS)	Special Education	06/06/2018
BORJA, Julie	IA/Special Ed./SH (SS)	Special Education	06/06/2018
BURKS, Linda	IA/Special Education (SS)	Special Education	06/06/2018
CARRUTHERS, Michelle	IA/Special Ed./SH (SS)	Special Education	06/06/2018
CHUONG, Laureen	IA/Special Ed./SH (SS)	Special Education	06/06/2018
CHUONG, Colleen	IA/Special Ed./SH (SS)	Special Education	06/06/2018
CLARK, Holly	IA/Special Ed./SH (SS)	Special Education	06/06/2018
CORTES, Dina	IA/Special Ed./SH (SS)	Special Education	06/06/2018
CRUMP, Laura	IA/Special Ed./SH (SS)	Special Education	06/06/2018
DROOG, Lisa	IA/Special Ed./SH (SS)	Special Education	06/06/2018
EDWARDS, Cynthia	IA/Special Ed./SH (SS)	Special Education	06/06/2018
EVERETT, Jessica	IA/Special Education (SS)	Special Education	06/06/2018
FISK, Tanya	IA/Physical Education (SS)	Special Education	06/06/2018
FLAUGHER, Monica	IA/Special Ed./SH (SS)	Special Education	06/06/2018
FLORES, Bryan	IA/Special Ed./SH (SS)	Special Education	06/06/2018
GALINDO, Patricia	IA/Special Ed./SH (SS)	Special Education	06/06/2018
GARCIA, Nicole	IA/Special Ed./SH (SS)	Special Education	06/06/2018
GARCIA, Vickie	IA/Special Ed./SH (SS)	Special Education	06/06/2018
HAWKINS, Alisa	IA/Special Ed./SH (SS)	Special Education	06/06/2018
HERNANDEZ, Elena	IA/Special Education (SS)	Special Education	06/06/2018
HORNE, Wendy	IA/Special Ed./SH (SS)	Special Education	06/06/2018
HUIE, Kelly	IA/Special Ed./SH (SS)	Special Education	06/06/2018
HUSTON, Linda	IA/Special Ed./SH (SS)	Special Education	06/06/2018
JEPEWAY, Gwen	IA/Special Ed./SH (SS)	Special Education	06/06/2018
KAPLAN, Debbie	IA/Special Ed./SH (SS)	Special Education	06/06/2018
KUHNS, Richelle	IA/Special Ed./SH (SS)	Special Education	06/06/2018
MANNING, Alane	IA/Special Ed./SH (SS)	Special Education	06/06/2018
MILVERSTED, Dana	IA/Special Ed./SH (SS)	Special Education	06/06/2018
ORRIS, Nancy	IA/Special Ed./SH (SS)	Special Education	06/06/2018
PACHECO, Erica	IA/Special Ed./SH (SS)	Special Education	06/06/2018
PALACIOS, Theresa	IA/Special Ed./SH (SS)	Special Education	06/06/2018

CLASSIFIED PERSONNEL

NAME	POSITION	LOCATION	EFFECTIVE DATE
APPOINTMENT – SUPPLEMENTAL INSTRUCTION – SUMMER SCHOOL (cont.)			
PEREZ, Ranelle	IA/Special Education (SS)	Special Education	06/06/2018
PERRY, Kathleen	IA/Special Ed./SH (SS)	Special Education	06/06/2018
PROUDFIT, Stephanie	IA/Special Ed./SH (SS)	Special Education	06/06/2018
REYES, Jessica	IA/Special Ed./SH (SS)	Special Education	06/06/2018
REYES, Elizabeth	IA/Special Ed./SH (SS)	Special Education	06/06/2018
RIZZO-VASQUEZ, Alisha	IA/Special Ed./SH (SS)	Special Education	06/06/2018
RODRIGUEZ, Maria L.	IA/Special Ed./SH (SS)	Special Education	06/06/2018
SANCHEZ, Mark	IA/Special Ed./SH (SS)	Special Education	06/06/2018
SAWYER, Danielle	IA/Special Education (SS)	Special Education	06/06/2018
SHULER, Tracy	IA/Special Education (SS)	Special Education	06/06/2018
ULLOA, Georgina	IA/Special Education (SS)	Special Education	06/06/2018
WATTS, Sally	IA/Physical Education (SS)	Special Education	06/06/2018
WILLIAMS, Susan	IA/Special Ed./SH (SS)	Special Education	06/06/2018
RELEASE OF PROBATIONARY EMPLOYEE WITHOUT PREJUDICE			
Employee #26126			04/20/2018
RETIREMENT			
ARROYO, Robert (24 years of service)	Custodian II (GF)	Canyon Hills JHS	07/01/2018
JUENGLING, Dorene (20 years of service)	Grant Program Support Spec./Suppl. Funding (GF)	Health Services	06/23/2018
ROLLINS-ALLEN, Cheryl (20 years of service)	Billing Specialist (MCB)	Health Services	05/01/2018
RESIGNATION			
DUNKLE, Brenda	Multi Media Communications Specialist (GF)	Communications	05/04/2018
THOMAS, Natalie	Licensed Vocational Nurse (GF)	Health Services	04/24/2018
APPOINTMENT OF SHORT TERM EMPLOYEES EFFECTIVE APRIL 1, 2018, THROUGH JUNE 30, 2018			
VARNER, Kelsea	IA/Special Ed./SH	Cortez ES	
MORREIRA II, Richard	IA/Special Ed./SH-Bus Aide	Special Education	
SILVEIRA, Allisson	Typist Clerk I	Transportation	

CLASSIFIED PERSONNEL (cont.)

NAME	POSITION	LOCATION	EFFECTIVE DATE

APPOINTMENT OF SHORT TERM EMPLOYEES EFFECTIVE JULY 1, 2018, THROUGH SEPTEMBER 30, 2018

SILVEIRA, Allisson	Typist Clerk I	Transportation

APPOINTMENT OF CLASSIFIED SUBSTITUTES EFFECTIVE JULY 1, 2018, THROUGH JUNE 30, 2019

ACEVES, Lorraine	ARRISON, Shannon	AYRES, Bridget
BETANCOURT, Caroline	BOSSANO, Maria	BRANDYBERRY, Lillian
BUQUID, Natasha	CASTILLO, Monika	CHILTON, Jana
CHUNG, Dexter	FERREIRA, Christina	FLUM, Mary Lou
FOLEY, Doreen	GRAZIANO, Arlene	GREEN, Michael
GUZMAN, Guadalupe	HARGROVE, Stephanie	HOLZMEISTER, Esther
IASPARRO, Lesa	KATSUHIRO, Leticia	KENDRENA, Sandra
KLUCK, Kathleen	KUDER, Mallory	LOURENCO, Johnny
MARTINEZ, Vanessa	MISSERI, Monica	MOHLMAN, Janice
PAREDES, Maria	PHANBUH, Wandalin	POINTER, Delphine
SELVIDGE, Gina	SERRA, Alicia	SHAH, Sejal
SIN, Carol	SMITH, Michael	TORRES, Lucia
TORRES, Monica	VAKA, Nancy	VARNER, Kelsea
VISTA, Sontri	WHITAKER, Kimberly	ZELAYA-AGUILAR, Amalia

(504) = Federal Law for Individuals with Handicaps
(ACE) = Ace Driving School
(ADLTCALW) = Adult Cal Works
(ABG) = Adult Education Block Grant
(ASB) = Associated Student Body
(ASF) = Adult School Funded
(ATE) = Alternative to Expulsion
(B) = Booster Club
(BTSA) = Beginning Teacher Support & Assessment
(C) = Categorically Funded
(CAHSEE)= California High School Exit Exam
(CC) = Children's Center (Marshall)
(CDF) = Child Development Fund
(CSR) = Class Size Reduction
(CVLA) = Chino Valley Learning Academy
(CWY) = Cal Works Youth
(E-rate) = Discount Reimbursements for Telecom.
(ESLC) = ESL/Citizenship – Adult Education
(G) = Grant Funded
(GF) = General Fund
(HBE) = Home Base Education
(MM) = Measure M – Fund 21
(MAA) = Medi-Cal Administrative Activities
(MCB) = Medi-Cal Billing Option
(MH) = Mental Health – Special Ed.
(NBM) = Non-Bargaining Member
(ND) = Neglected and Delinquent
(NS) = Nutrition Services Budget
(OPPR) = Opportunity Program
(PFA) = Parent Faculty Association
(R) = Restricted
(ROP) = Regional Occupation Program
(SAT) = Saturday School
(SB813) = Medi-Cal Admin. Activities Entity Fund
(SELPA) = Special Education Local Plan Area
(SOAR) = Students on a Rise
(SPEC) = Spectrum Schools
(SS) = Summer School
(SWAS) = School within a School
(VA) = Virtual Academy
(WIA) = Workforce Investment Act

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Lea Fellows, Assistant Superintendent, Human Resources
Suzanne Hernandez, Ed. D., Director, Human Resources
Richard Rideout, Director, Human Resources

SUBJECT: **REVISIONS TO THE JOB DESCRIPTIONS FOR DIRECTOR, BUSINESS SERVICES, AND PAYROLL SUPERVISOR**

==========

BACKGROUND

Job descriptions are a statement of duties, qualifications, and responsibilities associated with a particular job. It is a matter of standard practice to modify and/or create job descriptions as new positions become necessary, jobs evolve, and responsibilities and duties change. Additionally, changes in organizational structure, student needs, and other factors require the revision of existing positions to support the District's mission of increased student achievement.

New language is provided in UPPER CASE while old language to be deleted is ~~lined through.~~

Approval of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education approve the revisions to the job descriptions for:

a) Director, Business Services; and
b) Payroll Supervisor.

FISCAL IMPACT

No fiscal impact to the Director, Business Services. An additional $8,071.00 to the General Fund for the Payroll Supervisor position, inclusive of salary, mandatory benefits, health and welfare, and other allowances.

WMJ:LF:SH:RR:mcm

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Position Description

TITLE: Director, ~~Business~~ FISCAL Services

REPORTS: Assistant Superintendent, Business~~/Operations~~ SERVICES

DEPARTMENT: Business~~/Operations~~ SERVICES

CLASSIFICATION: Classified Management

FLSA: Exempt

WORK YEAR: 261

ISSUED: 05/11/1982

SALARY: Range 15

BASIC FUNCTION:

Under the administrative direction of the ~~Associate~~ ASSISTANT Superintendent of Business~~/Operations~~ SERVICES, implements and administers comprehensive District procedures in the areas of Accounting, Budget and Finance, Payroll Fringe Benefits, and Attendance accounting. Performs related duties as required.

REPRESENTATIVE DUTIES:

Incumbents may perform any combination of the essential functions shown below. This position description is not intended to be an exhaustive list of all duties, knowledge, or abilities associated with this classification, but is intended to accurately reflect the principal job elements.

DISTINGUISHING CHARACTERISTICS:

This classification is characterized by the responsibility to provide support service functions and administrative direction as required.

E = ESSENTIAL FUNCTIONS

MINIMUM REQUIREMENTS:

Duties may include, but are not limited to, the following:

1. Coordinates performance of financial services in support of the educational program of the District. **(E)**

2. Administers District funds, assets, contracts and agreements and develops systems to safeguard same. **(E)**

3. Researches and provides accurate and current data to assist the District negotiation team. **(E)**

4. Manages, accounts for, and monitors income and expenditure transactions for conformance with mandated accounting standards and District procedures. **(E)**

5. Plans, organizes, prepares, and monitors the School District budget, including coordination of site and department budgets to assure timely and accurate availability of financial data. **(E)**

6. Develops, analyzes, monitors, and continuously improves departmental accounting and financial management processes and procedures to ensure compliance with Federal, State, County, District and professional standards, policy, regulation, and reporting requirements. **(E)**

7. Reviews expenditures and encumbrances to assure that accounts are within approved budgetary limits. **(E)**

8. Reconciles reports to control figures and test for reasonableness. **(E)**

9. Approves transfer of budgeted funds in accordance with fiscal policy and legal requirements. **(E)**

10. Reviews documents and reports for correct coding and compliance with procedural requirements. **(E)**

11. Develops written procedures, guidelines, forms and other documents to facilitate business operations. **(E)**

12. Consults and coordinates with site, program, administrative personnel, and County Office of Education to assure smooth coordination of services and good understanding of financial management and accounting processes. **(E)**

13. Acquires and maintains up-to-date knowledge of all applicable laws and regulations; obtains official interpretations as necessary. **(E)**

14. Assists the Associate Superintendent of Business/Operations in the formulations of policies and procedures dealing with the business and fiscal operations of the District. **(E)**

15. Maintains sound internal controls. **(E)**

16. Monitors the implementation of Board policies and procedures. **(E)**

17. Assists independent auditors with periodic audits as needed; assists with preparation of schedules, worksheets, and documents.

18. Assists with year-end closing.

19. Uses computer network, terminals, and microcomputers and applications software to word process, creates and manipulates databases and spreadsheets, enters accounting transactions, develops graphics for reports and presentations and transmits data to other agencies. **(E)**

20. Supervises, assigns, coordinates training for all fiscal service staff. **(E)**

EDUCATION, EXPERIENCE, LICENSES, AND OTHER REQUIREMENTS:

At least two years experience in educational agency support management required. Completion of Bachelor's Degree in Business Administration, Management, Accounting or a closely related field; MBA or CPA desirable.

Five years of progressively responsible professional experience in administrative management, at least three years of which have been at a supervisory level in a public agency.

Must possess, or obtain prior to appointment, a valid California Driver's License. Must have ability to obtain and maintain insurability status under the District's vehicle insurance policy.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

- Principles of management and planning;
- Principles and practices of budgeting and accounting; cost accounting, systems analysis and management, supervision and training;
- Legal, procedural and reporting requirements; AND
- Applicable laws and procedures.

ABILITY TO:

- Plan, organize, direct and control activities in the areas of responsibility and evaluate their effectiveness;
- Coordinate with other departments;
- Communicate effectively orally and in writing;
- Participate in policy formulation and implementation;
- Prepare and present oral and written reports;
- Interpret legal, financial, technical and professional literature;
- Select, train, direct and evaluate personnel;
- Communicate effectively with staff, superiors, Board of Education and community; AND
- Work with limited supervision.

WORKING CONDITIONS:

ENVIRONMENT:

- School office environment;
- Occasional work site visitations; AND
- Demanding timelines.

Physical Demands:

- Occasional bending at the waist, carrying, pushing, pulling or lifting not to exceed 50 lbs.;
- Occasional kneeling, crouching or stooping;
- Climbing, occasional use of step ladders;
- Dexterity of hands and fingers to operate standard office equipment;
- Hearing and speaking to exchange information in person and over the telephone;

- Visual ability to read and prepare/process documents;
- Sitting and/or standing for extended period of time; AND
- Mobility in office and at work sites.

Hazards:

- Some contact with toxic materials;
- Some work at sites where hardhats are required;
- Exposure to dirt and other materials around a work site;
- May be exposed to contact with uncooperative individuals;
- Occasional work around large pieces of equipment having moving parts; AND
- Stress from work complexity.

I have read the above position description and fully understand the requirements set forth therein. I hereby accept the position of Director, Fiscal Services and agree to abide by the requirements and duties set forth. I will perform all duties and responsibilities to the best of my ability.

_____ _____

(Signature of Employee) **(Date)**

In compliance with the Americans with Disabilities Act, the Chino Valley Unified School District will provide reasonable accommodations to qualified individuals with disabilities, and encourages both prospective and current employees to discuss potential accommodations with the division of Human Resources.

Board Approved: 05/11/82
Revised: 01/24/84
Revised: 11/27/84
Revised: 05/14/85
Revised: 05/20/04
REVISED:

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Position Description

TITLE:	~~Payroll Supervisor~~ COORDINATOR, PAYROLL AND BENEFITS SERVICES	**REPORTS**:	Director, ~~Business~~ FISCAL Services
DEPARTMENT:	~~Business~~ FISCAL Services	**CLASSIFICATION:**	Classified Management
FLSA:	Exempt	**WORK YEAR:**	261
ISSUED:	March 21, 2013	**SALARY:**	Range ~~36~~ 26B

BASIC FUNCTIONS:

Under the direction of the Director of ~~Business~~ FISCAL Services, coordinates and maintains a detailed and complex payroll system and performs a full range of responsible and complex functions associated with overseeing the District's employee fringe benefits system. Performs responsible professional level duties including but not limited to training, supervision and evaluation of payroll and fringe benefit staff, coordinates and directs specialized tasks related to District-wide payroll operations and FRINGE BENEFITS, and assures compliance with all federal, state, county and District legal policies and requirements.

REPRESENTATIVE DUTIES:

Incumbents may perform any combination of the essential functions shown below. This position description is not intended to be an exhaustive list of all duties, knowledge, or abilities associated with this classification, but is intended to accurately reflect the principal job elements.

DISTINGUISHING CHARACTERISTICS:

The Payroll Supervisor plans, coordinates, evaluates and supervises the work of the payroll support staff and other staff as needed. This position performs payroll-related work ranging in difficulty and requires a thorough knowledge of payroll, fringe benefits, and fiscal principles. The Payroll Supervisor will also serve as a resource to District administrators and employees, as well as to payroll staff.

E = ESSENTIAL FUNCTIONS

MINIMUM REQUIREMENTS:

1. Plan, organize and direct payroll activities, including classified and certificated payroll and employee benefit payment processing, ensuring confidentiality. **(E)**

2. Work closely with Human Resources and Payroll to ensure that employees are paid accurately, charged to the proper accounts, and validation of records is completed between the Human Resources, Payroll, and Accounting Departments. **(E)**

3. Maintain strict payroll controls, schedules and timelines. **(E)**

4. Provide technical expertise; solve a variety of payroll and fringe benefit problems and respond to questions or complaints from employees regarding interpretation of laws, rules and District regulations governing payroll and fringe benefits. **(E)**

5. Provide technical recommendations and information to District administration regarding policies and procedures related to employee payroll/benefit and union contract policies. **(E)**

6. Supervise the distribution of checks and other payroll-related documents. **(E)**

7. TEST AND IMPLEMENT COUNTY PAYROLL SYSTEMS TO ENSURE PROPER OPERATION PRIOR TO IMPLEMENTATION. **(E)**

~~7.~~ 8. Prepare and/or coordinate completion of various payroll reports and filings, including pay histories. **(E)**

9. GENERATE PROJECTIONS RELATING TO SALARIES AND BENEFITS AS NECESSARY. **(E)**

10. IMPLEMENT BOARD APPROVED SALARY ADJUSTMENTS INCLUDING RETROACTIVE, ONE-TIME, OR ONGOING SALARY ADJUSTMENTS PER NEGOTIATED BARGAINING AGREEMENTS AND SETTLEMENTS. **(E)**

~~8.~~ 11. Coordinate collection and reconciliation of fringe benefit accounts, including voluntary deductions (e.g., tax-sheltered annuities). **(E)**

~~9.~~ 12. Coordinate completion and distribution of annual W-2 forms and other tax-related forms. **(E)**

~~10.~~ 13. Verify and/or calculate salary and fringe benefit increases or reductions. **(E)**

~~11.~~ 14. Review issuance of payroll from the revolving cash fund. **(E)**

~~12.~~ 15. Maintain confidentiality of sensitive and privileged information. **(E)**

~~13.~~ 16. Serve as liaison with other departments and representatives of government agencies, financial institutions, county offices and retirement systems to coordinate activities and resolve issues. **(E)**

~~14.~~ 17. Prepare notices and bulletins to notify District personnel of payroll-related issues. **(E)**

~~15.~~ 18. Assure compliance with District, county, state, IRS, PERS, STRS, and PARS laws, rules and regulations. **(E)**

~~16.~~ 19. Attend District and county office meetings and read pertinent information to keep current on payroll transactions and reporting requirements. **(E)**

~~17.~~ 20. Provide direction and training to support staff regarding county, federal, state and District policies and procedures relating to payroll and benefit processing. **(E)**

21. OVERSEE THE IMPLEMENTATION OF THE COLLECTIVE BARGAINING AGREEMENTS PERTAINING TO HEALTH AND WELFARE BENEFITS FOR ELIGIBLE EMPLOYEES. **(E)**

22. INTERPRET, MONITOR, APPLY FEDERAL AND STATE BENEFITS LEGISLATION, LAWS, AND REGULATIONS AS RELATED TO THE HEALTH CARE REFORM ACT OF 2010 AND/OR FUTURE REFORMS. **(E)**

23. COORDINATE ALL REPORTING OF FINANCIAL AND NON-FINANCIAL INFORMATION TO THE INTERNAL REVENUE SERVICE REGARDING THE DISTRICT'S ADMINISTRATION AND IMPLEMENTATION OF THE HEALTH CARE REFORM ACT OF 2010 AND/OR FUTURE REFORMS. **(E)**

24. PREPARE AND EXTRACT BENEFIT DATA FOR THE DISTRICT'S POST EMPLOYMENT BENEFITS ACTUARIAL STUDY. **(E)**

25. ADHERE TO WORKERS COMPENSATION LAWS AND COORDINATE TRACKING WITH RISK MANAGEMENT TO ENSURE COMPLIANCE. **(E)**

26. SERVE AS THE DISTRICT'S REPRESENTATIVE ON THE BENEFITS JOINT POWERS AUTHORITY BOARD OF DIRECTORS' MEETINGS. **(E)**

27. PREPARE CENSUS INFORMATION AND DATA TO ASSIST WITH BENEFITS PLAN DESIGN AND RATING. **(E)**

28. WORK CLOSELY WITH INSURANCE BROKERS ON THE IMPLEMENTATION OF MEDICAL, DENTAL, VISION, AND LIFE INSURANCE PLANS. **(E)**

29. COORDINATES ANNUAL BENEFITS RENEWAL AND BENEFITS OPEN ENROLLMENT FOR ALL BARGAINING UNITS WITH THE JOINT POWERS AUTHORITY. **(E)**

30. IMPLEMENT AND MANAGE THE DISTRICT'S CONSOLIDATED OMNIBUS BUDGET RECONCILIATION ACT (COBRA) PROGRAM. **(E)**

~~18.~~ 31. Provide leadership and work with staff to create a high performance, service-oriented work environment that supports the department's mission and promotes a positive employee environment. **(E)**

~~19.~~ 32. Perform other duties as assigned. **(E)**

EDUCATION, EXPERIENCE, LICENSES, AND OTHER REQUIREMENTS:

~~Completion of college course work in accounting/payroll or closely related field desirable.~~

BACHELOR'S (FOUR-YEAR) DEGREE WITH A MAJOR IN ACCOUNTING OR BUSINESS ADMINISTRATION ~~Two~~ AND MINIMUM OF FIVE years of ~~professional or~~ PROGRESSIVELY RESPONSIBLE payroll OR FRINGE BENEFITS experience, preferably in a CALIFORNIA public SCHOOL SYSTEM. ~~agency in the operation of accounting/payroll systems and preparation of management reports.~~

AN EQUIVALENT COMBINATION OF EDUCATION AND EXPERIENCE MAY BE CONSIDERED. TWO YEARS EXPERIENCE IN A CLOSELY RELATED FIELD CAN BE

SUBSTITUTED FOR EACH YEAR OF THE EDUCATION REQUIREMENT. (30 ACCREDITED SEMESTER CREDIT UNITS = 1 YEAR)

Employment eligibility that may include fingerprints, health (TB), and/or other employment clearance.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

- Federal, state, and local statutes;
- County and District policies and procedures;
- District bargaining unit contracts;
- District statutory rates and fringe benefit plans;
- Policies and procedures involved in the preparation, verification, maintenance, and processing of District payrolls; AND
- Applicable sections of various tax codes, retirement plans, and Education Code.

ABILITY TO:

- WORK EFFECTIVELY WITH LIMITED SUPERVISION;
- WORK UNDER PRESSURE AND MEETING STRICT DEADLINES;
- HANDLE AND RETAIN CONFIDENTIAL INFORMATION;
- INTERPRET FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS PERTAINING TO PAYROLL AND BENEFITS;
- Perform complex and technical payroll operations including payroll audits and reconciliations;
- Plan, organize, and supervise the payroll duties of staff to assure the timely and accurate distribution of the District payroll and benefits;
- Prepare and maintain a variety of records, reports and files;
- Establish and maintain effective working relationships with management, staff, District and county personnel;
- Communicate effectively with employees, administrators, the public, and representatives of public agencies;
- Use available technology effectively and efficiently;
- OPERATE A COMPUTER TERMINAL USING VARIOUS COUNTY SOFTWARE PROGRAMS;
- ~~Maintain confidentiality;~~
- DEMONSTRATE PROBLEM-SOLVING SKILLS IN VARIOUS SITUATIONS; AND
- SUPERVISE AND EVALUATE THE PERFORMANCE OF ASSIGNED STAFF.

WORKING CONDITIONS:

ENVIRONMENT:

- District office environment;
- Subject to frequent interruptions;
- CONSTANT DEMANDING DEADLINES; AND
- EXTENSIVE CONTACT WITH STAFF MEMBERS, VENDORS, AND OTHER PUBLIC AGENCIES.

PHYSICAL DEMANDS:

- Bending at the waist, kneeling or crouching, and reaching to retrieve and maintain files and records;
- Reaching overhead, above the shoulders and horizontally;
- Dexterity of hands and fingers to operate standard office equipment, computer keyboard, other office equipment, and other equipment necessary to complete the required duties;
- Hearing and speaking to exchange information in person and on the telephone;
- Visual ability to read, review, and assure accuracy of budget documents, financial statements and reports;
- Sitting for extended periods;
- Standing for extended periods;
- Walking over rough or uneven surfaces; AND
- Light lifting; pushing or pulling carts.

HAZARDS:

- Extended viewing of computer monitor; AND
- Working around and with office equipment having moving parts.

I have read the above position description and fully understand the requirements set forth herein. I hereby accept the position of ~~Payroll Supervisor~~ COORDINATOR, PAYROLL AND BENEFITS SERVICES and agree to abide by the requirements and duties set forth. I will perform all duties and responsibilities to the best of my ability.

_____ _____

(Signature of Employee) **(Date)**

In compliance with the Americans with Disabilities Act, the Chino Valley Unified School District will provide reasonable accommodations to qualified individuals with disabilities, and encourages both prospective and current employees to discuss potential accommodations with the Division Human Resources.

Board approved: March 21, 2013
REVISED:

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: AEROSPACE ENGINEERING**

==========

BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Aerospace Engineering explores the evolution of flight, flight fundamentals, navigation and control, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems and related careers. It applies and concurrently develops secondary-level knowledge and skills in mathematics, science, and technology. This course is aligned to the California Career and Technical Education Standards and fulfills the capstone level course in the Engineering and Design Pathway.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education receive for information the new course Aerospace Engineering.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

CONTACTS	
1. School/District Information:	**School/District:** Chino Valley Unified School District **Street Address:** 5130 Riverside Dr., Chino, CA 91710 **Phone:** (909) 628-1201 **Web Site:** chino.k12.ca.us
2. Course Contact:	**Teacher Contact:** Office of Secondary Curriculum **Position/Title:** Director of Secondary Curriculum **Site:** District Office **Phone:** (909) 628-1201 X1630
A. COVER PAGE - COURSE ID	
1. Course Title:	Aerospace Engineering
2. Transcript Title/Abbreviation:	Aero Eng
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement
6. Grade level(s):	10-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	Yes
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	
13. Brief Course Description: Aerospace Engineering (AE) is the study of the engineering discipline which develops new technologies for use in aviation, defense systems, and space exploration. The course explores the evolution of flight, flight fundamentals, navigation and control, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems and related careers. In addition, the course presents alternative applications for aerospace engineering concepts. Students will analyze, design, and build aerospace systems. While implementing these designs, students will continually hone their interpersonal skills, creativity, and application of the design process. Students apply knowledge gained throughout the course in a final multi-media project to envision their future professional accomplishments. The course applies and concurrently develops secondary-level knowledge and skills in mathematics, science, and technology.	
14. Prerequisites:	Principles of Engineering (POE) Integrated Math 1 or higher (Recommended) Biology and the Living Earth or higher (Recommended)
15. Context for Course: This course is part of the Project Lead the Way (PLTW) CTE engineering sequence. The course is considered a CTE Specialization course and follows the introductory Principles of Engineering course.	
15. History of Course Development: This course was designed to provide students with skills and knowledge in a Career Technical Education (CTE) pathway. Coursework is meant to prepare students for professional life as indicated by the College and Careers Readiness Standards. The course has been updated to reflect the changes in CTE standards.	
16. Textbooks:	None
16. Supplemental Instructional Materials:	Access to computers with appropriate software and engineering lab with appropriate tools.

B. COURSE CONTENT

1. Course Purpose:

Through both individual and collaborative team activities, projects, and problems, students will problem solve as they practice common engineering design and development protocols such as project management and peer review. Students will develop skill in technical representation and documentation of design solutions according to accepted technical standards, and they will use current 3d design and modeling software to represent and communicate solutions. In addition, the development of computational methods that are commonly used in engineering problem solving, including statistical analysis and mathematical modeling, are emphasized. Ethical issues related to professional practice and product development are also presented.

This course is designed for the California Career and Technical Education **Engineering and Architecture (EA) sector**. This course is aligned to the California Career and Technical Education Standards: **Engineering and Design Pathway** and is designed to be a **capstone level course**.

2. Course Outline:

Unit 1: Overview of Aerospace Engineering

Tech Lit: 1.9-12.J, 1.9-12.K, 1.9-12.L, 2.9-12.W, 2.9-12.X, 2.9-12.Y, 2.9-12.Z 2.9-12.AA, 2.9-12.BB, 2.9-12.CC, 3.9-12.G, 3.9-12.H, 3.9-12.J, 4.9-12.H, 4.9-12.I, 4.9-12.J, 6.9-12.H, 6.9-12.I, 7.9-12.G, 7.9-12.H, 7.9-12.I, 7.9-12.J, 7.9-12.M, 7.9-12.N, 9.9-12.J, 9.9-12.L, 10.9-12.I, 10.9-12.J, 10.9-12.L, 13.9-12.K, 13.9-12.L, 17.9-12.P, 18-9-12.J

CTE Anchor Standards: 1.0, 3.0, 3.1

EA: B5.0, B5.1, B5.2, B5.3, B5.4, B5.5

- History of Flight:
  - Knowledge of the history of flight enables an appreciation and understanding of past engineering accomplishments to be recognized.
  - Knowledge of aerospace history provides insight to future challenges involving travel through the atmosphere and space.
  - Many types of vehicles have been designed to fly.
  - Airplanes consist of several major components each of which has a specific function in the design and operation of the airplane.
  - The forces acting on an aircraft enable it to fly.

Unit 2: Aerodynamics and Aerodynamics Testing

NGSS: HS.PS2.1, HS.PS3.1, HS.PS3.3, HS.ETS1.2, HS.ETS1.3, HS.ETS1.4, DCI - PS2.A, DCI - PS3.A, DCI - PS3.B, DCI - PS3.B, DCI - PS3.B, DCI - PS3.B, DCI - PS3.B, DCI - PS3.D, DCI - ETS1.B, DCI - ETS1.C

Tech Lit: 2.9-12.W, 2.9-12.Z, 2.9-12.AA, 2.9-12.BB, 4.9-12.I, 8.9-12.H, 8.9-12.J, 9.9-12.L, 11.9-12.N, 11.9-12.O, 11.9-12.P, 11.9-12.Q, 11.9-12.R, 12.9-12.L, 12.9-12.M, 12.9-12.N, 12.9-12.O, 12.9-12.P, 13.9-12.J, 17.9-12.N, 17.9-12.P, 17.9-12.Q

CTE Anchor Standards: 1.0, 2.5, 4.0, 4.1, 4.3, 4.5, 5.0, 5.1, 5.2, 5.3, 5.4, 6.0, 6.1, 6.3, 6.4, 6.6, 7.0, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8, 8.0, 8.1, 8.2, 8.7, 9.0, 9.1, 9.2, 9.5, 9.7, 10.0, 10.1, 10.2, 10.3, 11.0, 11.1, 11.2, 11.5

EA: B4.0, B4.1, B4.2, B6.0, B6.1, B6.2, B6.3, B6.4, B6.5, B6.6, B6.7, B7.0, B7.1, B7.2, B7.3, B7.4, B7.5, B7.6

- Aerodynamics:
  - The forces applied to an airplane in flight are lift, weight, drag, and thrust.
  - Wings provide the lifting forces needed to overcome the weight of an airplane.
  - Engines provide the thrust force needed to overcome the aerodynamic drag from the body of an airplane.
  - The design of an aircraft wing requires knowledge of aerodynamics and physics.
  - The design process involves the use of computer simulation tools to predict the performance of a design prior to the building of a physical model.

- The design process involves creating multiple solutions to a problem and then evaluating and ranking the solutions in order select the best solution.

- Airfoil Construction:
  - Design ideas are verified by the construction and testing of prototypes and models.
  - Sub-scale models are used to represent a full-size system.
  - Coordinate geometry is used to create varied shapes, such as airfoils.
  - Basic hand tools and equipment can be used to create accurate scale models.
- Wind Tunnel Testing:
  - Testing prototypes is an important part of the design process.
  - Engineers use scaled models to evaluate, to test, and to determine the performance of their designs.
  - Test results are best analyzed through the use of graphs and other methods to depict the data collected during testing.
- Introduction to Propulsion:
  - Newton's Three Laws of Motion are central to the idea of propulsion.
  - An external force is required to change the state of an object from rest to motion and from motion to rest.
  - The direction of acceleration is the same as the direction of the external force.
  - Newton's Third Law of Motion can be used to explain the production of thrust by a propulsion system.
  - The three principal propulsion systems are the propeller, the jet engine, and the rocket engine.

Unit 3: Flight Systems

NGSS: HS.ETS1.2, HS.ETS1.3, HS.ETS1.4, DCI - ETS1.B, DCI - ETS1.C

Tech Lit: 1.9-12.K, 2.9-12.W, 2.9-12.X, 2.9-12.Y, 2.9-12.Z, 2.9-12.AA, 2.9-12.BB, 3.9-12.J, 4.9-12.I, 7.9-12.G, 8.9-12.H, 8.9-12.J, 9.9-12.J, 9.9-12.L, 12.9-12.P, 17.9-12.M, 17.9-12.P, 17.9-12.Q

CTE Anchor Standards: 2.5, 5.0, 5.1, 5.2, 5.3, 5.4, 6.0, 6.1, 6.3, 6.4, 6.6, 7.0, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8, 10.0, 10.1, 10.2, 10.3

EA: B4.0, B4.3, B4.4, B4.5, B6.0, B6.1, B6.2, B6.3, B6.4, B6.5, B6.6, B6.7, B7.0, B7.1, B7.2, B7.3, B7.4, B7.5, B7.6

- Glider Design, Construction, and Test:
  - Aircraft designs are the result of the best available theories, knowledge, and skills available to the designer at the time of their creation.
  - Software utilizing the mathematics of flight theory can be used to predict the flight performance of an aircraft prior to its construction.
  - Construction of a multi-component device is aided by the use of assembly and alignment jigs.
  - Flight testing data is essential for evaluating an aircraft design.
  - Radically different designs can achieve similar results.
- GPS and Spatial Awareness:
  - Pilots need to know where they are and how to proceed to the next waypoint in their flight plan.
  - Flight safety requires spatial awareness.
  - Numerous methods have been used to communicate positional information to pilots using old, current, and cutting-edge technology to improve flight safety through redundancy.
  - Global Positioning Systems use information provided by a constellation of satellites to calculate a position and motion in all three axes and through time.
  - Location and motion information is tremendously enhanced when it is correlated to 2D and 3D representations of the world around a pilot.

Unit 4: Astronautics

NGSS: HS.ESS1.4, HS.ESS3.4, HS.ETS1.1, HS.ETS1.2, HS.ETS1.3, HS.ETS1.4, HS.PS2.1, HS.PS2.3, HS.PS2.4, HS.PS3.1, HS.PS3.2, DCI - ETS1.A, DCI - ESS1.B, DCI - ESS3.C, DCI - ETS1.B, DCI - ETS1.C, DCI - PS2.A, DCI - PS2.B, DCI - PS3.A, DCI - PS3.B, DCI - PS3.C

Tech Lit: 1.9-12.J, 10.9-12.K, 11.9-12.N, 11.9-12.O, 11.9-12.P, 11.9-12.Q, 11.9-12.R, 12.9-12.L, 12.9-12.P, 13.9-12.K, 16.9-12.J, 17.9-12.N, 17.9-12.P, 17.9-12.Q, 2.9-12.AA, 2.9-12.BB, 2.9-12.W, 2.9-12.X, 2.9-12.Z, 3.9-12.J, 4.9-12.I, 4.9-12.J, 6.9-12.I, 7.9-12.G, 7.9-12.I, 7.9-12.L, 7.9-12.M, 8.9-12.H, 8.9-12.I, 8.9-12.J, 8.9-12.K, 9.9-12.I, 9.9-12.J, 9.9-12.K, 9.9-12.L

CTE Anchor Standards: 1.0, 5.0, 5.1, 5.2, 5.3, 5.4, 6.0, 6.1, 6.3, 6.4, 6.6, 7.0, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8, 8.0, 8.1, 8.2, 8.7, 9.0, 9.1, 9.2, 9.5, 9.7, 10.0, 10.1, 10.2, 10.3, 11.0, 11.1, 11.2, 11.5

EA: B4.0, B4.1, B4.2, B4.3, B4.4, B5.0, B5.1, B5.2, B5.4, B5.5, B6.0, B6.1, B6.2, B6.3, B6.4, B6.5, B6.6, B6.7, B7.0, B7.1, B7.2, B7.3, B7.4, B7.5, B7.6

- Measuring Rocket Engine Thrust:
  - Rocket thrust can be measured using a simple device.
  - Calibration of a thrust measurement device can provide accurate data.
  - Thrust vs. time data can be acquired using a strip chart recorder.
  - Rocket thrust must be controlled to reduce the damaging effects of traveling through dense atmosphere.
- Model Rocket Trajectory:
  - Parts of a model rocket and parts of a model rocket engine have specific function(s) during a rocket's flight.
  - The forces of weight, thrust, drag, and lift interact differently on a rocket in flight than on an aircraft in flight.
  - Newton's three laws of motion (inertia, F = ma, and action-reaction) can be used to describe and predict events during each phase of a rocket launch.
  - Rocket design features are interrelated and determine how well a rocket will perform during powered flight.
  - The maximum velocity and maximum acceleration of a rocket during flight can be calculated mathematically given model rocket and engine performance data.
  - A rocket's maximum altitude can be calculated by using indirect measurement.
- Rocket Camera:
  - The Internet and the library are useful tools for conducting research.
  - Aerial photography has many applications.
  - Using the scientific method to design a project to answer a research question is an important skill to conducting a scientific/engineering investigation.
  - Formulating a research question based on research, gathering data, analyzing data, and making judgments about experimental data are vital processes for conducting a research project/an investigation.
  - The scale factor of aerial photographs can be used to determine a rocket's altitude, number, and kind of objects in the photograph, and the dimension of objects in the photographs.
  - Aerial photographs can be used to identify, classify, and enumerate objects in the photograph.
  - A rocket's launch angle affects the forces of lift, thrust, weight, and drag.
- Orbital Mechanics:
  - Ellipses are conic sections, and circles are special cases of ellipses.
  - Orbits involve the steady procession of a small mass object around a large mass object. This includes planets processing around the sun, as well as satellites processing around a planet.
  - Objects in orbit are continuously "falling" toward the body about around which they orbit.
  - Orbital elements can be used to fully define a satellite's orbit, allowing the accurate prediction of the precise location of the satellite at a given time.
  - Orbital mechanics provides a means for describing orbital behavior of bodies.

Unit 5: Space Life Sciences

NGSS: HS.ETS1.3, DCI - ETS1.B, DCI - ETS1.C

Tech Lit: 2.9-12.W, 2.9-12.Z, 4.9-12.I, 8.9-12.H, 8.9-12.J, 9.9-12, 17.9-12.M, 17.9-12.P, 17.9-12.Q

CTE Anchor Standards: 1.0, 2.0, 2.5, 3.0, 3.1, 5.0, 5.1, 5.2, 5.3, 5.4, 6.0, 6.1, 6.3, 6.4, 6.6, 7.0, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8, 8.0, 8.1, 8.2, 8.7, 9.0, 9.1, 9.2, 9.5, 9.7, 10.0, 10.1, 10.2, 10.3, 11.0, 11.1, 11.2, 11.5

EA: B4.0, B4.1, B4.2, B4.3, B4.4, B4.5, B6.0, B6.1, B6.2, B6.3, B6.4, B6.5, B6.6, B6.7, B7.0, B7.1, B7.2, B7.3, B7.4, B7.5, B7.6, B9.0, B9.1, B9.2

- Life Support and Environmental Systems
  - Basic physiological needs of the human body when living safely within and outside of Earth's atmosphere are oxygen, pressure, food and water, sleep, gravity, temperature, protective clothing, voiding by bladder and bowel.
  - The environment on earth and in space must be considered when designing solutions to problems in aerospace engineering.
  - Engineers have solved many technological challenges faced when designing solutions for living higher atmospheres and space.
  - The force, mass, and acceleration phenomena or G-forces that astronauts, fighter pilots, and Formula One drivers might experience is because of the rocket, jet, or internal combustion engine that provides the force needed to accelerate them, not gravity.
- Effect of Gravity on the Human Body:
  - Reduced gravity environments can be simulated in a 1-g, Earth-normal, environment.
  - The action of spinning can fool the senses and stimulate the vestibular system in the inner ear.
  - An increase stress-filled environment is physically unique and can affect the ability to perform mental functions.
  - Cooperative and supportive team behaviors result in increased safety and higher quality data.
- Microgravity Drop Tower:
  - Gravity is the weakest force known in nature, yet it holds galaxies and the solar system together.
  - Any object in freefall experiences microgravity conditions, which occur when the object falls toward the Earth with an acceleration equal to that due to gravity alone (approximately 9.8 meters per second squared [m/s2], or 1 g at Earth's surface).
  - Brief periods of microgravity can be achieved on Earth by dropping objects from tall structures.
  - The microgravity environment associated with the space shuttle is a result of the spacecraft being in orbit, which is a state of continuous freefall around the Earth.
  - A microgravity environment gives researchers a unique opportunity to isolate and study the influence of gravity on physical processes, as well as phenomena that are normally masked by gravity and thus difficult, if not impossible, to study on Earth.

Unit 6: Aerospace Materials

NGSS: HS.PS1.3, HS.ETS1.2, HS.ETS1.3, HS.ETS1.4, DCI - ETS1.B, DCI - ETS1.C

Tech Lit: 2.9-12.W, 2.9-12.Z, 2.9-12.AA, 2.9-12.BB, 4.9-12.I, 8.9-12.H, 8.9-12.J, 9.9-12.L, 11.9-12.N, 11.9-12.O, 11.9-12.P, 11.9-12.Q, 11.9-12.R, 12.9-12.L, 12.9-12.P, 13.9-12.J, 17.9-12.N, 17.9-12.P, 17.9-12.Q 19.9-12.M, 19.9-12.Q

CTE Anchor Standards: 1.0, 2.0, 2.5, 3.0, 3.1, 5.0, 5.1, 5.2, 5.3, 5.4, 6.0, 6.1, 6.3, 6.4, 6.6, 7.0, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8, 8.0, 8.1, 8.2, 8.7, 9.0, 9.1, 9.2, 9.5, 9.7, 10.0, 10.1, 10.2, 10.3, 11.0, 11.1, 11.2, 11.5

EA: B4.0, B4.1, B4.2, B4.3, B4.4, B4.5, B5.0, B5.1, B5.2, B5.3, B5.4, B5.5, B6.0, B6.1, B6.2, B6.3, B6.4, B6.5, B6.6, B6.7, B7.0, B7.1, B7.2, B7.3, B7.4, B7.5, B7.6, B8.0, B8.1, B8.2, B8.3, B8.4, B8.5, B8.6, B9.0, B9.1, B9.2

- Composites Fabrication and Testing:
  - Multiple layers of any material are stronger than a single layer of that material.
  - Composite materials are fabricated by molding together layers of reinforced fabric, such as often glass or carbon fiber with a plastic matrix, such as epoxy.
  - Composite materials are used in the aerospace industry because they have excellent strength to weight ratios, which means they are able to carry large loads with a lighter structure.
  - The strength and stiffness of composite materials can be significantly increased by altering the distance

between adjacent sheets using a core material to create a sandwich construction.
  - Material performance is sometimes assessed by comparing strength to weight ratios.
  - A deflection test can be used to accurately determine the modulus of elasticity of a composite plastic sample.
  - A deflection test can be used to indicate the stiffness of various composite plastic samples.
- Thermal Protection Systems for Space Vehicles:
  - An understanding of the physics of space vehicle re-entry into the atmosphere is important for designing thermal protection systems.
  - Knowledge of material properties and testing is essential when trying to protect a space vehicle.
  - Heat transfer is a process that creates high temperatures in a space vehicle.
  - Energy is dissipated and converted into heat during a space vehicle re-entry.
  - Thermal Protection Systems (TPS) consist of various materials and coatings that are designed to protect a space vehicle.

Unit 7: Systems Engineering

NGSS: HS.PS2.1, HS.PS2.3, HS.PS3.1, HS.PS3.3, HS.PS4.2, HS.ESS3.4, HS.ETS1.2, HS.ETS1.3, HS.ETS1.4, DCI - PS2.A, DCI - PS3.A, DCI - PS3.B, DCI - PS3.D, DCI - ETS1.A, DCI - ETS1.B, DCI - ETS1.C, DCI - ESS2.D, DCI - ESS3.C

Tech Lit: 2.9-12.AA, 2.9-12.BB, 2.9-12.FF, 2.9-12.W, 2.9-12.X, 2.9-12.Y,2.9-12.Z, 4.9-12.I, 8.9-12.H, 8.9-12.I, 8.9-12.J, 8.9-12.K, 9.9-12.I, 9.9-12.J, 9.9-12.K, 9.9-12.L, 11.9-12.N, 11.9-12.O, 11.9-12.P, 11.9-12.Q, 11.9-12.R, 12.9-12.L, 12.9-12.M, 12.9-12.N, 12.9-12.O, 12.9-12.P, 13.9-12.J, 13.9-12.K, 17.9-12.L, 17.9-12.M, 17.9-12.N, 17.9-12.P, 17.9-12.Q, 18-9-12.M

CTE Anchor Standards: 1.0, 2.0, 2.5, 3.0, 3.1, 5.0, 5.1, 5.2, 5.3, 5.4, 6.0, 6.1, 6.3, 6.4, 6.6, 7.0, 7.2, 7.3, 7.4, 7.5, 7.7, 7.8, 8.0, 8.1, 8.2, 8.7, 9.0, 9.1, 9.2, 9.5, 9.7, 10.0, 10.1, 10.2, 10.3, 11.0, 11.1, 11.2, 11.5

EA: B4.0, B4.1, B4.2, B4.3, B4.4, B4.5, B5.0, B5.1, B5.2, B5.3, B5.4, B5.5, B6.0, B6.1, B6.2, B6.3, B6.4, B6.5, B6.6, B6.7, B7.0, B7.1, B7.2, B7.3, B7.4, B7.5, B7.6, B8.0, B8.1, B8.2, B8.3, B8.4, B8.5, B8.6, B9.0, B9.1, B9.2, B10.0, B10.1, B10.2, B10.3

- Intelligent Vehicles:
  - The two incentives for building robots are social, replacing humans in undesirable or dangerous jobs, and economic, reducing the cost of manufacturing while improving its quality.
  - Interactive systems are used in complicated arenas, such as science exploration.
  - Electronic data communication allows information to be transferred from human to human, human to machine, machine to human, and machine-to-machine.
  - The determination of the pH (potential of Hydrogen) of an unknown substance or substances aids in identifying the substance.
  - Robotic devices must be designed to perform effectively in the environment in which they will be used.
  - Robotic devices are composed of mechanical, electrical, and computer based systems that can be programmed to make decisions and control actions based upon sensor readings.
  - The fundamental challenge when working in robotics is deciding what motions the robot should perform in order to achieve a goal.

<u>Next Generation Science Standards</u>

HS-ESS3-4 Earth and Human Activity**:** Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

HS-ETS1-1 Engineering Design: Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2 Engineering Design: Design a solution to a complex real-world problem by breaking it down into smaller,

more manageable problems that can be solved through engineering.

HS-ETS1-3 Engineering Design: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.
HS-PS1-3 Matter and its Interactions: Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.
HS-PS2-3 Motion and Stability: Forces and Interactions: Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.
DCI-ETS1.A: Defining and Delimiting an Engineering Problem
DCI-ETS1.B: Developing Possible Solutions
DCI-ETS1.C: Optimizing the Design Solution
DCI-ESS1.B: Earth and the Solar System
DCI-ESS1.C: The History of Planet Earth

Standards for Technological Literacy

2.9-12: Students will develop an understanding of the core concepts of technology.
- 2.9-12 W: Systems thinking applies logic and creativity with appropriate compromises in complex real-life problems.
- 2.9-12 X: Systems, which are the building blocks of technology, are embedded within larger technological, social, and environmental systems for example, a food processor is a system made up of components and subsystems.
- 2.9-12 Z: selecting resources involves trade-offs between competing values, such as availability, cost, desirability, and waste.
- 2.9-12 AA: requirements involve the identification of the criteria and constraints of a product or system and the determination of how they affect the final design and development.
- 2.9-12 BB: optimization is an ongoing process or methodology of redesigning or making a product and is dependent on criteria and constraints.

3.9-19: Students will develop an understanding of relationships among technologies and the connections between technology and other fields of study.
- 3.9-12 J: technological process promotes the advancement of science and mathematics.

4.9-12: Students will develop an understanding of the cultural, social, economic, and political effects of technology.
- 4.9-12 I: making decisions about the use of technology evolves win the trade-offs between the positive and negative effects.
- 4.9-12 J: ethical considerations are important in the development, selection, and use of technologies.

6.9-12: Students will develop an understanding of the role of society in the development and use of technology.
- 6.9-12.I: The decision whether to develop the technology is influenced by societal opinions and downs, in addition to corporate cultures.

7.9-12: Students will develop an understanding of the influence of technology on history.

- 7.9-12 G: most technological development has been evolutionary, the result of a series of refinements to a basic invention.
- 7.9-12 I: throughout history, technology has been a powerful force in reshaping the social, cultural, political, and

economic landscape.

8.9-12: Students will develop an understanding of the attributes of design.
- 8.9-12 H: The design process includes defining a problem, brainstorming, research and generating ideas, identifying criteria and specify constraints, exploring possibilities, selecting an approach, developing a design proposal, making a model or prototype, testing and evaluating the design using specifications, refine the design, creating or making it, and communicating processes and results.
- 8.9-12 I: Design problems are seldom presented in a clearly defined form.
- 8.9-12 J: The design needs to be continually checked and critiqued, and the ideas of the design must be redefined and improved.
- 8.9-12 K: Requirements of a design, such as criteria, constraints, and efficiency, sometimes compete with each other.

9.9-12: Students will develop an understanding of engineering design.
- 9.9-12 I: Established design principles are used to evaluate existing designs, to collect data, and to guide the design process.
- 9.9-12 J: Engineering design is influenced by personal characteristics, and the ability to visualize and think abstractly.
- 9.9-12 K: A prototype is a working model used to text a design concept by making actual observations and necessary adjustments.
- 9.9-12 L: The process of engineering design takes into account a number of factors.

10.9-12: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
- 10.9-12.K: Not all problems are technological, and not every problem can be solved using technology.

11.9-12: Students will develop abilities to apply the design process.
- 11.9-12 N: Identify criteria and constraints and determine how these will affect the design process.
- 11.9-12 O: Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of the final product.
- 11.9-12 P: Evaluate the design solution using conceptual, physical, and mathematical models at various intervals of the design process in order to check for proper design and to note areas where improvements are needed.
- 11.9-12 Q: Develop and produce a product or system using a design process.
- 11.9-12 R: Evaluate final solutions and communicate observation, processes, and results of the entire design process, using verbal. Graphic, quantitative, virtual, and written means, in addition to three-dimensional models.

12.9-12: Students will develop the abilities to use and maintain technological products and systems.
- 12.9-12.L: Document processes and procedures and communicate them to different audiences using appropriate oral and written techniques.

13.9-12: Students will develop the abilities to assess the impact of products and systems.
- 13.9-12.K; Synthesize data, analyze trends, and draw conclusions regarding the effect of technology on the individual, society, and the environment.

17.9-12: Students will develop an understanding of and be able to select and use information and communication technologies.
- 17.9-12 N: Information and communication systems can be used to inform, persuade, entertain, control,

manage, and educate.

17.9-12 P: There are many ways to communicate information, such as graphic and electronic means.

17.9-12 Q: Technological knowledge and processes are communicated using symbols, measurement, conventions, icons, graphic imaged, and languages that incorporate a variety of visual, auditory, and tactile stimuli.

19.9-12: Students will develop an understanding of and be able to select and use manufacturing technologies.

CTE Anchor Standards

1.0 Academics: Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Engineering and Architecture academic alignment matrix for identification of standards.

2.0 Communications: Acquire and accurately use Engineering and Architecture sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats.

2.4 Demonstrate elements of written and electronic communication, such as accurate spelling, grammar, and format.

2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.

2.6 Advocate and practice safe, legal, and responsible use of digital media information and communications technologies.

3.0 Career Planning and Management: Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans. (Direct alignment with SLS 11-12.2)

3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision making.

3.3 Explore how information and communication technologies are used in career planning and decision making.

3.6 Recognize the role and function of professional organizations, industry associations, and organized labor in a productive society.

4.0 Technology: Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Engineering and Architecture sector workplace environment.

4.1 Use electronic reference materials to gather information and produce products and services.

4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.

4.5 Research past, present, and projected technological advances as they impact a particular Pathway.

5.0 Problem Solving and Critical Thinking: Conduct short, as well as more sustained, research projects to create alternative solutions to answer a question or solve a problem unique to the Engineering and Architecture sector using critical and creative thinking; logical reasoning, analysis, inquiry, and problem-solving techniques.

5.1 Identify and ask significant questions that clarify various points of view to solve problems.

5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.

5.3 Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.

5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

6.0 Health and Safety: Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Engineering and Architecture sector workplace environment.
- 6.1 Locate, and adhere to, Material Safety Data Sheet (MSDS) instructions.
- 6.3 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.
- 6.4 Practice personal safety when lifting, bending, or moving equipment and supplies.
- 6.6 Maintain a safe and healthful working environment.

7.0 Responsibility and Flexibility: Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Engineering and Architecture sector workplace environment and community settings. (Direct alignment with SLS 9-10, 11-12.1)
- 7.2 Explain the importance of accountability and responsibility in fulfilling personal, community, and workplace roles.
- 7.3 Understand the need to adapt to changing and varied roles and responsibilities.
- 7.4 Practice time management and efficiency to fulfill responsibilities.
- 7.5 Apply high-quality techniques to product or presentation design and development.
- 7.7 Demonstrate the qualities and behaviors that constitute a positive and professional work demeanor, including appropriate attire for the profession.
- 7.8 Explore issues of global significance and document the impact on the Engineering and Architecture sector.

8.0 Ethics and Legal Responsibilities: Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms.
- 8.1 Access, analyze, and implement quality assurance standards of practice.
- 8.2 Identify local, district, state, and federal regulatory agencies, entities, laws, and regulations related to the Engineering and Architecture industry sector.
- 8.7 Conform to rules and regulations regarding sharing of confidential information, as determined by Engineering and Architecture sector laws and practices.

9.0 Leadership and Teamwork: Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the SkillsUSA career technical student organization.
- 9.1 Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.
- 9.2 Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills, as applied in groups, teams, and career technical student organization activities.
- 9.5 Understand that the modern world is an international community and requires an expanded global view.
- 9.7 Participate in interactive teamwork to solve real Engineering and Architecture sector issues and problems.

10.0 Technical Knowledge and Skills: Apply essential technical knowledge and skills common to all pathways in the Engineering and Architecture sector, following procedures when carrying out experiments or performing technical tasks.
- 10.1 Interpret and explain terminology and practices specific to the Engineering and Architecture sector.
- 10.2 Comply with the rules, regulations, and expectations of all aspects of the Engineering and Architecture sector.
- 10.3 Construct projects and products specific to the Engineering and Architecture sector requirements and expectations.
- 10.4 Collaborate with industry experts for specific technical knowledge and skills.

11.0 Demonstration and Application: Demonstrate and apply the knowledge and skills contained in the Engineering and Architecture anchor standards, pathway standards, and performance indicators in classroom, laboratory and

workplace settings, and through the SkillsUSA career technical student organization.

11.1 Utilize work-based/workplace learning experiences to demonstrate and expand upon knowledge and skills gained during classroom instruction and laboratory practices specific to the Engineering and Architecture sector program of study.

11.2 Demonstrate proficiency in a career technical pathway that leads to certification, licensure, and/or continued learning at the postsecondary level.

11.5 Create a portfolio, or similar collection of work, that offers evidence through assessment and evaluation of skills and knowledge competency as contained in the anchor standards, pathway standards, and performance indicators.

Engineering and Architecture Pathway Standards

Engineering Technology Pathway

B4.0 Understand the concepts of physics that are fundamental to engineering technology.

B4.1 Describe newton's laws and how they affect and define the movement of objects.

B4.2 Explain how the laws of conservation of energy and momentum provide a way to predict and describe the movement of objects.

B4.3 Compare the effects and applications of heat transfer and thermal dynamic processes.

B4.4 Explore the fundamentals and properties of waveforms and how waveforms may be used to carry energy.

B4.5 Analyze how electric and magnetic phenomena are related and know common practical applications.

B5.0 Understand how the principles of force, work, rate, power, energy, and resistance relate to mechanical, electrical, fluid, and thermal engineering systems.

B5.1 Differentiate between scalars and vectors.

B5.2 Solve problems by using the concept of vectoring to predict resultants.

B5.3 Compare and explore the six simple machines and their applications.

B5.4 Evaluate how energy is transferred and predict the effects of resistance in mechanical, electrical, fluid, and thermal systems.

B5.5 Formulate and solve problems by using the appropriate units applied in mechanical, electrical, fluid, and thermal engineering systems.

B6.0 Employ the design process to solve analysis and design problems.

B6.1 Understand the steps in the design process.

B6.2 Determine what information and principles are relevant to a problem and its analysis.

B6.3 Choose between alternate solutions in solving a problem and be able to justify the choices made in determining a solution.

B6.4 Translate word problems into mathematical statements when appropriate.

B6.5 Demonstrate the process of developing multiple details, within design constraints, into a single solution.

B6.6 Construct a prototype from plans and test it.

B6.7 Evaluate and redesign a prototype on the basis of collected test data.

B7.0 Understand industrial engineering processes, including the use of tools and equipment, methods of measurement, and quality assurance.

B7.1 Know the structure and processes of a quality assurance cycle.

B7.2 Describe the major manufacturing processes.

B7.3 Use tools, fasteners, and joining systems employed in selected engineering processes.

B7.4 Estimate and measure the size of objects in both Standard International and United States units.

B7.5 Apply appropriate geometric dimensioning and tolerancing (GD&T) practices.
B7.6 Calibrate precision measurement tools and instruments to measure objects.

B8.0 Understand fundamental control system design and develop systems that complete preprogrammed tasks.
B8.1 Identify the elements and processes necessary to develop a controlled system that performs a task.
B8.2 Demonstrate the use of sensors for data collection and process correction in controlled systems.
B8.3 Perform tests, collect data, analyze relationships, and display data in a simulated or modeled system using appropriate tools and technology.
B8.4 Program a computing device to control systems or process.
B8.5 Use motors, solenoids, and similar devices as output mechanisms in controlled systems.
B8.6 Assemble input, processing, and output devices to create controlled systems capable of accurately completing a preprogrammed task.

B9.0 Understand the fundamentals of systems and market influences on products as they are developed and released to production.
B9.1 Understand the process of product development.
B9.2 Understand decision matrices and the use of graphic tools in illustrating the development of a product and the processes involved.

B10.0 Design and construct a culminating project effectively using engineering technology.
B10.1 Use methods and techniques for employing all engineering technology equipment appropriately.
B10.2 Apply conventional engineering technology processes and procedures accurately, appropriately, and safely.
B10.3 Apply the concepts of engineering technology to the tools, equipment, projects, and procedures of the engineering technology pathway.

3. Key Assignments:

Lesson 1.1

It is expected that students will:

- Identify the various vehicles used for human flight.
- Identify and explain the function of the main components of an airplane.
- Identify and explain the forces acting on an airplane.
- Evaluate and compare the effects of design changes on the performance of an airplane.
- Experience the flight characteristics of an airplane through the use of a flight simulator.

Lesson 2.1

It is expected that students will:

- Identify the various forces acting on an airplane in flight.
- Identify the various factors that affect the lift and drag forces generated by an airfoil.
- Define the technical terms used to describe the geometry and performance of an airfoil.
- Analyze using a computer simulation tool the performance of an airfoil design.
- Evaluate and compare using a computer simulation several airfoil designs.
- Apply their knowledge of aerodynamics to design an airfoil that meets specifications.

Lesson 2.2

It is expected that students will:

- Extract geometric data from the FoilSim applet.
- Use a spreadsheet application to scale the geometric data points extracted from FoilSim to define an airfoil with a given chord length.
- Use modeling software to design templates to be used for accurately cutting airfoil shapes from a foam core.
- Use appropriate tools and machines to safely and accurately construct an airfoil to be tested in a wind tunnel.

- Evaluate different types of readily available foam products to determine the advantages and disadvantages of each in the construction of airfoil shapes.

Lesson 2.3

It is expected that students will:

- Identify the various components of a wind tunnel.
- Identify the various instruments used to measure the lift and drag forces generated by an airfoil.
- Synthesize a test plan to measure the performance of an airfoil.
- Measure the performance of an airfoil using lab equipment.
- Analyze the performance data gathered during testing.
- Evaluate and compare several performance characteristics of the airfoil.
- Communicate their test results through a technical report and a presentation to the class.

Lesson 2.4

It is expected that students will:

- Learn about Newton's Three Laws of Motion and how they relate to propulsion.
- Research and investigate propulsion and propulsion systems.
- Identify the four main propulsion systems and the parts of an engine.
- Conduct a propulsion systems analysis with calculations and graphs of data of various types of airplanes and propulsion systems.
- Design an engine and test the design using Engine Simulation software.
- Optional: Design, construct, and launch a water bottle rocket and make predictions of the rocket's altitude.
- Calculate the average altitude and relate Newton's Three Laws of Motion to the height the rocket achieved.

Lesson 3.1

It is expected that students will:

- Describe the requirements for a glider to remain stable in flight.
- Utilize software to layout a glider that complies with characteristics provided by the instructor.
- Design a glider for maximum flight distance.
- Construct a glider that accurately represents their design.
- Summarize test data to identify the best glider design.
- Write a proposal for "phase two" funding for a revised glider design.

Lesson 3.2

It is expected that students will:

- Gain a familiarity with the evolving technology of aerial navigation.
- Use a GPS unit to measure the location of objects.
- Summarize GPS data and create a navigational chart.
- Plan a multi-segment flight through a simulated airspace.
- Compare the ease of maintaining situational awareness using textual versus visual information when completing a "flight" through a simulated airspace.
- Explore the enhancements of the Wide Area Augmentation System (WAAS), Local Area Augmentation Systems (L.A.A.S.), and Synthetic Vision systems to the Global Positioning System.

Lesson 4.1

It is expected that students will:

- Design and build a rocket engine thrust testing device.
- Test the thrust of a model rocket engine.

- Modify the test to provide thrust vs. time data.

Lesson 4.2

It is expected that students will:

- Define the terms and concepts of the design, flight, and forces on a model rocket and be able to explain how they interaction.
- Investigate how changes in various design characteristics of a model rocket will affect the model rocket's flight performance.
- Work as an engineering team to construct a model rocket from a kit, fly it safely, and make predications, observations, and comparisons of flight data.
- Use trigonometry to calculate an estimate for the maximum altitude a model rocket obtains during a launch.
- Calculate a rocket's maximum velocity and maximum acceleration given rocket data and rocket engine performance specifications.

Lesson 4.3

It is expected that students will:

- Use the Internet and the library to conduct research on the importance of aerial photography.
- Demonstrate an understanding of the scientific method by formulating a testable research question, and designing and conducting an aerial photography project/experiment.
- Calculate the scale factor of aerial photographs, and use the scale factor to determine the rocket's altitude when the photography was taken, and determine the length of objects in the photographs using the photograph's scale factor.
- Describe how the launch angle relates to or affects the forces of lift, thrust, weight, and drag.

Lesson 4.4

It is expected that students will:

- Be able to define conic sections.
- Learn about historical figures in orbit theory.
- Observe basic orbit theory through a laboratory exercise.
- Learn about satellite motion and the application of orbit parameters by observing actual earth satellite motion.

Lesson 5.1

It is expected that students will:

- Work cooperatively in a team to design and conduct experiments related to positive g-force.
- Safely conduct experiments and collect data.
- Analyze the results of experiments through careful observation of experiment videotape.
- Synthesize the data and apply experimental conclusions to real-world situations.

Lesson 5.2

It is expected that students will:

- Experience the feeling of vestibular stimulation.
- Acquire data such as pulse rate and response time during stress tests performed in a reduced gravity environment.
- Analyze data and draw conclusions regarding the effects of reduced gravity and vestibular stimulation on the human body.
- Research the effects gravity has on the body both in space and on earth.

Lesson 5.3

It is expected that students will:

- Show and describe the videotape of drop experiment.
- Evaluate the results of the drop experiment with regard to anticipated outcomes.
- Describe recommendations for modifying the experiment.
- Keep a journal, including a daily entry that explains what was done, what needs to be done and their results.

Lesson 6.1

It is expected that students will:

- Mold various composite materials into the standard size 1" x 12" test sample.
- Build a test jig to test each composite sample for deflection.
- Conduct experiments and record data on the deflection of various composite samples using a micrometer and a dial indicator.
- Analyze and graph the results of the deflection experiments.

Lesson 6.2

It is expected that students will:

- Identify the material properties that are necessary for an effective Thermal Protection Systems (TPS).
- Describe the process of a space vehicle re-entry and the temperature extremes that a space vehicle may be subjected to.
- Determine the thermal protection capability of several materials through tests of materials and related research.
- Evaluate and compare the thermal test results of several materials.
- Apply their knowledge of material properties to select the best candidate materials for use in a thermal protection system.

Lesson 7.1

It is expected that students will:

- Design a computer driven system for a robot to perform a series of predetermined functions without having anything impede its progress while successfully delivering a payload to a predetermined location.
- Develop a rubric that will be used to assess the design-build-operate criteria of the robot.
- Design, build, and test an intelligent vehicle that will meet criteria determined by the goals established by the students.

4. Instructional Methods and/or Strategies:

Project Lead the Way APB (Activity, Project, and Problem-based) Instructional Design providing students with unique opportunities to work collaboratively, identify problems, apply what they know, persevere through challenges, find unique solutions, and lead their own learning. Students will be engaged in a variety of activities that balance direct instruction with project work. Students will be expected to apply the concepts and processes learned during direct instruction to their projects. Students will attend lectures, complete labs, become involved with professional mentors, complete real-world projects, and make presentations that demonstrate understanding of design/fabrication concepts and the research process.

Methods of instruction will include:

- Direct instruction (lectures, discussions, readings, and lab activities specific for mastery of content);
- Use of activity, problem, project-based learning with support from professional mentors;
- Development of language arts skills while students complete reports, journals, analyses, and essays;

- Use of educational courseware, interfaced probe ware, scientific instrumentation, and professional software;
- Use of a variety of instructional materials and resources including electronic media, handbooks, professional journals, reference materials, and textbooks;
- Self-directed, cooperative, and collaborative learning opportunities to increase responsibility of students for their own learning;
- Use of student presentations, exhibits, and competitions;
- Embedded assessments as a learning tool;
- Differentiated instruction for exceptional students; and
- Activities which promote scientific knowledge and adaptation of technology

5. Assessment Including Methods and/or Tools:

- Project-based assessments using PLTW APB rubrics
- A computer-based End of Course (EOC) exam delivered online
- PLTW LMS system supports delivery of curriculum and assessments

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: HOSPITALITY CONSUMER ECONOMICS**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Hospitality Consumer Economics is a course that incorporates economic concepts, applying the tools (graphs, statistics, equations) from other subject areas to the understanding of operations and institutions of economic systems. Studied in a historic and hospitality business context are the basic economic principals of micro and macroeconomics, international economics, comparative economic systems, methods and measurements. This course is aligned to the California Career and Technical Education Standards and fulfills the capstone level course in Hospitality, Tourism and Recreation Pathway.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education receive for information the new course Hospitality Consumer Economics.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Hospitality Consumer Economics
2. Transcript Title/Abbreviation:	Hosp Cons Econ
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement/History Social Studies
6. Grade level(s):	11-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course previously approved by UC:	No
9. Course classified as a Career Technical Education course:	Yes
10. Course modeled after an UC-approved course:	No
11. Repeatable for credit:	No
12. Date of Board Approval:	

13. Brief Course Description:
Hospitality Consumer Economics is designed so students can master fundamental economic concepts, applying the tools (graphs, statistics, equations) from other subject areas to the understanding of operations and institutions of economic systems. Studied in a historic and hospitality business context are the basic economic principals of micro and macroeconomics, international economics, comparative economic systems, measurements, and methods.

14. Prerequisites:	Introduction to Business Hospitality and Tourism

15. Context for Course:
Students will acquire a strong foundation of entrepreneurship at a professional level and to prepare students for university coursework or a career path in business or hospitality. This course is designed to integrate core academic content with project-based learning opportunities to deepen the students' knowledge and create opportunities for meaningful learning that includes critical thinking, collaboration, communication and creativity. In addition, the competencies in this course are aligned with the Common Core State Standards and the California Career Technical Education Model Curriculum Standards.

16**. History of Course Development**:
This course was developed for the Business Hospitality and Tourism Academy. The course was developed so students can meet their economic credit while exploring the business world of the hospitality industry.

17. Textbooks:	Prentice Hall Economics: Principles in Action. Pearson Prentice Hall, 2007. Foundations of Restaurant Management & Culinary Arts. Prentice Hall, 2011.
18. Supplemental Instructional Materials:	Foundations of Restaurant Management & Culinary Arts Level 1, 2nd Edition. Prentice Hall, 2011.

	Cook, Roy A, et al. *Tourism: The Business of Hospitality and Travel*. 2014.

C. COURSE CONTENT

Course Purpose:

Hospitality Economics is a comprehensive course that emphasizes the basic principles of economics and the fundamental operations of economic structures in a business environment. The course explores the fundamental economic and business ownership concepts and terms, microeconomics and macroeconomics and their relationship to small businesses.

Owning a business and the implementation of a business plan, economic systems, measurement of economic performance, management of human resources, the importance of the international economy, and marketing and promotional concepts will be the key focus of this course. The course focuses on developing critical thinking and economic decision-making skills. Furthermore, students grow in making application to real-world predictable and unpredictable situations. Through exposure to this study of small business, economic reasoning, and careers in our global economy, students further analyze their strengths and develop their own career portfolios. As a result, students gain a confident advantage for future endeavors including entry to college.

This course is designed for the California Career and Technical Education **Hospitality, Tourism and Recreation (HTR) sector**. This course is aligned to the California Career and Technical Education Standards: **Hospitality, Tourism and Recreation Pathway** and is designed to be an **Completer/Capstone level course**.

2. Course Outline:

Standard 1-Understand common economic terms and concepts and economic reasoning.

ANCHOR STANDARDS: 1.0, 2.0. 5.0, 10.0,
California Economic Standards: 12.1.1, 12.1.2, 12.1.3
HTR: C8.2, C8.3

- Examine the causal relationship between scarcity and the need for choices.
- Explain opportunity cost and marginal benefit and cost.
- Identify the difference between monetary and nonmonetary incentives and how changes in incentives cause changes in behavior.
- Evaluate the role of private property as an incentive in conserving and improving scarce resources, including renewable and nonrenewable natural resources.
- Analyze the role of a market economy in establishing and preserving political and personal liberty (e.g., through the works of Adam Smith).

Standard 2-Analyze the elements of America's market economy in a global setting.

ANCHOR STANDARDS: 1.0, 4.0, 5.0,
California Economics Standards: 12.2.1, 12.2.2, 12.2.3
HTR: C1.0, C1.2, C1.4

- Understand the relationship of the concept of incentives to the law of supply and the relationship of the concept of incentives and substitutes to the law of demand.
- Discuss the effects of changes in supply and/or demand on the relative scarcity, price, and quantity of products.
- Explain the roles of property rights, competition, and profit in a market economy.
- Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.
- Understand the process by which competition among buyers and sellers determines a market price.
- Describe the effect of price controls on buyers and sellers.
- Analyze how domestic and international competition in a market economy affects goods and services produced and the quality, quantity, and price of those products.

- Explain the role of profit as the incentive to entrepreneurs in a market economy.
- Describe the functions of the financial markets.
- Discuss the economic principles that guide the location of agricultural production and industry and the spatial distribution of transportation and retail facilities.

Standard 3-Analyze the influence of the federal government on the American economy.

ANCHOR STANDARDS: 7.0, 8.0, 9.0

California Economic Standards: 12.3.1, 12.3.2, 12.3.3, 12.3.4

HTR: C1.2, C1.3, C11.6, C12.6

- Understand how the role of government in a market economy often includes providing for national defense, addressing environmental concerns, defining and enforcing property rights, attempting to make markets more competitive, and protecting consumers' rights.
- Identify the factors that may cause the costs of government actions to outweigh the benefits.
- Describe the aims of government fiscal policies (taxation, borrowing, spending) and their influence on production, employment, and price levels.
- Understand the aims and tools of monetary policy and their influence on economic activity (e.g., the Federal Reserve).

Standard 4-Analyze the elements of the U.S. labor market in a global setting.

ANCHOR STANDARDS: 5.0, 10.0

California Economic Standards:12.4.1, 12.4.2, 12.4.3, 12.4.4

HTR: C2.1, C2.2, C1.3, C2.3

- Understand the operations of the labor market, including the circumstances surrounding the establishment of principal American labor unions, procedures that unions use to gain benefits for their members, the effects of unionization, the minimum wage, and unemployment insurance.
- Describe the current economy and labor market, including the types of goods and services produced, the types of skills workers need, the effects of rapid technological change, and the impact of international competition.
- Discuss wage differences among jobs and professions, using the laws of demand and supply and the concept of productivity.
- Explain the effects of international mobility of capital and labor on the U.S. economy.

Standard 5-Analyze the aggregate economic behavior of the U.S. economy.

ANCHOR STANDARDS: 2.0, 4.0, 7.0

California Economic Standards: 12.5.1, 12.5.2, 12.5.3

HTR: C2.5

Distinguish between nominal and real data.

- Define, calculate, and explain the significance of an unemployment rate, the number of new jobs created monthly, an inflation or deflation rate, and a rate of economic growth.
- Distinguish between short-term and long-term interest rates and explain their relative significance.

Standard 6-Categorize issues of international trade and explain how the U.S. economy affects, and is affected by, economic forces beyond the United States' borders.

ANCHOR STANDARDS: 1.0, 2.0, 8.0, 10.0

California economic Standards 12.6.1, 12.6.2, 12.6.3

- Identify the gains in consumption and production efficiency from trade, with emphasis on the main products and changing geographic patterns of twentieth-century trade among countries in the Western Hemisphere.

- Compare the reasons for and the effects of trade restrictions during the Great Depression compared with present-day arguments among labor, business, and political leaders over the effects of free trade on the economic and social interests of various groups of Americans.
- Understand the changing role of international political borders and territorial sovereignty in a global economy.
- Explain foreign exchange, the way exchange rates are determined, and the effects of the dollar's gaining (or losing) value relative to other currencies.

Standard 7-Understand and apply the basics of food preparation in food service establishments across the hospitality industry which include regional and global cuisines.
ANCHOR STANDARDS: 4.0, 5.0, 7.0, 9.0
HTR: C8.1, C1.2 C11.2, C11.4

- Understand qualities and properties of food items and ingredients used in food preparation.
- Incorporate, maintain, and store the tools, utensils, equipment, and appliances appropriate for preparing a variety of food items.
- Comprehend the principles of mise en place, including the placement and order of use of ingredients, tools, and supplies.
- Prepare food by using the correct techniques and procedures specified in recipes and formulas.
- Incorporate plating techniques, including accurate portioning and aesthetic presentation skills.

Standard 8-Recognize and apply the basic processes of financial analysis and business practices to successfully operate a hospitality business.
ANCHOR STANDARDS: 3.0, 5.0, 9.0, 10.0
HTR: C1.2, C1.4, C5.6

- Understand the importance and structure of standardized systems used in the hospitality industry.
- Explore the components of a profit-and loss statement.
- Calculate costs and pricing to cover theoretical cost.
- Understand the customer's perception of value and its relationship to profit and loss.
- Explore personal financial literacy.

Standard 9 -Emphasize the fundamentals of successful sales and marketing methods.
ANCHOR STANDARDS: 3.0, 4.0, 5.0, 9.0, 10.0
HTR: C4.1, C4.2, C4.3, C4.5

- Identify basic marketing principles for maximizing revenue based on supply and demand.
- Know the major market segments of the industry and understand how marketing principles and procedures can be applied to target audiences.
- Understand the various types of entrepreneurial opportunities in the hospitality industry.
- Analyze marketing strategies, including promotional selling and upgrading, and their effect on profits.
- Know methods to develop and maintain long-term customer relations.

Standard 10-Comprehend and practice common business practices which encourage profitability and cost controls in all areas of the Hospitality Industry.
ANCHOR STANDARDS: 1.0, 2.0, 3.0, 5.0, 9.0,
HTR: C6.1, C6.2, C6.3, C6.4

- Identify the types of cost incurred in the hospitality business.
- Explain the purpose of a budget.
- Illustrate the importance of standard labor cost to a business's success.
- List factors that affect labor cost.

- Construct the components and factors to consider when developing labor schedules.
- Outline purchasing, receiving and storage procedures.
- Categorize dollar value of inventory.
- Generate various methods of inventory pricing.

CTE Anchor Standards

1.0 Academics: Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Hospitality, Tourism, and Recreation academic alignment matrix for identification of standards.

2.0 Communications: Acquire and accurately use Hospitality, Tourism, and Recreation sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats.

3.0 Career Planning and Management: Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans.

4.0 Technology: Use existing and emerging technology, to investigate, research, and produce products and services, including new information, as required in the Hospitality, Tourism, and Recreation sector workplace environment.

5.0 Problem Solving and Critical Thinking: Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the Hospitality, Tourism, and Recreation, using critical and creative thinking; logical reasoning, analysis, inquiry, and problem-solving techniques.

7.0 Responsibility and Flexibility: Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Hospitality, Tourism, and Recreation sector workplace environment and community settings.

8.0 Ethics and Legal Responsibilities: Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms.

9.0 Leadership and Teamwork: Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the career technical student organization (FCCLA).

10.0 Technical Knowledge and Skills: Apply essential technical knowledge and skills common to all pathways in the Hospitality, Tourism, and Recreation sector, following procedures when carrying out experiments or performing technical tasks.

Hospitality, Tourism, and Recreation CTE Standards
Hospitality, Tourism, and Recreation

C1.0 Demonstrate an understanding of the major aspects of the hospitality, tourism, and recreation industry (i.e. lodging, travel, and tourism; event planning; theme parks, attractions, and exhibitions; and recreation) and the industry's role in local, state, national, and global economies.

C1.1 Define and compare core elements of the hospitality, tourism, and recreation industry from those of various supporting industries.

C1.2 Analyze the working conditions of various careers in the hospitality, tourism, and recreation industry.
C1.3 Analyze the impact and contributions of various segments of the industry on local, state, national, and international economies and cultures, and the environment.
C1.4 Compare and contrast the relationship between industry trends and local, state, national, and international economic trends.

C2.0 Analyze the basic elements of workforce and organizational management, including the roles and responsibilities of effective management and employees in the industry.
C2.1 Interpret how the mission and goals of a business affect operations in the hospitality, tourism, and recreation industry.
C2.2 Understand the importance of specific human resource practices and procedures that address workplace diversity, harassment, personal safety, and discrimination.
C2.3 Explain common safety, security, and emergency policies and procedures used in the hospitality, tourism, and recreation industry to protect guests, visitors, and employees, such as safe work practices and conditions, confidentiality of customer information, control of keys, infectious disease control, first aid procedures, and emergency training.
C2.4 Analyze the relationship of management techniques and appropriate business procedures, such as spreadsheets for payroll and inventories, tools for budgeting, recordkeeping, and corresponding to key outcomes: profitability, productivity, positive work environment, consumer and client satisfaction, business growth, business plans, corporate social responsibility, and environmental stewardship.
C2.5 Create a product which explains the impact of main laws and regulations that affect accommodations and practices, including the requirements of the California Occupational Safety and Health Administration and the Americans with Disabilities Act, wage and hour laws, tenant status, and accommodation of minors.

C4.0 Describe the fundamentals of successful sales and marketing methods.
C4.1 Recognize ways of developing and maintaining long-term guest relationships.
C4.2 Identify the major market segments of the hospitality, tourism, and recreation industry.
C4.3 Understand basic marketing principles for maximizing revenue based on supply and demand and competition.
C4.4 Understand the value of advertising, public relations, social networking, and community involvement.
C4.5 Analyze marketing strategies, including promotional selling and upgrading, and their effect on profits.

C5.0 Demonstrate an understanding of the basics of systems operations and the importance of maintaining facilities, equipment, tools, and supplies.
C5.6 Understand how essential departments in a hospitality, tourism, and recreation business contribute to economic success.

C6.0 Implement procedures for common types of financial transactions.
C6.1 Apply procedures for handling cash transactions, such as balancing cash, handling cash control, converting currency, and identifying counterfeit currency.
C6.2 Apply the procedures for handling noncash transactions: credit cards, debit cards, ATM cards, money orders, personal checks, coupons, discounts, and online transactions.
C6.3 Conduct all financial transactions in an accurate, professional, and ethical manner.
C6.4 Produce a product that identifies and explains the impact of identity theft on the hospitality, tourism, and recreation industry.

C8.0 Interpret the basics of global and domestic physical and cultural geography in relation to the hospitality, tourism, and recreation industry.

C8.1 Understand fundamental ways in which physical geography, culture, and politics, affect local economies and world travel and tourism.

C8.2 Create a product using types of basic information that international travelers need, including physical geography, time zones, International Date Line, rights and responsibilities, laws, insurance, emergency services, and customs.

C11.0 Illustrate the fundamentals of planning events for a diverse clientele.

C11.1 Explain the purposes and target audiences of various venues.

C11.2 Demonstrate the essential procedures for planning, promoting, publicizing, coordinating, and evaluating a program or event.

C11.3 Understand how to establish business relationships with a variety of locations, food suppliers, and other vendors.

C11.4 Demonstrate procedures for setting up facilities, equipment, and supplies.

C11.5 Develop schedules, registration tools, event materials, and programs.

C11.6 Plan special events (e.g., meetings, trade shows, fairs, conferences) based on specific themes, budgets, agendas, space and security needs, and itineraries.

C12.0 Demonstrate an understanding of the value of recreation and the fundamentals of recreational facilities and services.

C12.6 Create a product describing the types of insurance, licenses, and permits needed for the operation and management of various popular outdoor activities.

<u>Principles of American Democracy and Economics Standards</u>

12.1 Students explain the fundamental principles and moral values of American democracy as expressed in the U.S. Constitution and other essential documents of American democracy.

1. Analyze the influence of ancient Greek, Roman, English, and leading European political thinkers such as John Locke, Charles-Louis Montesquieu, Niccolò Machiavelli, and William Blackstone on the development of American government.
2. Discuss the character of American democracy and its promise and perils as articulated by Alexis de Tocqueville.
3. Explain how the U.S. Constitution reflects a balance between the classical republican concern with promotion of the public good and the classical liberal concern with protecting individual rights; and discuss how the basic premises of liberal constitutionalism and democracy are joined in the Declaration of Independence as "self-evident truths."

12.2 Students evaluate and take and defend positions on the scope and limits of rights and obligations as democratic citizens, the relationships among them, and how they are secured.

1. Discuss the meaning and importance of each of the rights guaranteed under the Bill of Rights and how each is secured (e.g., freedom of religion, speech, press, assembly, petition, privacy).
2. Explain how economic rights are secured and their importance to the individual and to society (e.g., the right to acquire, use, transfer, and dispose of property; right to choose one's work; right to join or not join labor unions; copyright and patent).
3. Discuss the individual's legal obligations to obey the law, serve as a juror, and pay taxes.

12.3 Students evaluate and take and defend positions on what the fundamental values and principles of civil society are (i.e., the autonomous sphere of voluntary personal, social, and economic relations that are not part of government), their interdependence, and the meaning and importance of those values and principles for a free society.

1. Explain how civil society provides opportunities for individuals to associate for social, cultural, religious, economic, and political purposes.
2. Explain how civil society makes it possible for people, individually or in association with others, to bring their influence to bear on government in ways other than voting and elections.
3. Discuss the historical role of religion and religious diversity.
4. Compare the relationship of government and civil society in constitutional democracies to the relationship of government and civil society in authoritarian and totalitarian regimes.

12.4 Students analyze the unique roles and responsibilities of the three branches of government as established by the U.S. Constitution.

1. Discuss Article I of the Constitution as it relates to the legislative branch, including eligibility for office and lengths of terms of representatives and senators; election to office; the roles of the House and Senate in impeachment proceedings; the role of the vice president; the enumerated legislative powers; and the process by which a bill becomes a law.
2. Explain the process through which the Constitution can be amended.
3. Identify their current representatives in the legislative branch of the national government.
4. Discuss Article II of the Constitution as it relates to the executive branch, including eligibility for office and length of term, election to and removal from office, the oath of office, and the enumerated executive powers.

12.5 Students summarize landmark U.S. Supreme Court interpretations of the Constitution and its amendments.

1. Understand the changing interpretations of the Bill of Rights over time, including interpretations of the basic freedoms (religion, speech, press, petition, and assembly) articulated in the First Amendment and the due process and equal-protection-of-the law clauses of the Fourteenth Amendment.
2. Analyze judicial activism and judicial restraint and the effects of each policy over the decades (e.g., the Warren and Rehnquist courts).
3. Evaluate the effects of the Court's interpretations of the Constitution in Marbury v. Madison, McCulloch v. Maryland, and United States v. Nixon, with emphasis on the arguments espoused by each side in these cases.

12.6 Students evaluate issues regarding campaigns for national, state, and local elective offices.

1. Analyze the origin, development, and role of political parties, noting those occasional periods in which there was only one major party or were more than two major parties.
2. Discuss the history of the nomination process for presidential candidates and the increasing importance of primaries in general elections.
3. Evaluate the roles of polls, campaign advertising, and the controversies over campaign funding.

3. Key Assignments:

<u>Standard 1</u>

- Students will demonstrate knowledge of the economic problem of scarcity. Students compose an informative essay based upon at least three of the articles. Within the essay, students articulate how each recent news scenario illustrates the economic problem of scarcity. Also, recognizing that various economic, natural, political and behavioral factors contribute to this problem, students conclude by recommending possible alternative outcomes.
- Students will identify the four major supply components that indicate that any tourist area must possess, discuss how the Fodor's Web site addresses each of these areas for the potential tourist.
- Students will analyze official travel and tourism industries webpage and answer the following: What statistical data are available at this Web site that would help a tourism professional determine the demand for travel and tourism?

Standard 2

- Students will prepare an argumentative essay to demonstrate knowledge on how a scenario might affect supply and demand. Students will demonstrate the advantages/disadvantages of economies based in individual choice vs. economies based on social choice. Students will create a model of society in which the economy is owned by the government and differentiate the advantages and pitfalls of such societies. Students will examine various types of economies and formulate a plan to explore a solution that focuses on equity and access.
- Based on currency exchange rate changes, students explore which countries would be less expensive to visit now than 5 years ago. Students will track the exchange rates between US and several other currencies over the past 5-year period and identify three countries that would be economically feasible to visit because of these exchange rates.

Standard 3

- Students will prepare a PowerPoint to demonstrate knowledge of the goals of monetary policy and any conflicts between these goals. Students respond to the following: Which goal should take precedence at any point in time? How might the Federal Reserve find a balance between certain short-run and longer-run objectives? What kind of pressure might arise from the political arena? As students present their case to class, they will provide justification and conclude with explaining how this affects the United States economy.
- Students will interview several business owners in the hospitality industry with prepared questions such as: Which regulations do you favor and why? Which regulations do you oppose and why? Do regulations add to the costs of producing your products or services? Do these regulations raise the prices you charge customers? After these interviews, students demonstrate knowledge of these governmental regulations and prepare a presentation outlining their findings.
- Student will develop a resource list of federal and state government agencies that assist small business owners. The list will identify the importance of regulations on small business operations, Federal Trade Commission, Consumer Product Safety Act, Environmental Protection legislation and Fair Credit Reporting Act. Students formulate through a verbal argument how the specific regulations will enhance or hinder small business ownership and defend their position to the class.

Standard 4

- Students will prepare an essay to demonstrate knowledge of how differing opinions collide in evaluating this statement: “If people are unemployed or poor, it is their own fault.” Within the essay students expound on the following prompts: To what extent are the poor responsible for their own status? To what extent are they the victims of conditions over which they have no control? What can the poor do to help themselves? What additional help, if any, do you think they ought to receive? Who should provide this help? How should the assistance be financed? As students present their case, they back it with justification and conclude with explaining how this affects our economy.
- Students will interview representatives of Labor Unions and Management regarding the role of unions in our economy. After interviewing several representatives from each area, students prepare a presentation in Sway to demonstrate knowledge of these separate roles in our economy as well as make predictions of the future of these roles. Students will create a presentation which will include the following information: In what ways do the labor and management representatives agree? In what ways do they differ? What changes have taken place in labor-management relations in recent years? Why have these changes occurred? Students conclude the presentation with their own opinion of how labor unions affect our economy, make predictions about the future role of the labor unions and justify the reasons for these predictions.
- Students will conduct their own research on our state’s minimum wage law as it compares to the federal minimum wage law. Next, students research their chosen hospitality career and determine how these laws affect this area. Then, students determine if they favor or oppose minimum wage legislation and why. Students

report all their findings and their case along with justifications in an online discussion board where classmates may reply or comment on one another's opinion on the minimum wage laws. The teacher moderates the discussion and provides further focus and considerations as necessary.

Standard 5

- After watching a video related to inflation, the teacher presents a scenario whereby economists are predicting a high rate of inflation now. To demonstrate knowledge of how consumers and the government might respond to this, students prepare a Sway presentation as if they are providing solutions to concerned consumers at a local community group. Using online resources provided in the video and/or specific books on the subject, students evaluate the options for consumers to protect themselves from the effects of rising prices and prescribe solutions that the government and/or Federal Reserve ought to do. Along with this content, visual criteria for the presentation include various forms of multi-media such as graphics, audio, and video related to the inflation.
- Students will recognize the difference between the public sector and the private sector roles in the reduction of unemployment. Students will identify what group(s)benefit the most from being unemployed and why they benefit. Students will evaluate the group(s) and devise a plan to help that specific identified group become more marketable for employment. Students will formulate in their plan the necessary skills needed to be successful.

Standard 6

- Students will identify one region of the world and describe global challenges that entrepreneurs face when conducting trade with those nations. Students will compile a timeline and devise a plan of action to assist the identified region with strategies to improve the said challenges. Students will compile a visual presentation for the class summarizing their process and findings that will include existing market competition and analysis of the travel and tourism service produced by that nation. In addition, students will examine the impact of the globalization of these goods and services have on the culture and environment as a whole.
- Students will work in groups to compare the transition to free market economics in China and Russia. The groups will describe three unique aspects the country's transition. They will determine what will be most successful in the long run and how it will affect the global economy.

Standard 7

- Students will explore current global food trends. From their research, students will develop a concept they will introduce to restaurant customers (their peers). The concept must be authentic, professional, and easy to communicate to their clientele and reflect a flavorful blend of the different cultural influences. Students will provide a list of ingredients, and sources from which to purchase them, and a narrative describing why their chosen ingredients and flavors go together. The final task will have students design, prepare, and deliver a main course that reflects their new cuisine concept that will be subject to customer (peer) review.
- Students will plan, prepare and serve representative meals and will demonstrate proper food preparation and cooking techniques and skills that enhance the flavor, tenderness, and appearance of food items.

Standard 8

- Students will investigate proper business finance, accounting processes, and producing profit. To demonstrate knowledge of how they must similarly manage their personal financial resources, provide for themselves and their potential family, and maintain savings for their future, students prepare and further analyze a personal financial plan. The student will then determine how these ideas can be translate and practiced in the business management position. They will present their finding to the class.
- Students will examine several current successful business model strategies and compile a list of these strategies. Students will recognize and illustrate the importance of close monitoring the results of business

activities, marketing and business ventures. The students will differentiate the results to their peers in a verbal discussion panel. Students will discuss pros and cons of each business model regarding the business venture.

Standard 9

- Working in small groups, students come up with a marketing plan for one of the following types of restaurants quick service, family, or fine dining. All the restaurants are operating in the same type of location a moderately dense middle-income suburb of a big city be sure to follow the five steps as you create the marketing plan for an operation.
- Find a local business in the hospitality industry and ask the following questions. How do local businesses in your area try to engage the community? Discuss with the class the groups finding.
- Students will analyze three tourism supplier's home pages. Which segments do you think each is targeting based on the information provided on the home page?
- Students will be given the following scenario and determine the best solution for this family. Your family is planning a summer holiday and designated you as the information gatherer. How much information would you collect? What types of information would you collect? What sources of information would you consult?
- Students will explore international and domestic travel sites from a teacher generated list. The students will answer the following questions. Which sites have the most powerful marketing concept in each category? What characterizes the sites you have chosen? What marketing concepts do these sites employ? What is your opinion of using the internet as a channel of distribution for advertising? Why? How do the U.S. sites compare with the international sites? The students will report their finding to the class.

Standard 10

- Students will include in a flow chart the important factors (economics, population, and competition). Students will identify the key elements needed to be successful in obtaining assistance. Students will synthesize the steps and present their finding to their peers in a verbal presentation with their flow chart as a visual reference. Student peers will share their feedback and discuss the viability of the flow chart in supporting the student's goal to secure funding.
- Explore and research websites dedicated to successful elements of a business plan. Students will develop a business plan with a partner; compare the coverage of your plan with another group's plan. Students will assess the other group's plan and provide constructive written feedback, so they can collaborate on how to strengthen each other's business plan. Students will produce a reflection at the end of the assignment and describe how they devised a solution for the betterment of each other's business plan.

4. Instructional Methods and/or Strategies:

- Direct instruction
- Group projects
- Research papers
- Video clips
- Guest speakers

Students will be required to analyze several situations regarding hospitality management. Role play and skill development will all be part of the instructional strategies used in this class.

5. Assessment Including Methods and/or Tools:

Formative and Summative assessments will be used. Projects, quizzes and exams will be used.

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: INTERNATIONAL FOODS**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

International Foods is an in-depth study of food patterns, cultural food habits, and customs of different ethnic groups and cultures. Advanced food preparation techniques are integrated into the study of varying country's cuisines. It is created by combining two-semester courses, International Foods 1 and International Foods 2, into a year-long course, to align with the newest Career Technical Education Model Curriculum Standards and Framework. This course fulfills the concentrator level course in the Food Services and Hospitality pathway.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education receive for information the new course International Foods.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr. Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	International Foods
2. Transcript Title/Abbreviation:	Int Foods
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement
6. Grade Level(s):	9-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	Yes
10. Modeled after an UC-approved course:	No
11. Repeatable for Credit:	No
12. Date of Board Approval:	
13. Brief Course Description: The course is an in-depth study of food patterns, cultural food habits, and customs of different ethnic groups and cultures. Advanced food preparation techniques are integrated into the study of each country's cuisine. This course will provide advanced students with experience and a wide range of knowledge concerning cultural food habits on European, ASIAN, United States, and Latin America cultures.	
14. Prerequisites:	None
15. Context for Course: This course will provide students an opportunity to perform specialized skills in food preparation, develop an awareness of the interrelationship of world food patterns, as well as the ability to plan nutritious, appetizing, and attractive meals using planning concepts and cultural eating patterns. In addition, students will be given the opportunity to develop individual skills necessary for transition to occupational courses. This course outline is aligned with the State of California Home Economics Careers and Technology Education Framework.	
16. History of Course Development: This course was designed to provide students with skills and knowledge in a Career Technical Education (CTE) pathway. Coursework is meant to prepare students for professional life as indicated by the College and Careers Readiness Standards. The course has been updated to reflect the changes in CTE standards. This course combines two courses that were previously semester courses (International Foods 1 and International Foods 2), complying with CTE guidelines for course consideration as part of a pathway.	
17. Textbooks:	Largen, V. L., & Bence, D. L. (2000). *Guide to good food*. Tinley Park, IL: Goodheart-Willcox Co.
18. Supplemental Instructional Materials:	Kowtaluk, Helen. *Food for Today*. Glencoe/McGraw-Hill, 2006.
C. COURSE CONTENT	
1. Course purpose:	

This course is designed for the California Career and Technical Education **Hospitality, Tourism, and Recreation (HTR) sector**. This course is aligned to the California Career and Technical Education Standards: **Food Service and Hospitality Pathway** and is designed to be a **Concentrator level course**.

2. Course Outline:

Unit 1 - Nutrition and Health

Anchor Standards: 5.0

HTR: B10.0, B10.1, B10.2, B10.3

- Students will understand the application of the principles of nutrition and their relationship to good health throughout the life cycle.
    - Compare and analyze label information on cultural foods products.
    - Identify and describe the services of public and private agencies that provide food and nutrition information and protection to consumers on the national and international level.
    - Compare and contrast the MYPLATE of Europe, ASIA, and Latin America in relation to the United States.
    - Describe food related illnesses and malnutrition in the world.
    - Evaluate the influence of the media on nutrition and eating habits.

Unit 2 - Food Safety and Sanitation

Anchor Standard: 6.0

HTR: B3.0, B3.2, B3.3, B3.4, B6.0, B6.1, B6.3, B6.5

- Students will understand the principles of maintaining food safety and sanitation.
    - Review organisms that cause food spoilage, sources of contamination, and conditions required for growth and the organism.
    - Employ sanitary practices before, during, and after food preparation and service.
    - List the agencies that determine food safety regulations in the United States and abroad.
    - Compare responsibilities of various government agencies concerned with food safety and nutrition as it effects imported food products.
    - Identify proper techniques for storage and preparation of foods.

Unit 3 - Facilities and Equipment

Anchor Standard: 6.0

HTR: B5.0, B5.1, B5.2, B5.3, B5.4, B5.5 B6.0, B6.1

- Students will understand the selection, use and care of safe and efficient facilities and equipment.
    - Identify and minimize safety hazards in the kitchen.
    - Identify and select steps to be followed during emergencies related to food and equipment accidents.
    - Research a variety of surfaces and materials used in international kitchens and assess their characteristics in terms of sanitation, safety and maintenance.
    - Describe the availability of food preparation equipment and appliances in terms of needs, want, cost, safety, efficiency, use and care.
    - Apply appropriate practices when using, maintaining and storing food preparation equipment and appliances.
    - Use a variety of appliances, equipment, and techniques to prepare food and meals.
    - Develop a list of the most essential equipment and appliances for individuals to use when preparing cultural recipes.

Unit 4 - Meal Management

HTR: B11.0, B11.1, B11.2, B11.3, B11.4, B11.5, B11.6

- Students will understand the principles of food purchasing and meal management.
    - Identify ways to manage time, energy, and resources when planning and preparing meals.
    - Plan and prepare foods/meals that utilize time, energy, resource conservation, and management techniques.
    - Utilize consumer skills to save money when selecting foods.
    - Apply decision-making skills for purchasing food.
    - Use consumer skills in selecting food by comparing and selecting quality unit prices, products, expiration dates, and brands.
    - Identify and compare the availability of international food products in terms of cost, convenience, services, and variety of selections.
    - Summarize advantages and disadvantages of preparing international meals at home and dining out.
    - Compare international meals and compute costs in terms of time, money, resources, nutritional quality, and satisfaction for various life styles and different stages of the life cycle.
    - Analyze food needs, methods of procurement, and storage for hypothetical disaster and emergency situations in the United States and in other countries.

Unit 5 - Food Preparation

Anchor Standard: 7.8

HTR: B5.0, B5.1, B5.2, B5.3, B5.4, B5.5, B5.6, B6.9, B6.1, B6.2, B6.3, B6.4, B6.5, B6.6, B6.7, B7.0, B7.1, B7.2, B7.3, B7.4, B7.5, B7.6

- Students will understand the principles of food preparation.
    - Use appropriate equipment and techniques for dry and liquid measurements.
    - Interpret an international recipe to prepare a food product.
    - Define food preparation terminology used in the preparation of a variety of food products in the United States, Latin America, Europe, and Asia.
    - Describe the properties and functions of ingredients used to prepare international foods.
    - Apply food preparation techniques that preserve nutrients and enhance flavor and appearance of food.
    - Define and demonstrate advanced food preparation techniques and skills.
    - Analyze time, energy, equipment, and resource usage in food preparation situations for individuals and families with various life styles.
    - Apply advanced concepts of food preparation and nutrition by planning, preparing, and servicing aesthetically pleasing and nutritious meals.
    - Examine and apply the psychology and aesthetics of food presentation.
    - Select appropriate food ingredients as substitutions in international recipes.
    - Investigate and describe current trends in international food preparation.

Unit 6 - Meal Service and Etiquette

HTR: B9.0, B9.3

- Students will understand styles of meal service and commonly accepted etiquette practices.
    - Describe and practice table settings for United States, Latin American, Asia, and Europe.
    - Describe and practice a variety of meal service styles.
    - Practice table manners and etiquette commonly accepted in the United States, Latin America, and Europe.

Unit 7 - Food and Culture

Anchor Standards: 1.0, 2.0, 5.0, 10.0, 10.8

HTR: B1.0, B1.2, B6.0, B6.6, B8.0, B8.4

- Students will understand that culture influences food choices and etiquette.
    - Identify regional differences in the United States affecting the preparation and service of foods.
    - Identify cultural differences affecting the preparation and service of foods.
    - Research European, Asia, United States and Latin America food preparation techniques, table settings, meal etiquette, food habits, traditions, holidays, climate, geography, economy, utensils, and methods of cookery.
    - Relate the influences of factors such as culture, geographic region, and socioeconomic status upon food choices and habits.

Unit 8 - Food Production and Technology

Anchor Standards: 4.0, 6.0, 6.2, 6.7, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 10.0, 10.2, 10.5, 10.6, 10.7, 10.10, 10.11
HTR: B3.0, B3.2, B3.3, B3.4

- Students will understand food production, processing, and distribution methods, and their relationship to consumer food supply.
    - Describe technological advances that have affected food production, processing, and distribution of foreign products.
    - Evaluate the impact of current and emerging food technologies on food quality, availability, and cost of foreign products.
    - Describe quality assurance procedures used in food science/processing companies of foreign products.
    - Compare food production and processing techniques, safety standards and distribution methods in the world marketplace.
    - Investigate and describe the evolution and development of food products and preparation equipment.
    - Explain the methods used in the United States and other countries for retarding bacterial growth in food processing and distribution.

Unit 9 - Careers Related to Hospitality, Tourism, and Recreation

Anchor Standards: 1.0, 2.0 3.0, 3.1, 3.2, 3.4, 3.6, 3.9, 7.0, 9.0.

- Students will understand careers related to global opportunities Hospitality, Tourism, and Recreation.
    - Identify the attributes of effective Hospitality, Tourism and Recreation professionals.
    - Compare personal interests, aptitudes, and abilities required in Hospitality, Tourism, and Recreation careers.
    - Evaluate career options related to Hospitality, Tourism, and Recreation in Europe, Asia, the United States, and Latin America including labor market projections, education requirements, job responsibilities, salary benefits, expectations, and working environment.
    - Develop a career plan in Hospitality, Tourism, and Recreation that reflects upward career mobility and opportunities for entrepreneurship.

<u>CTE Anchor Standards</u>

1.0 Academics: Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the hospitality, tourism, and recreation academic alignment matrix for identification of standards.

2.0 Acquire and accurately use Hospitality, Tourism, and Recreation sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats.

3.0 Career Planning and Management: Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans.
- 3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision-making.
- 3.2 Evaluate personal character traits such as trust, respect, and responsibility and understand the impact they can have on career success.
- 3.3 Explore how information and communication technologies are used in career planning and decision-making.
- 3.4 Research the scope of career opportunities available and the requirements for education, training, certification, and licensure.
- 3.5 Integrate changing employment trends, societal needs, and economic conditions into career planning.
- 3.6 Recognize the role and function of professional organizations, industry associations, and organized labor in a productive society.
- 3.7 Recognize the importance of small business in the California and global economies.
- 3.8 Understand how digital media are used by potential employers and postsecondary agencies to evaluate candidates.
- 3.9 Develop a career plan that reflects career interests, pathways, and postsecondary options.

4.0 Use existing and emerging technology, to investigate, research, and produce products and services, including new information, as required in the Hospitality, Tourism, and Recreation sector workplace environment.

5.0 Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the Hospitality, Tourism, and Recreation, using critical and creative thinking; logical reasoning, analysis, inquiry, and problem-solving techniques.

6.0 Health and Safety: Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Hospitality, Tourism, and Recreation sector workplace environment.
- 6.2 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.
- 6.7 Be informed of laws/acts pertaining to the Occupational Safety and Health Administration (OSHA).

7.0 Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Hospitality, Tourism, and Recreation sect or workplace environment and community settings.

8.0 Ethics and Legal Responsibilities: Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms.
- 8.1 Access, analyze, and implement quality assurance standards of practice.
- 8.2 Identify local, district, state, and federal regulatory agencies, entities, laws, and regulations related to the Hospitality, Tourism, and Recreation industry sector.
- 8.3 demonstrate ethical and legal practices consistent with Hospitality, Tourism, and Recreation sector workplace standards.
- 8.5 analyze organizational culture and practices within the workplace environment.

9.0 Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision-making, benefits of workforce diversity, and conflict resolution as practiced in the Career Technical Student Organization (FCCLA).

10.0 Technical Knowledge and Skills: Apply essential technical knowledge and skills common to all pathways in the Hospitality, Tourism, and Recreation sector, following procedures when carrying out experiments or performing technical tasks.
- 10.2 Comply with the rules, regulations, and expectations of all aspects of the Hospitality, Tourism, and Recreation sector.
- 10.5 Define the principles of nutrition and their relationship to good health through the life cycle.
- 10.6 Define and identify the basic principles of food safety and sanitation and the proper techniques for preparing and serving food.
- 10.7 Apply the principles of food purchasing, food preparation, and meal management in a variety of settings.
- 10.10 Describe food production, processing, and distribution methods and the relationship of those techniques to consumer food supply and nutrition.
- 10.11 Explain how to select, safely use, and efficiently care for facilities and equipment related to food product development, food preparation, dining, lodging, tourism, and recreation.

Hospitality, Tourism, and Recreation CTE Standards

Hospitality, Tourism, and Recreation Pathway Standards

B1.0 Demonstrate an understanding of major aspects of the food service and hospitality industry and the role of the industry in local, state, national, and global economies.
- B1.2 Understand how the various segments of the industry contribute to, and impact, local, state, national, and international economies, cultures, and the environment.

B3.0 Interpret the basic principles of sanitation and safe food handling.
- B3.2 Understand basic local, state, and federal sanitation regulations as they pertain to food production and service.
- B3.3 Explain the types of food contamination, the potential causes, including cross-contamination, and methods of prevention.
- B3.4 Practice safe and sanitary procedures in all food handling, including food receiving, storage, production, service, and cleanup.

B5.0 Demonstrate an understanding of the basics of systems operations and the importance of maintaining facilities, equipment, tools, and supplies.
- B5.1 Apply the procedures for cleaning and maintaining facilities and equipment and the importance of preventive maintenance and the use of nontoxic and less toxic materials.
- B5.2 Recognize the types of materials and supplies used in the maintenance of facilities, including the identification of the hazardous environmental and physical properties of chemicals and the use of Material Safety Data Sheets (MSDS).
- B5.3 Practice the procedures for maintaining inventories: ordering food, equipment, and supplies; and storing and restocking supplies.
- B5.4 Understand the relationship between facilities management and profit and loss, including the costs of resource consumption, breakage, theft, supplies use, and decisions for repairs or replacement.
- B5.5 Understand how various departments in a food service facility contribute to the economic success of a business.
- B5.6 Prioritize tasks and plan work schedules based on budget and personnel.

B6.0 Illustrate and apply the basics of food preparation and safety and sanitation in professional and institutional kitchens.
- B6.1 Use, maintain, and store the tools, utensils, equipment, and appliances safely and appropriately for preparing a variety of food items.

B6.2 Apply the principle of mise en place, including the placement and order of use of ingredients, equipment, tools, and supplies.
B6.3 Prepare food by using the correct terminology, food safety, techniques, and procedures specified in recipes and formulas.
B6.4 Plan and follow a food production schedule, including timing and prioritizing of tasks and activities.
B6.5 Evaluate the qualities and properties of food items and ingredients used in food preparation.
B6.6 Design plating techniques, including accurate portioning and aesthetic presentation skills.
B6.7 Develop a food preparation plan using forecasting and cross-utilization of products to maximize profit and eliminate waste.

B7.0 Illustrate and apply the basics of baking, pastry, and dessert preparation and safety and sanitation in professional and institutional kitchens.
B7.1 Use, maintain, and store the tools, utensils, equipment, and appliances safely and appropriately for preparing, serving, and storing baked goods, pastries, and desserts.
B7.2 Apply the principle of *mise en place,* including the placement and order of use of the ingredients, equipment, tools, and supplies unique to baking and pastry production.
B7.3 Produce baked goods, pastries, and desserts by using the correct terminology, food safety, techniques, procedures, and various finishing techniques.
B7.4 Evaluate the qualities and properties of food items and ingredients used for baked goods, pastries, and desserts.
B7.5 Understand packaging and merchandising techniques to feature seasonal and standard bakery products.
B7.6 Develop a plan using forecasting and cross-utilization of products to maximize profit and eliminate waste.

B8.0 Apply the knowledge and skills essential for effective customer service.
B8.4 Understand the roles of management and employees in effectively meeting the needs of culturally, generationally diverse, special needs customers.

B9.0 Apply the basic procedures and skills needed for food and beverage service.
B9.3 Practice safe, efficient, and proper procedures for setting, serving, maintaining, and busing tables.

B10.0 Demonstrate and apply basic nutritional concepts in meal planning and food preparation.
B10.1 Apply basic nutritional principles and know how to use food preparation techniques that conserve nutrients.
B10.2 Interpret nutritional or ingredient information from food labels and fact sheets and analyze menu items to meet the dietary needs of individuals.
B10.3 Create nutritious, creative, and profitable menus in accord with availability and demand.

B11.0 Demonstrate an understanding of the basic processes of costing and cost analysis in food and beverage production and service.
B11.1 Understand the customer's perception of value and its relationship to profit and loss.
B11.2 Understand the components of a profit and loss statement emphasizing food and labor costs.
B11.3 Utilize the practices of reduce, reuse, and recycle to maximize profits.
B11.4 Understand the importance and structure of standardized systems, such as the uniform system of accounts for restaurants.
B11.5 Evaluate the importance of the menu as the primary source of revenue generation and cost control.
B11.6 Calculate recipe costs and pricing per portion and compare the cost per cover to the theoretical cost.

3. Key Assignments:

- Create a culturally based meal plan

- Apply advanced concepts of food preparation and nutrition by planning, preparing, and servicing aesthetically pleasing and nutritious meals.
- Select appropriate food ingredients as substitutions in international recipes.
- Investigate and describe current trends in international food preparation.

- Analyze global food costs, needs, and storage
  - List the agencies that determine food safety regulations in the United States and abroad.
  - Compare responsibilities of various government agencies concerned with food safety and nutrition as it effects imported food products.
  - Identify proper techniques for storage and preparation of foods.
- Create international meals using appropriate equipment and techniques
  - Interpret an international recipe to prepare a food product.
  - Apply food preparation techniques that preserve nutrients and enhance flavor and appearance of food.
- Research international careers related to the field of Hospitality, Tourism, and Recreation
  - Identify the attributes of effective Hospitality, Tourism, and Recreation professionals.
  - Evaluate career options related to Hospitality, Tourism, and Recreation in Europe, Asia, the United States, and Latin America including labor market projections, education requirements, job responsibilities, salary benefits, expectations, and working environment.
  - Develop a career plan in Hospitality, Tourism, and Recreation that reflects upward career mobility and opportunities for entrepreneurship.

4. Instructional Methods and/or Strategies:

- Direct instruction
- Hands-on labs
- Project based learning
- Simulated work based learning
- Collaborative environment
- Modeling

5. Assessment Including Methods and/or Tools:

The evaluation of student progress and evaluation will be based on the following criteria outlined in board policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **NEW COURSE: INTRODUCTION TO DIGITAL MEDIA**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Introduction to Digital Media is a year-long elective course that introduces a broad spectrum of computer applications: web design, video animation, digital imaging, digital video and digital art using current industry standards. Graphic design and page layout techniques are also emphasized as a basic competency for manipulating images and information. This course is aligned to the California Career and Technical Education Standards and fulfills the introductory level course in the Media and Design Arts Pathway.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education receive for information the new course Introduction to Digital Media.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr. Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Introduction to Digital Media
2. Transcript Title/Abbreviation:	Digital Media
3. Transcript Course Code/Number:	
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "f" Visual & Performing Arts requirement
6. Grade level(s):	9-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	Yes
10. Modeled after an UC-approved Course:	No
11. Repeatable for Credit:	No
12. Date of Board Approval:	

13. Brief Course Description:

This is a year-long course that introduces students to a broad spectrum of computer applications. Students are exposed to web design, video animation, digital imaging, digital video and digital art using current industry standards. This course works to help students learn the basic competencies necessary to use and manipulate images and information easily. Additionally, students will learn to use word processing, graphic skills and design skills in the production of professional documents such as a flyer, letterhead, business card, magazine cover, and newsletter. Graphic design and page layout techniques are emphasized. Students will produce documents that communicate effectively and use proper desktop publishing techniques. This course is aligned to the California Career and Technical Education Standards: Media and Design Arts Pathway.

14. Prerequisites:	None

15. Context for Course:

This course will provide students with a foundation in computer applications using industry-leading software tools.

16. History of Course Development:

To live, learn, and work successfully in an increasingly complex and information- rich society, students must use technology effectively. Within a sound educational setting, a course such as Digital Media can enable students to become capable information technology users, information seekers, analyzers and evaluators, problem solvers and decision makers, creative and effective users of productivity tools, communicators, collaborators, publishers and producers, and informed, responsible, and contributing citizens.

16. Textbooks:	*The Non-Designer's Design Book*, by Robin Williams Peachpit Press, 3rd edition, 2008
17. Supplemental Instructional Materials:	*Adobe Classroom in a Book* Adobe Press, 2010

C. COURSE CONTENT

1. Course Purpose:

The purpose of this course is to provide students with a foundation preparing them for future careers in the communication, and digital industries of the 21st century. This course will also familiarize them with current and emerging tools used to develop digital content.

This course is designed for the California Career and Technical Education **Arts, Media, and Entertainment sector**. This course is aligned to the California Career and Technical Education Standards: **Design, Visual and Media Arts pathway** and is designed to be a/an **Introductory level course**.

2. Course Outline:

Unit 1 - Students understand the effective use of tools for media production, development, and project management.

AME: A1.1, 1.4, 1.7; A2.1, 2.2, 2.6, 2.8, 2.9; A7.3, 7.4, 7.5; A8.1; 8.2, 8.4, 8.6 / C4.1, 4.3; C7.1

- Students understand the effective use of tools for media production, development, and project management.
- Students will know the basic functions of media design software, such as keyframe animation, two-dimensional design, and three-dimensional design.
- Students will use appropriate software to design and produce professional-quality images, documents, and presentations.
- Students will analyze the purpose of the media to determine the appropriate file format and level of compression.
- Students will analyze media and develop strategies that target the specific needs and desires of the audience.
- Students will know the basic design elements necessary to produce effective print, video, audio, and web-based media.
- Students will use technical skills (e.g., pagination, printing, folding, cutting, binding) to produce publishable materials.

Unit 2 - Students will understand the effective use of communication software to access and transmit information.

AME: A1.1; A8.5 / C7.1, 7.5, 7.6

- Students understand the effective use of communication software to access and transmit information.
- Students will know multiple ways in which to transfer information and resources (e.g., text, data, sound, video, still images) between software programs and systems.
- Students will understand the differences between various Internet protocols (e.g., http, https, ftp, etc.).
- Students will use multiple online search techniques and resources to acquire information.
- Students will know the appropriate ways to validate and cite Internet resources.

Unit 3 - Students understand the use of different types of peripherals and hardware appropriate to media and technology.

AME: A1.2, 1.4; A5.6; A8.1, 8.2, 8.3, 8.7 / C1.2; C4.1, 4.3, 4.4; C7.6

- Students understand the use of different types of peripherals and hardware appropriate to media and technology.
- Students will understand the appropriate peripherals and hardware needed to achieve maximum productivity for various projects.
- Students will know how to identify and integrate various types of peripherals and hardware to meet project requirements.
- Students will use various types of audio and video equipment (e.g., digital cameras, recorders, scanners, Web cams, CD and DVD recorders), as appropriate, for different projects.
- Students will understand the types of media storage and the use of appropriate file formats, and know how to convert data between media and file formats.

Unit 4 - Students apply technical and interpersonal skills and knowledge to support the user.
AME: A2.1, 2.2, 2.3; A8.1, 8.5, 8.6 / C2.2; C3.1

- Students apply technical and interpersonal skills and knowledge to support the user.
- Students will use a logical and structured approach to isolate and identify the source of problems and to resolve problems.
- Students will know the available resources for identifying and resolving problems.
- Students will use technical writing and communication skills to work effectively with diverse groups of people.

Unit 5 - Students understand and apply knowledge of effective Page design and management.
AME: A1.2, 1.6; A4.2, 4.5 / C3.1; C5.1, 5.2; C6.4

- Students understand and apply knowledge of effective Page design and management.
- Students will understand the purpose, scope, and development of a Websites and documents.
- Students will know the relative features, strengths, and weaknesses of different authoring programs and cross-platform issues.

<u>Arts, Media, and Entertainment CTE Standards</u>
Design, Visual, and Media Arts

A1.0 Demonstrate ability to reorganize and integrate visual art elements across digital media and design applications.
A1.1 View and respond to a variety of industry-related artistic products integrating industry appropriate vocabulary.
A1.2 Identify and use the principles of design to discuss, analyze, and create projects and products across multiple industry applications.
A1.4 Select industry-specific works and analyze the intent of the work and the appropriate use of media.
A1.6 Compare and analyze art work done using electronic media with those done with materials traditionally used in the visual arts.
A1.7 Analyze and discuss complex ideas, such as distortion, color theory, arbitrary color, scale, expressive content, and real versus virtual in works of art.

A2.0 Apply artistic skills and processes to solve a variety of industry-relevant problems in a variety of traditional and electronic media.
A2.1 Demonstrate skill in the manipulation of digital imagery (either still or video) in an industry-relevant application.
A2.2 Demonstrate personal style and advanced proficiency in communicating an idea, theme, or emotion in an industry-relevant artistic product.
A2.3 Apply refined observation and drawing skills to solve an industry-relevant problem.
A2.6 Create an artistic product that involves the effective use of the elements of art and the principles of design.
A2.8 Plan and create artistic products that reflect complex ideas, such as distortion, color theory, arbitrary color, scale, expressive content, and real versus virtual.
A2.9 Create a multimedia work of art that demonstrates knowledge of media and technology skills.

A4.0 Analyze, assess, and identify effectiveness of artistic products based on elements of art, the principles of design, and professional industry standards.
A4.2 Deconstruct how beliefs, cultural traditions, and current social, economic, and political contexts influence commercial media (traditional and electronic).
A4.5 Analyze and articulate how society influences the interpretation and effectiveness of an artistic product.

A5.0 Identify essential industry competencies, explore commercial applications and develop a career specific personal plan.
A5.6 Prepare portfolios of original art created for a variety of purposes and commercial applications.

A7.0 Demonstrate an understanding of the elements of discourse (e.g., purpose, speaker, audience, form) when completing narrative, expository, persuasive, or descriptive writing assignments.
A7.3 Enhance meaning by employing rhetorical devices, including extended use of parallelism, repetition, analogy; incorporation of visual aids (e.g., graphs, tables, pictures); and the issuance of a call for action.
A7.4 Integrate databases, graphics, and spreadsheets into electronically processed documents.
A7.5 Revise text to highlight the individual voice, improve sentence variety and style, and enhance subtlety of meaning and tone in ways that are consistent with the purpose, audience, and genre.

A8.0 Understand the key technical and technological requirements applicable to various segments of the Media and Design Arts Pathway.
A8.1 Understand the component steps and skills required to design, edit, and produce a production for audio, video, electronic, or printed presentation.
A8.5 Differentiate writing processes, formats, and conventions used for various media.

Production and Managerial Arts

C1.0 Demonstrate knowledge of industry safety standards and practices in all areas of technical production.
C1.2 Demonstrate knowledge of basic electrical safety.

C2.0 Understand the technical support functions and artistic competencies in film, video, and live production.
C2.2 Produce a production flow chart for a live theatrical or media based production.

C3.0 Analyze and differentiate the function of the various members of a production team.
C3.1 Identify the skills and competencies of the various members of a production team including producer, production manager, director, assistant director, stage manager, production designer(s), post production, etc.

C4.0 Demonstrate key skills and an understanding of the complexities of production planning.
C4.1 Know the main elements and functional responsibilities involved in the production and presentation of the performing, visual, and media arts.
C4.3 Identify the responsibilities and activities associated with the preproduction, production, and post-production of a creative project.
C4.4 Demonstrate understanding of the appropriate use of technology in each phase of the production planning.

C5.0 Apply knowledge of services, equipment capabilities, the workflow process, data acquisition, and technology to a timely completion of projects.
C5.1 Identify essential qualifications and technological competencies for each team member, including artists, designers, performers, composers, writers, and technicians.
C5.2 Plan the general coordination of various elements in a project or production.

C6.0 Understand the key elements of developing and promoting a production from creation to distribution.
C6.4 Create a promotional example using electronic media.

C7.0 Know various media production, communication, and dissemination techniques and methods, including written, oral, visual, and electronic media.
- C7.1 Identify and describe licensing management for live and media based productions and intellectual properties.
- C7.5 Understand the components of marketing campaigns for live and media based productions, including advertising in both traditional and social media.
- C7.6 Demonstrate understanding of the distribution component of both live and media based production including Web, print, radio, television, and communication based options.

3. Key Assignments:

Assignments include:

- Individual and group projects
- Presentations involving digital photos
  - Students will know the basic functions of media design software, such as keyframe animation, two-dimensional design, and three-dimensional design.
  - Students will use appropriate software to design and produce professional-quality images, documents, and presentations.
  - Students will analyze the purpose of the media to determine the appropriate file format and level of compression.
  - Students understand and apply knowledge of effective Page design and management.
  - Students will understand the purpose, scope, and development of a Websites and documents.
- Presentations involving video
  - Students will know the basic design elements necessary to produce effective print, video, audio, and web-based media.
  - Students will know multiple ways in which to transfer information and resources (e.g., text, data, sound, video, still images) between software programs and systems.
  - Students will use various types of audio and video equipment (e.g., digital cameras, recorders, scanners, Web cams, CD and DVD recorders), as appropriate, for different projects.
- Presentations involving desktop publishing.
  - Students will use technical skills (e.g., pagination, printing, folding, cutting, binding) to produce publishable materials.
  - Students will understand the differences between various Internet protocols (e.g., http, https, ftp, etc.).

4. Instructional Methods and/or Strategies:

Instructional strategies include:

- Direct instruction
- Small group work
- Activity based instruction
- Group discussions

5. Assessment Including Methods and/or Tools:

The class uses computers to drive project-based learning. The culminating project requires students to create the materials needed for a company or small business. Students use desktop publishing, digital photo/video software to create documents and commercials for a fictitious company.

The evaluation of student progress and evaluation will be based on the following criteria outlined in Board Policy:

- Assessments: 60-75% of the final grade
- Assignments and class discussions: 25-40% of the final grade

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **COURSE MODIFICATIONS: AVID 9, AVID 10, AND AVID 11**

==========

BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Advanced Via Individual Determination (AVID) 9, AVID 10, and AVID 11 are academic electives that prepare students for college readiness and success. The mission of AVID is to ensure that all students, especially those with unrealized academic potential, will succeed in rigorous curriculum, enter mainstream activities of the school, and increase their participation in four-year colleges. Curriculum is provided by AVID Center and students participate in tutor-facilitated study groups, motivational activities, and academic success skills.

AVID 9: The course is being modified to reflect AVID's updated grade-specific standards. Additionally, the specific grade level is being added to the course title to reflect grade 9 enrollment only. The change will allow grade 9 students to receive UC/CSU 'g' elective credit.

AVID 10: The course is being modified to reflect AVID's updated grade-specific standards. Additionally, the specific grade level is being added to the course title to reflect grade 10 enrollment only. The change will allow grade 10 students to receive UC/CSU 'g' elective credit.

AVID 11: The course is being modified to reflect AVID's updated grade-specific standards. Additionally, the specific grade level is being added to the course title to reflect grade 11 enrollment only. The change will allow grade 11 students to receive UC/CSU 'g' elective credit.

New language is provided in UPPER CASE while old language to be deleted is ~~lined through~~.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education receive for information the course modifications for AVID 9, AVID 10, and AVID 11.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	~~Advancement Via Individual Determination (AVID)~~ AVID 9
2. Transcript Title/Abbreviation:	AVID 9
3. Transcript Course Code/Number:	5976
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement
6. Grade Level(s):	~~9-12~~ 9
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	February 7, 2002
Date of Revision Approval:	

13. Brief Course Description:

The mission of AVID is to ensure that all students, but especially THOSE WITH UNREALIZED ACADEMIC POTENTIAL ~~disadvantaged students in the middle with academic potential~~, will succeed in rigorous curriculum, will enter mainstream activities of the school, will increase their enrollment in four-year colleges, and will become educated and responsible participants and leaders in a democratic society.

14. Prerequisites:	None

15. Context for Course:

~~The AVID course is a four-year regularly scheduled elective college preparatory class. This course meets the needs of students by:~~

- ~~Providing academic instruction and other support to students to prepare them for eligibility to four-year colleges and universities~~
- ~~Giving students college level entry skills~~
- ~~Increasing the "coping skills" of students~~
- ~~Motivating students to seek college educations~~
- ~~Increasing the student's level of career awareness~~

ADVANCEMENT VIA INDIVIDUAL DETERMINATION (AVID) IS AN ACADEMIC ELECTIVE COURSE THAT PREPARES STUDENTS FOR COLLEGE READINESS AND SUCCESS; IT IS SCHEDULED DURING THE REGULAR SCHOOL DAY AS A YEAR-LONG COURSE. EACH WEEK, STUDENTS RECEIVE INSTRUCTION UTILIZING A RIGOROUS COLLEGE PREPARATORY CURRICULUM PROVIDED BY AVID CENTER, TUTOR-FACILITATED STUDY GROUPS, MOTIVATIONAL ACTIVITIES, AND ACADEMIC SUCCESS SKILLS. IN AVID, STUDENTS PARTICIPATE IN ACTIVITIES THAT INCORPORATE STRATEGIES FOCUSED ON WRITING, INQUIRY, COLLABORATION, ORGANIZATION AND READING TO SUPPORT THEIR ACADEMIC GROWTH.

16. History of Course Development:
SOME STUDENTS WILL HAVE PREVIOUS EXPERIENCE WITH AVID AT THE MIDDLE GRADES, AND SOME STUDENTS WILL BE EXPERIENCING AVID FOR THE FIRST TIME. EITHER WAY, THE NINTH-GRADE AVID ELECTIVE COURSE WILL SERVE AS A REVIEW OF THE AVID PHILOSOPHY AND STRATEGIES. STUDENTS WILL WORK ON ACADEMIC AND PERSONAL GOALS AND COMMUNICATION, ADJUSTING TO THE HIGH SCHOOL SETTING. STUDENTS WILL INCREASE AWARENESS OF THEIR PERSONAL CONTRIBUTIONS TO THEIR LEARNING, AS WELL AS THEIR INVOLVEMENT IN THEIR SCHOOL AND COMMUNITY. THERE IS AN EMPHASIS ON ANALYTICAL WRITING, FOCUSING ON PERSONAL GOALS AND THESIS WRITING. STUDENTS WILL WORK IN COLLABORATIVE SETTINGS, LEARN HOW TO PARTICIPATE IN COLLEGIAL DISCUSSIONS, AND USE SOURCES TO SUPPORT THEIR IDEAS AND OPINIONS. STUDENTS WILL PREPARE FOR AND PARTICIPATE IN COLLEGE ENTRANCE AND PLACEMENT EXAMS, WHILE REFINING STUDY SKILLS AND TEST-TAKING, NOTE-TAKING, AND RESEARCH TECHNIQUES. THEY WILL TAKE AN ACTIVE ROLE IN FIELD TRIP AND GUEST SPEAKER PREPARATIONS AND PRESENTATIONS. THEIR COLLEGE RESEARCH WILL INCLUDE FINANCIAL TOPICS AND BUILDING THEIR KNOWLEDGE ON COLLEGES AND CAREERS OF INTEREST.

17. Textbooks:	AVID Tutorial Guide, Dr. Paolina Schiro and Tracy Daws, AVID Published Resource College and Careers, Nancy Caine, Regina Risi, Dr. Paolina Schiro, Carmen S, AVID Published Resource High School Writing Michelle Mullen and Sandy Boldway, AVID Published Resource AVID Critical Thinking and Engagement, Paul Bendall, Adam Bollhoefer, and Vijay Koilpillai, AVID Published Resource AVID Elective Essentials for High School, Dr. Paolina Schiro, Raegan McGinnis, and Cindy Metter, AVID Published Resource Critical Reading: Deep Reading Strategies for Expository Texts, Jonathan LeMaster, AVID Published Resource
18. Supplemental Instructional Materials:	AVID Weekly, Supporting Math in the AVID Elective, Write Path content books, AVID Test Prep, Roadtrip Nation Weekly, Focused Note-Taking

C. COURSE CONTENT

1. Course Purpose:
AVID ELECTIVE COURSES AT ALL GRADE LEVELS ARE DESIGNED TO PREPARE STUDENTS FOR ENTRANCE INTO FOUR-YEAR COLLEGES AND UNIVERSITIES, WITH EMPHASIS ON ANALYTICAL WRITING, PREPARATION FOR COLLEGE ENTRANCE AND PLACEMENT EXAMS, COLLEGE STUDY SKILLS AND TEST TAKING, CORNELL NOTE TAKING, AND RESEARCH.

2. Course Outline:
~~The specific curriculum and teacher curriculum guides are developed and provided by the AVID Center.~~

UNIT 1: CHARACTER DEVELOPMENT

1. SELF-AWARENESS
    a. REMIND STUDENTS ABOUT SLANT INTERACTIONS AND EXPECTATIONS IN ALL CLASSES
    b. UNDERSTAND THE ROLE OF AVID STUDENTS AND DISPLAY CHARACTERISTICS ON A REGULAR BASIS
    c. DEVELOP SKILLS IN OFFERING APPROPRIATE CRITICISM
    d. DEVELOP UNDERSTANDING ABOUT PERSONAL LEARNING STYLES
    e. COMPLETE SELF-EVALUATIONS ABOUT CONFLICT RESOLUTION, PERSONAL BEHAVIOR AND CORE VALUES 6. APPLY CONFLICT MANAGEMENT SKILLS, ALIGNING WITH THE EXPECTATIONS OF AN AVID STUDENT
    f. DEVELOP AWARENESS OF PERSONAL STRENGTHS/SKILLS AND UTILIZE THEM TO BETTER THE SCHOOL AND COMMUNITY
2. GOALS

a. CALCULATE GRADE POINT AVERAGE AND SET ACADEMIC AND PERSONAL GOALS FOR SUCCESS, BEING SURE TO MONITOR GOALS AT THE END OF EACH GRADING PERIOD
b. REVISIT ACADEMIC SIX-YEAR PLAN TO UNDERSTAND COLLEGE ENTRANCE REQUIREMENTS AND LEARN ABOUT AP®/IB®/HONORS COURSE OPTIONS
c. EXAMINE ACADEMIC STRENGTHS AND WEAKNESSES THAT WILL AID IN COURSE SELECTION PATTERNS
d. CREATE FOCUSED GOALS AROUND COLLEGE AND THE STEPS NECESSARY TO GAIN ENTRANCE
e. CREATE SHORT-, MID-, AND LONG-TERM GOALS THAT SUPPORT ACADEMIC AND PERSONAL GROWTH
f. REVIEW AND REVISE PERSONAL AND ACADEMIC GOALS DURING KEY TIMES THROUGHOUT THE YEAR
g. WRITE AN ESSAY DESCRIBING GOALS FOR SUCCESS IN HIGH SCHOOL, INCLUDING THE STEPS NEEDED TO ACHIEVE THOSE GOALS AND POTENTIAL BARRIERS TO MEETING THOSE GOALS
h. DISCUSS GOALS IN AN ORAL PRESENTATION, USING ORGANIZED INFORMATION THAT INTEGRATES APPROPRIATE MEDIA IN THE PRESENTATION

3. COMMUNITY AND SCHOOL INVOLVEMENT
   a. BE EXPOSED TO A VARIETY OF SCHOOL ACTIVITIES/CLUBS AND COMMUNITY SERVICE OPPORTUNITIES AT THE BEGINNING OF THE YEAR
   b. BECOME ACTIVE IN AT LEAST ONE SCHOOL OR COMMUNITY SERVICE PROJECT/ACTIVITY
   c. TRACK COMMUNITY SERVICE HOURS AND EXTRACURRICULAR ACTIVITY PARTICIPATION IN A MULTI-YEAR STUDENT PORTFOLIO
4. OWNERSHIP OF LEARNING
   a. ACCESS GRADES ONLINE OR FROM TEACHERS ON A REGULAR BASIS
   b. ANALYZE GRADE REPORTS TO CREATE A STUDY/ACTION PLAN FOR CONTINUED ACADEMIC IMPROVEMENT
   c. SEEK OPPORTUNITIES OUTSIDE OF THE AVID CLASSROOM TO ASK QUESTIONS, CLARIFY THINKING AND IDENTIFY POINTS OF CONFUSION
   d. CREATE POSITIVE PEER CONNECTIONS THROUGH INDEPENDENT STUDY GROUPS

UNIT 2: COMMUNICATION

1. SPEAKING
   a. EFFECTIVELY INTEGRATE SPEAKING TERMINOLOGY INTO SPEECHES
   b. ROLE PLAY VARYING WORD CHOICE, TONE AND VOICE WHEN SPEAKING TO AN ASSIGNED AUDIENCE
   c. PRACTICE PURPOSEFUL MOVEMENT DURING SPEECHES
   d. DRAFT, EDIT, REVISE AND PRESENT AN INFORMAL AND A FORMAL SPEECH
   e. WORK WITH A COLLABORATIVE GROUP TO MAKE PRESENTATIONS TO THE CLASS FOLLOWING VARIOUS ACTIVITIES
   f. USE FACTUALLY RELIABLE EVIDENCE TO SUPPORT TOPIC
   g. PRESENT INFORMATION, FINDINGS AND SUPPORTING EVIDENCE CONCISELY AND LOGICALLY
2. LISTENING
   a. GIVE FEEDBACK ON STUDENT PRESENTATIONS AND DELIVERY
   b. POSE QUESTIONS THAT ASK FOR CLARIFICATION
   c. RECORD KEY INFORMATION IN CORNELL NOTES

UNIT 3: WRITING

1. THE WRITING PROCESS
   a. USE ORGANIZATIONAL STRATEGIES AND TOOLS TO AID IN THE DEVELOPMENT OF ESSAYS
   b. UNDERSTAND AND IDENTIFY THE AUDIENCE, PURPOSE AND FORM FOR WRITING ASSIGNMENTS
   c. REVISE DRAFTS MULTIPLE TIMES TO IMPROVE AND CLARIFY
   d. EDIT STUDENTS' ESSAYS, ESPECIALLY CHECKING FOR TRANSITION WORDS AND ERRORS IN GRAMMAR, PUNCTUATION AND COMMA USAGE

e. USE COMMON EDITING MARKS DURING THE EDITING PROCESS
f. UTILIZE RUBRICS TO SELF-EVALUATE AND PEER EVALUATE WORK, ESPECIALLY THOSE SIMILAR TO AP EXAM RUBRICS
g. REFLECT ON ONE'S OWN WRITING TO ENCOURAGE CONTINUAL GROWTH

2. WRITING SKILLS
   a. UNDERSTAND STRATEGIES TO WRITE EFFECTIVE THREE-PART ESSAYS
   b. DEVELOP A CLEAR AND CONCISE THESIS FOR EXPOSITORY WRITING
   c. WRITE WITH A FOCUS ON GRAMMAR, PUNCTUATION AND COMMA USAGE
   d. INCLUDE DESCRIPTIVE SENTENCES IN PIECES OF WRITING
   e. USE APPROPRIATE AND VARIED TRANSITIONS TO LINK MAJOR SECTIONS OF THE TEXT, IN ORDER TO CREATE COHESION AND CLARIFY THE RELATIONSHIPS AMONG COMPLEX IDEAS AND CONCEPTS
3. WRITING APPLICATIONS
   a. DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A COLLEGE RESEARCH ESSAY
   b. DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A MANDALA ESSAY
   c. WRITE INFORMATIVE TEXTS TO EXAMINE AND EXPLAIN COMPLEX IDEAS, SUCH AS A COMPLEX PROCESS 4. DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A 'LIFE GOALS' ESSAY
4. WRITING TO LEARN
   a. WRITE SUMMARIES OF INFORMATION IN VARIOUS CONTEXTS
   b. DIFFERENTIATE BETWEEN A SUMMARY AND A REFLECTION
   c. USE LEARNING LOGS TO REFLECT UPON PERFORMANCE ON ASSESSMENTS, WHERE THE LEARNING BROKE DOWN, AND WHERE CONFUSION EXISTS

UNIT 4: INQUIRY

1. COSTA'S LEVELS OF THINKING
   a. USE COSTA'S LEVELS OF THINKING WORDS IN ASSIGNMENTS, DISCUSSIONS AND NOTES
   b. FOCUS ON DRAWING CONNECTIONS BETWEEN IDEAS, USING COMPARE AND CONTRAST QUESTIONS
2. TUTORIALS
   a. REFINE COLLABORATIVE TUTORIAL SKILLS THROUGH TUTOR-LED DISCUSSIONS FOLLOWING TUTORIAL SESSIONS
   b. STUDENT PRESENTER INITIATES THE DISCUSSION BY EXPLAINING THE QUESTION (WHAT STRATEGIES HAVE BEEN PREVIOUSLY ATTEMPTED AND WHERE THEY BECAME CONFUSED IN ANSWERING THE QUESTION)
   c. UTILIZE RESOURCES (SUCH AS CORNELL NOTES AND TEXTBOOK) TO GATHER INFORMATION
3. SOCRATIC SEMINAR AND PHILOSOPHICAL CHAIRS
   a. WORK WITH PEERS TO SET RULES FOR COLLEGIAL DISCUSSIONS AND DECISION-MAKING
   b. ANALYZE A SEMINAL U.S DOCUMENT OF HISTORICAL AND LITERARY SIGNIFICANCE (E.G., THE GETTYSBURG ADDRESS, WASHINGTON'S FAREWELL ADDRESS) IN A SOCRATIC SEMINAR OR PHILOSOPHICAL CHAIRS DISCUSSION
   c. UTILIZE CRITICAL READING STRATEGIES TO IDENTIFY AUTHORS' CLAIMS AND FORMULATE QUESTIONS TO EXPLORE MEANING AS PREPARATION FOR A SOCRATIC SEMINAR
   d. DURING THE SOCRATIC SEMINAR, ASK ADDITIONAL QUESTIONS TO CONTINUE DEEPER EXPLORATION OF THE TEXT AND ONE ANOTHER'S THINKING AND EXPRESSIONS
   e. REFLECT ON THE SOCRATIC SEMINAR DISCUSSION AND IDENTIFY AREAS FOR FUTURE IMPROVEMENT

UNIT 5: COLLABORATION

1. TYPES OF INTERACTIONS
   a. DEVELOP POSITIVE PEER INTERACTION SKILLS THROUGH ESTABLISHING GROUP NORMS BEFORE, AND REFLECTIVE DISCUSSIONS FOLLOWING, COLLABORATIVE ACTIVITIES

b. UTILIZE TECHNOLOGY TO INTERACT AND COLLABORATE WITH OTHERS
c. RESPOND THOUGHTFULLY TO DIVERSE PERSPECTIVES, SUMMARIZE POINTS OF AGREEMENT AND DISAGREEMENT, AND WHEN WARRANTED, JUSTIFY ONE'S OWN VIEWS AND UNDERSTANDING AND MAKE NEW CONNECTIONS IN LIGHT OF THE EVIDENCE AND REASONING PRESENTED
d. PARTICIPATE IN TEAM BUILDING LESSONS TO LEARN ABOUT VALUING AND EFFECTIVELY WORKING WITH OTHERS

UNIT 6: ORGANIZATION

1. ORGANIZATION AND TIME MANAGEMENT
    a. REFINE ORGANIZATION AND NEATNESS OF BINDER THROUGH ONGOING COURSE SUPPORT, PEER DISCUSSION, AND PERSONAL REFLECTION AND GOAL SETTING
    b. UTILIZE A PLANNER/AGENDA TO TRACK CLASS ASSIGNMENTS AND GRADES
    c. UTILIZE A PLANNER/AGENDA TO BALANCE SOCIAL AND ACADEMIC COMMITMENTS AND COLOR CODE PLANNER TO IDENTIFY DIFFERENT TOPICS (ACADEMIC, SOCIAL, EXTRACURRICULAR, ETC.)
    d. ASSESS TIME USAGE AND CREATE A TIME MANAGEMENT PLAN, WHICH WILL ALLOW FOR ACADEMIC, EXTRACURRICULAR AND RECREATIONAL ACTIVITIES
    e. BEGIN DEVELOPING A HIGH SCHOOL PORTFOLIO OF PERSONAL ACADEMIC WORK, ACCOMPLISHMENTS, AWARDS AND EXTRACURRICULAR INVOLVEMENT TO SHOW EVIDENCE OF GROWTH AND USE FOR COLLEGE AND SCHOLARSHIP APPLICATIONS
    f. PUBLISH FINAL VERSIONS OF WRITING FOR THE ACADEMIC PORTFOLIO
2. NOTE-TAKING
    a. TAKE 10 TO 18 PAGES OF QUALITY CORNELL NOTES PER WEEK
    b. UNDERSTAND HOW TO USE NOTES TO STUDY, INCLUDING THE FOLD-OVER METHOD
    c. UTILIZE NOTES DURING THE TUTORIAL PROCESS TO SUPPORT QUESTIONING AND GATHERING OF KEY LEARNING
    d. EDIT AND REVISE NOTES OUTSIDE OF CLASS TO IMPROVE USABILITY
    e. REFINE PROCESS OF IDENTIFYING IMPORTANT POINTS, USING ABBREVIATIONS AND USING SHORTCUTS IN THE RIGHT COLUMN OF CORNELL NOTES
    f. BEGIN WRITING HIGHER-LEVEL QUESTIONS IN THE LEFT COLUMN THAT CORRESPOND TO CHUNKS OF INFORMATION IN THE NOTES SECTION
    g. REFLECT ON ALL NOTES TAKEN DURING A UNIT OF STUDY AFTER THE TEST IS RETURNED AND CONSIDER GAPS OF STUDY THAT LED TO MISSED QUESTIONS
3. RESEARCH AND TECHNOLOGY
    a. USE TECHNOLOGY IN ASSIGNMENTS AND PRESENTATIONS, USING STANDARDIZED CITATION STYLES TO CITE SOURCES
    b. UTILIZE TECHNOLOGY TO COMPLETE FINAL DRAFTS OF ASSIGNMENTS AND CONDUCT RESEARCH
    c. ESTABLISH A PROFESSIONALLY STRUCTURED EMAIL ADDRESS (E.G., FIRST INITIAL LAST NAME @ EMAIL PROVIDER.COM)
4. TEST PREPARATION/TEST-TAKING
    d. IDENTIFY AND REFLECT ON AREAS OF ACADEMIC WEAKNESS AND DETERMINE STUDY AND TEST-TAKING STRATEGIES THAT WILL AID IN TEST PREPARATION
    e. PREPARE FOR UPCOMING ASSESSMENTS BASED UPON THE FORMAT OF THE TEST AND PREVIOUS ASSESSMENT RESULTS
    f. UNDERSTAND GRADING RUBRIC AND PRIORITIZE TIME ALLOTMENT ON TEST SECTIONS BASED ON POINT VALUES
    g. LEARN TO EFFECTIVELY MANAGE TEST ANXIETY
    h. CHECK ALL ANSWERS/RESPONSES PRIOR TO SUBMITTING TEST AND CHANGE RESPONSES WHEN SURE OF NECESSITY

UNIT 7: READING

1. VOCABULARY
    a. UNDERSTAND HOW TO USE CONTEXT CLUES IN INTERPRETING NEW VOCABULARY
    b. INCORPORATE NEW WORDS GARNERED FROM READING INTO ACADEMIC SPEECH AND WRITING
    c. DETERMINE OR CLARIFY THE MEANING OF UNKNOWN AND MULTIPLE MEANING WORDS USING CONTEXT CLUES AND REFERENCE MATERIALS
2. TEXTUAL ANALYSIS
    a. UNDERSTAND AND USE PRE-READING STRATEGIES TO BUILD BACKGROUND KNOWLEDGE OF UNFAMILIAR TEXTS
    b. IDENTIFY GENRE OF TEXT
    c. READ AND DISCUSS VARIOUS EXAMPLES OF TEXT, INCLUDING ARTICLES FROM FICTION AND NON-FICTION
    d. USE MULTIPLE READING STRATEGIES, INCLUDING MARKING THE TEXT AND ANNOTATING TEXT TO IDENTIFY CLAIMS AND CONNECT IDEAS
    e. USE REREADING STRATEGIES TO RECALL CRITICAL CONCEPTS DURING DISCUSSIONS AND ESSAY WRITING
    f. USE ANY SUBTITLES TO GUIDE READING
    g. RECORD SUMMARIES, CONNECTIONS AND QUESTIONS IN THE MARGINS

UNIT 8: COLLEGE PREPAREDNESS

1. GUEST SPEAKERS
    a. PREPARE FOR GUEST SPEAKER PRESENTATIONS BY CREATING QUESTIONS FOR THE SPEAKERS PRIOR TO THEIR VISIT
    b. GREET AND ESCORT GUEST SPEAKERS TO THE CLASSROOM
    c. USE SKILLS OF LISTENING AND NOTE-TAKING DURING PRESENTATIONS BY GUEST SPEAKERS
    d. GATHER INSIGHT FROM A VARIETY OF GUEST SPEAKERS WHO DISCUSS VARIOUS ASPECTS OF THEIR CAREERS
    e. DRAFT, PEER EDIT, REVISE AND CREATE A FINAL DRAFT OF A LETTER AND/OR PROJECT OF APPRECIATION TO GUEST SPEAKERS
2. FIELD TRIPS
    a. PARTICIPATE IN FIELD TRIPS TO INCLUDE ONE OR TWO COLLEGE/UNIVERSITY VISITS THAT ARE DIFFERENT FROM PREVIOUS YEAR
    b. ENGAGE IN AT LEAST ONE "E-TRIP" THAT HAS AN INTERACTIVE COMPONENT THAT IS OUTSIDE OF THE STATE
    c. USE SKILLS OF LISTENING AND NOTE-TAKING DURING FIELD TRIP EXPERIENCES
    d. DRAFT, EDIT, REVISE AND CREATE FINAL DRAFT OF WRITING THAT REFLECTS ON LEARNING FROM FIELD TRIP EXPERIENCE(S)
3. COLLEGE AND CAREER KNOWLEDGE
    a. RESEARCH COLLEGE ADMISSIONS REQUIREMENTS, WITH EMPHASIS ON COST OF LIVING, TUITION, AND FINANCIAL AID FOR A COLLEGE OF CHOICE
    b. CONTINUE DEVELOPING A BASIC UNDERSTANDING OF COLLEGE VOCABULARY
    c. RESEARCH A CAREER OF INTEREST, BASED UPON CAREER VALUES
    d. PARTICIPATE IN CAREER AWARENESS TESTS AND ACTIVITIES TO HELP BUILD AWARENESS OF PERSONAL STRENGTHS
4. COLLEGE ENTRANCE TESTING
    a. TAKE AND ANALYZE THE RESULTS FROM A PLAN AND/OR PSAT TEST

b. DEVELOP VOCABULARY SKILLS BY REVIEWING ROOTS, PREFIXES, SUFFIXES, AND ACT AND SAT® WORD LISTS
c. COLLABORATIVELY PROBLEM SOLVE PSAT/PLAN TEST PREPARATORY ITEMS

5. COLLEGE ADMISSIONS/FINANCIAL AID
   a. UNDERSTAND THE IMPORTANCE OF COMMUNITY SERVICE AND GRADES AS A REQUIREMENT FOR SCHOLARSHIPS
   b. IDENTIFY SCHOOLS OF INTEREST AND EXAMINE COST OF ATTENDANCE

3. Key Assignments:

~~Lessons are offered in note-taking, study skills, test-taking, time management, SAT and college entrance/placement exam preparation, effective textbook reading, and library research skills.~~

UNIT 1:
CREATE FOCUSED GOALS AROUND COLLEGE AND THE STEPS NECESSARY TO GAIN ENTRANCE ALONG WITH SHORT-, MID-, AND LONG-TERM GOALS THAT SUPPORT ACADEMIC AND PERSONAL GROWTH. STUDENTS WILL ALSO REVIEW AND REVISE PERSONAL AND ACADEMIC GOALS DURING KEY TIMES THROUGHOUT THE YEAR. FINALLY, THEY WILL ALSO CREATE A GOALS ESSAY AND DISCUSS GOALS IN AN ORAL PRESENTATION, USING ORGANIZED INFORMATION THAT INTEGRATES APPROPRIATE MEDIA IN THE PRESENTATION

UNIT 2:
STUDENTS WILL BUILD AND DELIVER A 5-10 MINUTE FORMAL SPEECH. STUDENTS WILL BE ALLOWED TO CHOOSE FROM A PERSUASIVE, NARRATIVE OR INFORMATIVE SPEECH. SIMILARLY, AS AUDIENCE MEMBERS STUDENTS WILL BE ABLE TO PARTICIPATE, PROVIDE FEEDBACK AND ASSESS THEIR PEER'S SPEECHES.

UNIT 3:
TO DEVELOP STUDENT'S WRITING ABILITIES, THEY WILL PRODUCE A COHERENT, RESEARCHED BASED ESSAY ON A COLLEGE INTEREST OF THEIR CHOICE. THE RESEARCH PROJECT MUST INCLUDE 3-PART SOURCE INTEGRATION, AS WELL AS RELEVANT INFORMATION SURROUNDING THEIR TOPIC. THE FOCUS WILL BE ON DEVELOPING A CLEAR AND CONCISE THESIS FOR EXPOSITORY WRITING WITH SUPPORTING DETAILS AND FACTS. STUDENTS WILL LEARN CRITICAL RESEARCHING, CITING, AND WRITING SKILLS, WITHIN A TOPIC THAT HELPS BROADEN THEIR KNOWLEDGE OF COLLEGES AND THE OPPORTUNITIES THAT CONTINUED EDUCATION PROVIDES.

UNIT 4:
STUDENTS WILL BE ABLE TO UNDERSTAND AND PARTICIPATE IN THE SOCRATIC SEMINAR & PHILOSOPHICAL CHAIRS PROCESS. STUDENTS WILL READ CRITICALLY AND ASK QUESTIONS TO CONTINUE DEEPER EXPLORATION OF THE TEXT. IN ADDITION, STUDENTS WILL DEEPEN AND CHALLENGE ONE ANOTHER'S THINKING AND EXPRESSIONS ABOUT THE TEXT WHILE ALSO REFLECTING ON THE SOCRATIC SEMINAR DISCUSSION AND IDENTIFY AREAS FOR FUTURE IMPROVEMENT. STUDENTS WILL ALSO BE REQUIRED TO COME TO CLASS PREPARED HAVING REVIEWED THE ASSIGNMENTS, TEXT AND TOPIC OF DISCUSSIONS, AS WELL AS USE THEIR LEARNING IN FUTURE PROJECTS AND ASSIGNMENTS. THESE METHODS OF DIALOG WILL HELP DEEPEN THEIR UNDERSTANDING OF RELEVANT (LARGELY EXPOSITORY) TEXTS, FORMULATE OPINIONS, HAVE MEANINGFUL DIALOG WITH PEERS, AND RE-EVALUATE THEIR OWN THINKING ON A TOPIC.

UNIT 5:
STUDENTS WILL BE REQUIRED TO COLLABORATE WITH ONE ANOTHER DURING CLASS SESSIONS IN A VARIETY OF WAYS AND FOR A VARIETY OF PURPOSES. THESE COLLABORATIVE OPPORTUNITIES WILL RANGE FROM SHARING WITH A PEER ABOUT CURRENT UNDERSTANDING, TO INTERACTING WITH SMALL GROUPS IN PROJECTS, TO LARGE GROUP DIALOG WHERE STUDENTS LEARN AND GROW FROM THEIR PEERS. THESE ASSIGNMENTS WILL BE REQUIRED THROUGHOUT THE UNIT. THROUGH THE USE OF COLLABORATIVE STRUCTURES STUDENTS WILL STRENGTHEN THEIR ABILITY TO

COMMUNICATE WITH THEIR PEERS, FORMULATE OPINIONS, AND ADAPT THAT OPINION THROUGH GROUP INTERACTIONS.

UNIT 6:
STUDENTS WILL NEED TO ASSESS TIME USAGE AND CREATE A TIME MANAGEMENT PLAN, WHICH WILL ALLOW FOR ACADEMIC, EXTRACURRICULAR AND SOCIAL ACTIVITIES THAT WILL BE USED THROUGHOUT ALL CLASSES FOR THE ENTIRE SCHOOL YEAR. ALSO, THEY WILL BEGIN TO DEVELOP A HIGH SCHOOL PORTFOLIO OF PERSONAL ACADEMIC WORK, ACCOMPLISHMENTS, AWARDS AND EXTRACURRICULAR INVOLVEMENT TO SHOW EVIDENCE OF GROWTH AND USE FOR COLLEGE AND SCHOLARSHIP APPLICATIONS WHILE ULTIMATELY PUBLISHING FINAL VERSIONS OF WRITING FOR THE ACADEMIC PORTFOLIO. IN ADDITION, STUDENTS WILL BEGIN TO BACKWARDS MAP LARGE PROJECTS, IN ORDER TO BREAK THEM INTO SUBTASKS AND CREATE A PROJECT PLAN THAT FITS INTO THEIR SCHEDULE. IN DOING THIS, STUDENTS WILL DEVELOP THE ABILITY TO COORDINATE AND PROACTIVELY TAKE OWNERSHIP OF THEIR LEARNING.

UNIT 7:
EXPOSITORY TEXTS SUCH AS AVID WEEKLY'S NEWSPAPER ARTICLES WILL BE INFUSED INTO THE CURRICULUM TO ENSURE THAT STUDENTS ARE ABLE TO INTERPRET NEW VOCABULARY, READ FOR FLUENCY AND USE CONTEXTUAL CLUES. STUDENTS WILL RECORD THEIR SUMMARIES OF THE READINGS, MAKE NEW AND PREVIOUS CONNECTIONS TO OTHER WORK AND INCLUDE HIGHER LEVEL QUESTIONS TO BRING TO CLASS. IN ADDITION, STUDENTS WILL INCORPORATE THIS GAINED KNOWLEDGE INTO OTHER ASPECTS OF THEIR EDUCATION SUCH AS STRUCTURED DISCUSSIONS WITH PEERS, EXPOSITORY ESSAY DEVELOPMENT, AND ANALYZING MULTIPLE POINTS OF VIEW OF THE SAME TOPIC.

UNIT 8:
AS PART OF THE COLLEGE EXPLORATION PROCESS STUDENTS WILL CONDUCT VARIOUS RESEARCH TO BEGIN DEVELOPING A COLLEGE MATCH. THIS WILL INCLUDE RESEARCH ONLINE, FIELD TRIPS, E-VISITS, GUEST SPEAKERS AND INTERVIEWS. SIMILARLY, STUDENTS WILL BE REQUIRED TO TAKE CAREER ASSESSMENT TO ALSO INFORM THE COLLEGE MATCHING PROCESS. ULTIMATELY, STUDENTS WILL BE REQUIRED TO PRODUCE A RESEARCH PAPER THAT REFLECTS THEIR LEARNING. THIS WILL PROVIDE STUDENTS WITH AN OPPORTUNITY TO DEVELOP RESEARCH SKILLS, A KNOWLEDGE OF THE VAST CHOICES OF CONTINUED EDUCATION, AND DETERMINING THE REQUIREMENTS EARLY ABOUT THE REQUIREMENTS NECESSARY FOR GAINING COLLEGE ACCEPTANCE.

4. Instructional Methods and/or Strategies:

- INTERACTING WITH TEXT AND VISUALS
- STRATEGIES TO SUPPORT READING FOR UNDERSTANDING
- USING GRAPHIC ORGANIZERS
- WRITING TO LEARN AND LEARNING TO WRITE
- ANALYZING PRIMARY SOURCES
- STRUCTURED DISCUSSION
- STRUCTURED ORAL PRESENTATIONS

5. Assessment Including Methods and/or Tools:

THE EVALUATION OF STUDENT PROGRESS AND EVALUATION WILL BE BASED ON THE FOLLOWING CRITERIA OUTLINED IN BOARD POLICY:

- ASSESSMENTS: 60-75% OF THE FINAL GRADE
- ASSIGNMENTS AND CLASS DISCUSSIONS: 25-40% OF THE FINAL GRADE

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	~~Advancement Via Individual Determination (AVID)~~ AVID 10
2. Transcript Title/Abbreviation:	AVID 10
3. Transcript Course Code/Number:	~~5976~~ 5977
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement
6. Grade Level(s):	~~9-12~~ 10
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	No
11. Repeatable for Credit:	No
12. Date of Board Approval:	February 7, 2002
Date of Revision Approval:	

13. Brief Course Description:
The mission of AVID is to ensure that all students, but especially THOSE WITH UNREALIZED ACADEMIC POTENTIAL ~~disadvantaged students in the middle with academic potential~~, will succeed in rigorous curriculum, will enter mainstream activities of the school, will increase their enrollment in four-year colleges, and will become educated and responsible participants and leaders in a democratic society.

14. Prerequisites:	AVID 9 (Recommended) Teacher Recommendation (Recommended) Co-requisites: One AP/Honors course (Recommended) Geometry (Recommended)

15. Context for Course:
~~The AVID course is a four-year regularly scheduled elective college preparatory class. This course meets the needs of students by:~~

- ~~Providing academic instruction and other support to students to prepare them for eligibility to four-year colleges and universities~~
- ~~Giving students college level entry skills~~
- ~~Increasing the "coping skills" of students~~
- ~~Motivating students to seek college educations~~
- ~~Increasing the student's level of career awareness~~

ADVANCEMENT VIA INDIVIDUAL DETERMINATION (AVID) IS AN ACADEMIC ELECTIVE COURSE THAT PREPARES STUDENTS FOR COLLEGE READINESS AND SUCCESS; IT IS SCHEDULED DURING THE REGULAR SCHOOL DAY AS A YEAR-LONG COURSE. EACH WEEK, STUDENTS RECEIVE INSTRUCTION UTILIZING A RIGOROUS COLLEGE PREPARATORY

CURRICULUM PROVIDED BY AVID CENTER, TUTOR-FACILITATED STUDY GROUPS, MOTIVATIONAL ACTIVITIES, AND ACADEMIC SUCCESS SKILLS. IN AVID, STUDENTS PARTICIPATE IN ACTIVITIES THAT INCORPORATE STRATEGIES FOCUSED ON WRITING, INQUIRY, COLLABORATION, ORGANIZATION AND READING TO SUPPORT THEIR ACADEMIC GROWTH.

16. History of Course Development:

DURING THE TENTH-GRADE AVID ELECTIVE COURSE, STUDENTS WILL REFINE THE AVID STRATEGIES TO MEET THEIR INDEPENDENT NEEDS AND LEARNING STYLES. STUDENTS WILL CONTINUE TO REFINE AND ADJUST THEIR ACADEMIC LEARNING PLANS AND GOALS, AND INCREASE AWARENESS OF THEIR ACTIONS AND BEHAVIORS. AS STUDENTS INCREASE THE RIGOROUS COURSE LOAD AND SCHOOL/COMMUNITY INVOLVEMENT, THEY WILL REFINE THEIR TIME MANAGEMENT AND STUDY SKILLS ACCORDINGLY. STUDENTS WILL EXPAND THEIR WRITING PORTFOLIO TO INCLUDE: ANALYZING PROMPTS, SUPPORTING ARGUMENTS AND CLAIMS, CHARACTER ANALYSIS AND DETAILED REFLECTIONS. STUDENTS WILL ALSO ANALYZE VARIOUS DOCUMENTS, IN ORDER TO PARTICIPATE IN COLLABORATIVE DISCUSSIONS AND DEVELOP LEADERSHIP SKILLS IN THOSE SETTINGS. STUDENTS WILL EXPAND THEIR VOCABULARY USE, CONTINUING TO PREPARE FOR COLLEGE ENTRANCE EXAMS AND PREPARATION. TEXT ANALYSIS WILL FOCUS ON SPECIFIC STRATEGIES TO UNDERSTAND COMPLEX TEXTS. LASTLY, STUDENTS WILL NARROW DOWN THEIR COLLEGE AND CAREERS OF INTEREST, BASED ON PERSONAL INTERESTS AND GOALS.

17. Textbooks:	AVID Tutorial Guide, Dr. Paolina Schiro and Tracy Daws, AVID Published Resource College and Careers, Nancy Caine, Regina Risi, Dr. Paolina Schiro, Carmen S, AVID Published Resource High School Writing, Michelle Mullen and Sandy Boldway, AVID Published Resource AVID Critical Thinking and Engagement, Paul Bendall, Adam Bollhoefer, and Vijay Koilpillai, AVID Published Resource AVID Elective Essentials for High School, Dr. Paolina Schiro, Raegan McGinnis, and Cindy Metter, AVID Published Resource Critical Reading: Deep Reading Strategies for Expository Texts, Jonathan LeMaster, AVID Published Resource
18. Supplemental Instructional Materials:	AVID Weekly, Supporting Math in the AVID Elective, Write Path content books, AVID Test Prep, Roadtrip Nation Weekly, Focused Note-Taking

C. COURSE CONTENT

1. Course Purpose:

AVID ELECTIVE COURSES AT ALL GRADE LEVELS ARE DESIGNED TO PREPARE STUDENTS FOR ENTRANCE INTO FOUR-YEAR COLLEGES AND UNIVERSITIES, WITH EMPHASIS ON ANALYTICAL WRITING, PREPARATION FOR COLLEGE ENTRANCE AND PLACEMENT EXAMS, COLLEGE STUDY SKILLS AND TEST TAKING, CORNELL NOTE TAKING, AND RESEARCH.

2. Course Outline:

~~The specific curriculum and teacher curriculum guides are developed and provided by the AVID Center.~~

UNIT 1: CHARACTER DEVELOPMENT

1. SELF-AWARENESS
    a. DEMONSTRATE SCHOLARLY ATTRIBUTES IN WORKING WITH ADULTS AND PEERS
    b. UNDERSTAND THE ROLE OF AVID STUDENTS AND DISPLAY CHARACTERISTICS ON A REGULAR BASIS
    c. ALIGN LEARNING AND STUDY STRATEGIES TO PERSONAL LEARNING STYLE
    d. DEMONSTRATE THE ABILITY TO SUCCESSFULLY RESOLVE CONFLICTS AND DISPUTES WITH PEERS AND TEACHERS
    e. REASSESS PREVIOUS YEAR'S INTERESTS AND PURSUITS, IN ORDER TO REALIGN CURRENT ACTIVITIES TO FURTHER DEVELOP ABILITIES
    f. ASSESS AREAS OF WEAKNESS AND DEVELOP PLANS TO ADDRESS THOSE WEAKNESSES

2. GOALS
    a. REASSESS ACADEMIC SIX-YEAR PLAN TO EVALUATE PROGRESS TOWARD MEETING ALL COLLEGE ENTRANCE REQUIREMENTS UPON HIGH SCHOOL GRADUATION AND ADAPT PLANS IF ANY COURSES NEED TO BE RETAKEN DUE TO LOW ACADEMIC GRADES
    b. EXAMINE ACADEMIC STRENGTHS THAT WILL AID IN COURSE SELECTION PATTERNS, ESPECIALLY AROUND HONORS AND AP® COURSES
    c. SET AND MONITOR GOALS AROUND COMMUNITY SERVICE, EXTRACURRICULAR ACTIVITY INVOLVEMENT AND ACADEMIC TESTING
3. COMMUNITY AND SCHOOL INVOLVEMENT
    a. CONTINUE IN EXTRACURRICULAR CLUBS, PROGRAMS, COMMUNITY SERVICE AND ATHLETICS OF INTEREST TO DEMONSTRATE COMMITMENT, IN ADDITION TO SEEKING OUT POSITIONS OF LEADERSHIP, SUCH AS CLUB OFFICERS OR CAPTAINS
    b. DETERMINE A SERVICE LEARNING PROJECT TO PARTICIPATE IN AS A CLASS
    c. TRACK COMMUNITY SERVICE HOURS AND EXTRACURRICULAR ACTIVITY PARTICIPATION IN A MULTI-YEAR STUDENT PORTFOLIO
4. OWNERSHIP OF LEARNING
    a. ACCESS GRADES ONLINE OR FROM TEACHERS ON A REGULAR BASIS
    b. ANALYZE GRADE REPORTS TO CREATE A STUDY/ACTION PLAN FOR CONTINUED ACADEMIC IMPROVEMENT
    c. SEEK OPPORTUNITIES OUTSIDE OF THE AVID CLASSROOM TO ASK QUESTIONS, CLARIFY THINKING AND IDENTIFY POINTS OF CONFUSION
    d. CREATE POSITIVE PEER CONNECTIONS THROUGH INDEPENDENT STUDY GROUPS

UNIT 2: COMMUNICATION

1. SPEAKING
    a. ROLE PLAY VARYING WORD CHOICE, TONE AND VOICE WHEN SPEAKING TO AN ASSIGNED AUDIENCE
    b. PRACTICE UTILIZING PURPOSEFUL GESTURES DURING SPEECHES
    c. REFINE USE OF VOCAL PROJECTION IN BOTH FORMAL SPEECHES AND SOCRATIC SEMINAR SETTINGS
    d. INCORPORATE TECHNOLOGY AND/OR VISUAL AIDS TO INCREASE EFFECTIVENESS OF THE SPEECH OR PRESENTATION
    e. PRACTICE SPEAKING SKILLS THROUGH MOCK JOB INTERVIEWS
    f. PRESENT INFORMATION, FINDINGS AND SUPPORTING EVIDENCE CONCISELY AND LOGICALLY
    g. INTEGRATE MULTIPLE SOURCES OF INFORMATION
2. LISTENING
    a. RECORD KEY LEARNING POINTS AND PROVIDE FEEDBACK USING CORNELL NOTES
    b. EFFECTIVELY SUMMARIZE IDEAS FROM A DISCUSSION

UNIT 3: WRITING

1. THE WRITING PROCESS
    a. PRACTICE STRATEGIES FOR PRE-WRITING IN RESPONSE TO VARIOUS PROMPTS FOR BOTH TIMED WRITING AND PROCESS WRITING
    b. ANALYZING A PROMPT FOR TIMED WRITING SITUATIONS
    c. EDIT STUDENTS' ESSAYS, ESPECIALLY CHECKING FOR THE USAGE OF VARIED SENTENCE TYPES
    d. UTILIZE RUBRICS TO SELF-EVALUATE AND PEER EVALUATE WORK, ESPECIALLY THOSE SIMILAR TO AP EXAM RUBRICS
2. WRITING SKILLS

a. REFINE STRATEGIES TO WRITE EFFECTIVE PARAGRAPHS
b. FOCUS ON EXPANDING WORD CHOICE IN ALL ASPECTS OF WRITING
c. WRITE WITH A FOCUS ON USING VARIED SENTENCE TYPES (SIMPLE, COMPOUND, COMPLEX)
d. INCORPORATE TRANSITIONS TO IMPROVE FLOW WITHIN A PARAGRAPH AND LOGICALLY TIE TOGETHER ACADEMIC ARGUMENTS
e. SUPPORT ARGUMENTS AND CLAIMS OF EVIDENCE USING TEXTUAL SOURCES

3. WRITING APPLICATIONS
   a. DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A CHARACTER ANALYSIS
   b. USE WRITING ACTIVITIES FROM CONTENT AREA CLASSES TO PRACTICE, DEVELOP AND REFINE WRITING SKILLS
4. WRITING TO LEARN
   a. EVALUATE SUMMARIES USING RUBRICS AND CHECKLISTS
   b. UTILIZE REFLECTIVE LOGS TO EVALUATE NOTE-TAKING HABITS AND SET SUBSEQUENT GOALS TO IMPROVE UPON PAST LEARNING
   c. WRITE DETAILED REFLECTIONS ON EXPERIENCES, PRESENTATIONS AND SPEECHES, FOCUSING ON HOW THE KNOWLEDGE IS APPLIED TO DECISIONS

UNIT 4: INQUIRY

1. COSTA'S LEVELS OF THINKING
   a. USE SKILLED QUESTIONING TO ELICIT DEEPER THINKING FROM SELF AND OTHERS
2. TUTORIALS
   a. REFINE COLLABORATIVE TUTORIAL SKILLS THROUGH TUTOR-LED DISCUSSIONS FOLLOWING TUTORIAL SESSIONS WITH A FOCUS ON HIGHER-LEVEL QUESTIONING
   b. COMPLETE A HIGHER-LEVEL REFLECTION ABOUT THE LEARNING PROCESS DURING TUTORIALS
3. SOCRATIC SEMINAR AND PHILOSOPHICAL CHAIRS
   a. UTILIZE CRITICAL READING STRATEGIES TO DETERMINE MAIN IDEAS/CLAIMS AS A PRE-ACTIVITY TO SOCRATIC SEMINAR AND PHILOSOPHICAL CHAIRS DISCUSSIONS
   b. COME TO SOCRATIC SEMINAR/PHILOSOPHICAL CHAIRS DISCUSSIONS PREPARED, HAVING READ AND RESEARCHED MATERIAL UNDER STUDY AND EXPLICITLY DRAW ON THAT PREPARATION BY REFERRING TO EVIDENCE FROM TEXTS
   c. PROPEL CONVERSATIONS BY POSING AND RESPONDING TO QUESTIONS THAT RELATE THE CURRENT DISCUSSIONS TO BROADER THEMES OR LARGER IDEAS
   d. FOCUS ON THE DEVELOPMENT OF LEADERSHIP SKILLS AND SELF-REFINEMENT DURING SOCRATIC SEMINAR DISCUSSIONS
   e. SUMMARIZE POINTS OF AGREEMENT AND DISAGREEMENT

UNIT 5: COLLABORATION

1. TYPES OF INTERACTIONS
   a. DEVELOP POSITIVE PEER INTERACTION SKILLS THROUGH CREATING GROUP NORMS AND REFLECTIVE DISCUSSIONS FOLLOWING COLLABORATIVE ACTIVITIES
   b. FOCUS ON ACADEMIC LANGUAGE SKILLS THAT WILL DEVELOP STRONG PEER-INSTRUCTOR RELATIONSHIPS
   c. PRACTICE USING ENCOURAGEMENT AND POSITIVE AFFIRMATIONS WITH PEERS
   d. EVALUATE A SPEAKER'S POINT OF VIEW, REASONING, AND USE OF EVIDENCE AND RHETORIC, IDENTIFYING ANY FALLACIOUS REASONING OR EXAGGERATED OR DISTORTED EVIDENCE
   e. UTILIZE TECHNOLOGY TO INTERACT AND COLLABORATE WITH OTHERS AND FOSTER TRUST BUILDING SKILLS BY WORKING WITH PARTNERS TO COMPLETE A SPECIFIED TASK

f. ENHANCE UNDERSTANDING OF COLLABORATION BY WORKING IN GROUPS DURING TEAM BUILDING AND MOTIVATIONAL ACTIVITIES OR PROBLEM SOLVING
g. PARTICIPATE IN GROUP DISCUSSIONS AND REFLECTIONS BASED ON COLLABORATIVE WORK
h. ACKNOWLEDGE NEW INFORMATION EXPRESSED BY OTHERS, AND WHEN WARRANTED, MODIFY ONE'S OWN VIEWS

UNIT 6: ORGANIZATION

1. ORGANIZATION AND TIME MANAGEMENT
    a. REFINE ORGANIZATION AND NEATNESS OF BINDER THROUGH ONGOING COURSE SUPPORT, PEER DISCUSSION, AND PERSONAL REFLECTION AND GOAL SETTING
    b. UTILIZE A PLANNER/AGENDA TO TRACK CLASS ASSIGNMENTS AND GRADES
    c. UTILIZE A PLANNER/AGENDA TO BALANCE SOCIAL AND ACADEMIC COMMITMENTS AND USE BACKWARDS MAPPING FOR MAJOR PROJECTS OR TESTS
    d. ANALYZE GRADES TO ADJUST STUDY HABITS AND TIME ALLOCATIONS
2. NOTE-TAKING
    a. TAKE 10 TO 18 PAGES OF QUALITY CORNELL NOTES PER WEEK
    b. UTILIZE NOTES AFTER THE TESTS TO REEXAMINE INCORRECT ITEMS ON THE TESTS AND WHERE POTENTIAL GAPS IN THE NOTES MIGHT EXIST
    c. CREATE VISUALS OR SYMBOLS IN THE RIGHT COLUMN TO REPRESENT AND HELP RECALL INFORMATION
    d. CHANGE PEN COLORS TO INDICATE CHANGE IN CONCEPT
    e. REFINE THE SKILL OF COMPOSING AN ESSENTIAL QUESTION BASED ON THE STANDARD OR OBJECTIVE COVERED BY THE LESSON
    f. WRITE HIGHER-LEVEL SUMMARIES FOR CORNELL NOTES THAT LINK ALL OF THE LEARNING TOGETHER
3. RESEARCH AND TECHNOLOGY
    a. USE TECHNOLOGY IN ASSIGNMENTS AND PRESENTATIONS, USING PROPER MLA STYLE TO CITE SOURCES
    b. UTILIZE TECHNOLOGY TO COMPLETE FINAL DRAFTS OF ASSIGNMENTS AND CONDUCT RESEARCH
    c. USE TECHNOLOGY TO SHARE, STORE AND COLLABORATE ON PROJECTS
    d. RESEARCH CAREERS AND POSTSECONDARY INSTITUTIONS VIA THE INTERNET, GATHERING INFORMATION ABOUT MAJORS AND ATMOSPHERE OF THE COLLEGES/UNIVERSITIES
4. TEST PREPARATION/TEST-TAKING
    a. USE GRADED ASSESSMENTS TO IDENTIFY AND REFLECT ON ACADEMIC WEAKNESS AND DETERMINE STUDY AND TEST-TAKING STRATEGIES THAT WILL AID IN TEST PREPARATION
    b. UTILIZE STRATEGIES FOR VARIOUS TYPES OF TESTS, IN PREPARATION FOR MIDTERM AND FINAL EXAMS.

UNIT 7: READING

1. VOCABULARY
    a. EXPAND VOCABULARY, ESPECIALLY THOSE UTILIZED ON SAT/ACT TESTING AND PROPERLY INCORPORATE THEM INTO WRITINGS TO VARY WORD USAGE
    b. DEVELOP INTERPRETATION SKILLS, USING ROOT WORD, PREFIX, AND SUFFIX
    c. DEMONSTRATE INDEPENDENCE IN GATHERING VOCABULARY KNOWLEDGE
2. TEXTUAL ANALYSIS
    a. LEARN TO DETERMINE PURPOSE OF READING, IN ORDER TO CORRECTLY CHOOSE A PROPER METHOD OF READING
    b. READ AND DISCUSS VARIOUS EXAMPLES OF TEXT, INCLUDING ARTICLES FROM FICTION AND NON-FICTION

c. MARK TEXTS TO TRACK UNDERSTANDING OF THE TEXT AND QUESTIONS ABOUT THE READING
d. UTILIZE CHARTING OF THE TEXT TO TRACK VARIOUS POINTS OF VIEW AND OPPOSING CLAIMS
e. DETERMINE AUTHOR'S TONE AND VOICE
f. DEMONSTRATE A COMPREHENSIVE UNDERSTANDING OF SIGNIFICANT IDEAS EXPRESSED IN WRITTEN WORKS BY IDENTIFYING IMPORTANT IDEAS, RECOGNIZING INFERENCES AND DRAWING CONCLUSIONS

UNIT 8: COLLEGE PREPAREDNESS

1. GUEST SPEAKERS
    a. PRACTICE STRONG USAGE OF ACADEMIC LANGUAGE THROUGH THOUGHT-PROVOKING QUESTIONS THAT CLARIFY OR WILL LEAD TO GREATER DEPTH OF KNOWLEDGE
    b. PRACTICE LISTENING AND NOTE-TAKING SKILLS WITH GUEST SPEAKERS FROM BOTH THE SCHOOL AND COMMUNITY AND INTEGRATE INFORMATION INTO STUDENT PROJECTS AND PRESENTATIONS
    c. WRITE LETTERS OF APPRECIATION TO GUEST SPEAKERS, MAKING SURE TO REFLECT ON AND EXPRESS LEARNING FROM THE PRESENTATION
2. FIELD TRIPS
    a. PARTICIPATE IN FIELD TRIPS, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: ONE OR TWO COLLEGE/UNIVERSITY VISITS THAT ARE DIFFERENT FROM PREVIOUS YEAR, INCLUDING TIME SPENT WITH ADMISSIONS COUNSELORS, AND A FIELD TRIP THAT HAS A CAREER FOCUS
    b. MEET SET MINIMUM GRADE AND BEHAVIOR CRITERIA (AS DETERMINED BY THE SCHOOL), IN ORDER TO ATTEND THE FIELD TRIPS
3. COLLEGE AND CAREER KNOWLEDGE
    a. NARROW DOWN POTENTIAL COLLEGES/UNIVERSITIES OF INTEREST, CHOOSING CAMPUSES THAT FIT PERSONALITY, ACADEMIC INTERESTS AND GOALS
    b. SIGN-UP FOR ONGOING INFORMATION REGARDING ADMISSIONS AND POTENTIAL SCHOLARSHIPS FROM COLLEGES/UNIVERSITIES OF INTEREST
    c. DEVELOP AN UNDERSTANDING OF THE COLLEGE APPLICATION PROCESS AND REQUIRED INFORMATION
    d. BEGIN DEVELOPING AN UNDERSTANDING OF CAREER PATHS AND THE ASSOCIATED COLLEGE DEGREE
4. COLLEGE ENTRANCE TESTING
    a. PREPARE FOR, TAKE AND ANALYZE THE RESULTS FOR THE PSAT AND/OR PLAN TESTS
    b. FOCUS ON TEST-TAKING STRATEGIES TO HELP DETERMINE CORRECT ANSWERS ON HIGH-STAKES TESTS
    c. CONTINUE DEVELOPING VOCABULARY SKILLS BY REVIEWING ROOTS, PREFIXES, SUFFIXES, AND ACT AND SAT® WORD LISTS
    d. UNDERSTAND THE DIFFERENCES BETWEEN VARIOUS COLLEGE ENTRANCE TESTS
5. COLLEGE ADMISSIONS/FINANCIAL AID
    a. IDENTIFY KEY DIFFERENCES BETWEEN COSTS FOR PUBLIC AND PRIVATE UNIVERSITIES
    b. EXAMINE POTENTIAL SCHOLARSHIPS FROM COLLEGES OF INTEREST AND LOCAL SCHOLARSHIPS AND DESIGN PLANS TO MEET SELECTION CRITERIA

3. Key Assignments:

~~Lessons are offered in note-taking, study skills, test-taking, time management, SAT and college entrance/placement exam preparation, effective textbook reading, and library research skills.~~

UNIT 1

REASSESS SHORT-, MID-, AND LONG-TERM GOALS THAT WILL CONTINUE TO ENSURE ACADEMIC AND PERSONAL GROWTH. STUDENTS WILL ALSO REVIEW AND REVISE PERSONAL AND ACADEMIC GOALS, SPECIFICALLY THOSE DEALING WITH COLLEGE AND CAREER ASPIRATIONS. THEY WILL ALSO BE REQUIRED TO SET AND MONITOR GOALS AROUND COMMUNITY SERVICE, EXTRACURRICULAR ACTIVITY INVOLVEMENT AND ACADEMIC TESTING

UNIT 2
STUDENTS WILL BE REQUIRED TO DEVELOP AND INCREASE THEIR COMMUNICATIONS SKILLS. AS SUCH, STUDENTS WILL BE REQUIRED TO REGULARLY PARTICIPATE IN GROUP DISCUSSION, PROGRESSING THE DISCUSSION INTO DEEPER LEVELS OF THINKING, AS WELL AS PRESENT INFORMATION IN A VARIETY OF FORMAL AND INFORMAL SETTINGS. ALSO, THEY WILL BE REQUIRED TO SUMMARIZE KEY IDEAS FROM DISCUSSIONS USING CORNELL NOTES.

UNIT 3
STUDENTS WILL BE REQUIRED TO DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A CAREER RESEARCH ESSAY. THIS RESEARCH WILL INCLUDE 3-PART SOURCE INTEGRATION, AS WELL AS DEVELOPING STUDENTS' ABILITY TO WRITE EXPOSITORY TEXTS. THEY WILL THEN FOLLOW THIS UP BY DEVELOPING AND STRENGTHEN WRITING THROUGH THE CREATION OF AN ARGUMENTATIVE ESSAY. THE AIM IS FOR STUDENTS TO PRACTICE, DEVELOP, REFINE THEIR WRITING SKILLS WHILE PROVIDING AND CITING EVIDENCE. THROUGH THIS COURSE, STUDENTS' WILL EXPAND THEIR COLLEGE AND CAREER SKILLS TO RESEARCH AND WRITE ON A FACTUAL TOPIC, WHILE USING A HIGH ENGAGEMENT TOPIC THAT FURTHER PREPARES THEM FOR SUCCESS IN COLLEGE AND BEYOND.

UNIT 4
STUDENTS WILL ANALYZE DR. MARTIN LUTHER KING'S "I HAVE A DREAM" SPEECH AS A SEMINAL U.S DOCUMENT OF HISTORICAL AND LITERARY SIGNIFICANCE IN A SOCRATIC SEMINAR DISCUSSION. STUDENTS WILL BEGIN BY CRITICALLY READING THE TEXT SEVERAL TIMES IN ORDER TO DETERMINE KEY FACTS, ANALYZE MEANING, AND GENERATE QUESTIONS THAT WILL DRIVE THE DISCUSSION. ALSO, THEY WILL ANALYZE VARIOUS ACCOUNTS OF A SUBJECT TOLD THROUGH DIFFERENT MEDIUMS INCLUDING VIDEOS AND NEWS REPORTS OF THE SPEECH, DETERMINING WHICH DETAILS ARE EMPHASIZED IN EACH ACCOUNT IN A SOCRATIC SEMINAR DISCUSSION. THIS ASSIGNMENT WILL SUPPORT STUDENTS TO ANALYZE AN ARTICLE, INTERACT WITH PEERS TO COME TO A GREATER LEVEL OF COMMON UNDERSTANDING, AND SELF-REFLECT ON HOW TO CONTINUALLY IMPROVE THEIR ABILITY TO MEANINGFULLY DIALOG WITH THEIR PEERS.

UNIT 5
STUDENTS WILL BE REQUIRED TO REFINE INQUIRY, LISTENING AND ORAL COMMUNICATION SKILLS THROUGH A VARIETY OF ACTIVITIES, INCLUDING TUTORIALS, PRESENTATIONS, SOCRATIC SEMINARS, AND PHILOSOPHICAL CHAIRS. THESE VARIOUS METHODS OF COLLABORATING WITH THEIR PEERS IN BOTH LARGE AND SMALL SETTINGS WILL SUPPORT THEIR ABILITY TO CLEARLY FORMULATE AND COMMUNICATE IDEAS.

UNIT 6
STUDENTS WILL BE REQUIRED TO CONTINUOUSLY ADD TO AND REFLECT ON MULTI-GRADE LEVEL PORTFOLIO THROUGHOUT THE SCHOOL YEAR WHILE ALSO PRESENTING THEIR PORTFOLIO OF PERSONAL ACADEMIC WORK AT THE END OF THE YEAR USING PEER FEEDBACK AND SUGGESTIONS FOR IMPROVEMENT. THEY WILL THEN PUBLISH FINAL VERSIONS OF WRITING FOR THE ACADEMIC PORTFOLIO.

UNIT 7
EXPOSITORY TEXTS SUCH AS AVID WEEKLY'S NEWSPAPER ARTICLES WILL BE INFUSED INTO THE CURRICULUM TO ENSURE THAT STUDENTS ARE ABLE TO INTERPRET NEW VOCABULARY, READ FOR FLUENCY AND USE CONTEXTUAL CLUES. STUDENTS WILL BE REQUIRED TO FOCUS ON AUTHOR'S CLAIMS: I.E. OPPOSING VIEWPOINTS. STUDENTS WILL ALSO BE REQUIRED TO DEFEND THEIR POSITION, INTEGRATE FINDINGS INTO WRITING, ALONG WITH USING THEIR

LEARNING IN GROUP DISCUSSIONS SUCH AS SOCRATIC SEMINARS AND PHILOSOPHICAL CHAIRS. THE INCORPORATION OF READING WILL SUPPORT STUDENTS' SKILL IN BEING ABLE TO ANALYZE EXPOSITORY TEXTS AND UTILIZE THEIR FINDINGS IN A VARIETY OF WAYS.

UNIT 8
TRACK THOUGHTS AND POTENTIAL ATTENDANCE OF THE COLLEGE/UNIVERSITY THROUGH CORNELL NOTES, LEARNING LOGS, AND REFLECTIVE ESSAYS. STUDENTS WILL USE SKILLS OF LISTENING AND NOTE-TAKING DURING FIELD TRIP EXPERIENCES AND COLLEGE/CAREER MENTOR DISCUSSIONS. ALSO, THEY WILL WRITE MAKING SURE TO REFLECT ON AND EXPRESS LEARNING FROM PRESENTATIONS, FIELD TRIPS AND RESEARCH. THROUGH THIS, STUDENTS WILL LEARN ABOUT COLLEGE AND CAREER OPPORTUNITIES, AS WELL AS HELP GUIDE THEIR COLLEGE AND CAREER PLANS.

4. Instructional Methods and/or Strategies:

- INTERACTING WITH TEXT AND VISUALS
- STRATEGIES TO SUPPORT READING FOR UNDERSTANDING
- USING GRAPHIC ORGANIZERS
- WRITING TO LEARN AND LEARNING TO WRITE
- ANALYZING PRIMARY SOURCES
- STRUCTURED DISCUSSION
- STRUCTURED ORAL PRESENTATIONS

5. Assessment Including Methods and/or Tools:

THE EVALUATION OF STUDENT PROGRESS AND EVALUATION WILL BE BASED ON THE FOLLOWING CRITERIA OUTLINED IN BOARD POLICY:

- ASSESSMENTS: 60-75% OF THE FINAL GRADE
- ASSIGNMENTS AND CLASS DISCUSSIONS: 25-40% OF THE FINAL GRADE

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	~~Advancement Via Individual Determination (AVID)~~ AVID 11
2. Transcript Title/Abbreviation:	AVID 11
3. Transcript Course Code/Number:	~~5976~~ 5978
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement
6. Grade Level(s):	~~9-12~~ 11
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	February 7, 2002
Date of Revision Approval:	

13. Brief Course Description:
The mission of AVID is to ensure that all students, but especially THOSE WITH UNREALIZED ACADEMIC POTENTIAL ~~disadvantaged students in the middle with academic potential~~, will succeed in rigorous curriculum, will enter mainstream activities of the school, will increase their enrollment in four-year colleges, and will become educated and responsible participants and leaders in a democratic society.

14. Prerequisites:	AVID 10 Co-requisites: Enrollment in One AP/Honors course (Required)

15. Context for Course:
~~The AVID course is a four-year regularly scheduled elective college preparatory class. This course meets the needs of students by:~~

- ~~Providing academic instruction and other support to students to prepare them for eligibility to four-year colleges and universities~~
- ~~Giving students college level entry skills~~
- ~~Increasing the "coping skills" of students~~
- ~~Motivating students to seek college educations~~
- ~~Increasing the student's level of career awareness~~

ADVANCEMENT VIA INDIVIDUAL DETERMINATION (AVID) IS AN ACADEMIC ELECTIVE COURSE THAT PREPARES STUDENTS FOR COLLEGE READINESS AND SUCCESS, AND IT IS SCHEDULED DURING THE REGULAR SCHOOL DAY AS A YEAR-LONG COURSE. EACH WEEK, STUDENTS RECEIVE INSTRUCTION UTILIZING A RIGOROUS COLLEGE PREPARATORY CURRICULUM PROVIDED BY AVID CENTER, TUTOR-FACILITATED STUDY GROUPS, MOTIVATIONAL ACTIVITIES AND ACADEMIC SURVIVAL SKILLS. THE COURSE EMPHASIZES RHETORICAL READING, ANALYTICAL WRITING,

COLLABORATIVE DISCUSSION STRATEGIES, TUTORIAL INQUIRY STUDY GROUPS, PREPARATION FOR COLLEGE ENTRANCE AND PLACEMENT EXAMS, COLLEGE STUDY SKILLS AND TEST-TAKING STRATEGIES, NOTE-TAKING AND RESEARCH.

16. History of Course Development:
THE ELEVENTH-GRADE AVID ELECTIVE COURSE IS THE FIRST PART IN A JUNIOR/SENIOR SEMINAR COURSE THAT FOCUSES ON WRITING AND CRITICAL THINKING EXPECTED OF FIRST- AND SECOND-YEAR COLLEGE STUDENTS. IN ADDITION TO THE ACADEMIC FOCUS OF THE AVID SEMINAR, THERE ARE COLLEGE-BOUND ACTIVITIES, METHODOLOGIES AND TASKS THAT SHOULD BE UNDERTAKEN DURING THE JUNIOR YEAR TO SUPPORT STUDENTS AS THEY APPLY TO FOUR-YEAR UNIVERSITIES AND CONFIRM THEIR POSTSECONDARY PLANS.

17. Textbooks:	AVID Tutorial Guide, Dr. Paolina Schiro and Tracy Daws, AVID Published Resource College and Careers, Nancy Caine, Regina Risi, Dr. Paolina Schiro, Carmen S, AVID Published Resource High School Writing, Michelle Mullen and Sandy Boldway, AVID Published Resource AVID Critical Thinking and Engagement, Paul Bendall, Adam Bollhoefer, and Vijay Koilpillai, AVID Published Resource AVID Elective Essentials for High School, Dr. Paolina Schiro, Raegan McGinnis, and Cindy Metter, AVID Published Resource Critical Reading: Deep Reading Strategies for Expository Texts, Jonathan LeMaster, AVID Published Resource
18. Supplemental Instructional Materials:	AVID Weekly, Supporting Math in the AVID Elective, Write Path content books, AVID Test Prep, Roadtrip Nation Weekly, Focused Note-Taking

C. COURSE CONTENT

1. Course Purpose:
AVID ELECTIVE COURSES AT ALL GRADE LEVELS ARE DESIGNED TO PREPARE STUDENTS FOR ENTRANCE INTO FOUR-YEAR COLLEGES AND UNIVERSITIES, WITH EMPHASIS ON ANALYTICAL WRITING, PREPARATION FOR COLLEGE ENTRANCE AND PLACEMENT EXAMS, COLLEGE STUDY SKILLS AND TEST TAKING, CORNELL NOTE TAKING, AND RESEARCH.

2. Course Outline:
~~The specific curriculum and teacher curriculum guides are developed and provided by the AVID Center.~~

UNIT 1: CHARACTER DEVELOPMENT

A. SELF-AWARENESS
   1. UNDERSTAND THE ROLE OF AVID STUDENTS AND DISPLAY CHARACTERISTICS ON A REGULAR BASIS, ESPECIALLY TO YOUNGER AVID STUDENTS
   2. SERVE AS A MENTOR AND ROLE MODEL TO YOUNGER AVID STUDENTS
   3. DEVELOP SKILLS IN OFFERING AND RECEIVING CRITICISM
   4. IDENTIFY POTENTIAL ACADEMIC CHALLENGES THAT MAY OCCUR AND SEEK PROACTIVE SOLUTIONS WITH TEACHERS
   5. EXAMINE POTENTIAL CAREER PATHS AND COLLEGE DEGREES THAT ALIGN WITH ABILITIES, TALENTS AND INTERESTS
   6. ALIGN SENIOR YEAR COURSE SELECTION WITH IDENTIFIED INTERESTS AND ABILITY TO AID IN A SMOOTH COLLEGIATE TRANSITION

B. GOALS
   1. CHECK PROGRESS TOWARD SHORT- AND MID-TERM GOALS, INCLUDING GRADE POINT AVERAGE
   2. REVIEW ACADEMIC SIX-YEAR PLAN, CHECKING TO ASSURE RIGOROUS COURSE LOAD THROUGH GRADUATION

3. DEVELOP ACTION STEPS TO ACHIEVE DESIRED SCORES ON THE SAT AND ACT
4. REFINE GOALS BASED ON INTERESTS, TALENTS AND ABILITIES
5. REFINE PLANS FOR ONGOING PERSONAL AND ACADEMIC DEVELOPMENT
6. CREATE LIVING DOCUMENT WITH WRITTEN GOALS, BROKEN DOWN INTO STEPS TO USE THROUGHOUT THE YEAR
7. REFLECT UPON PREVIOUS YEAR'S GOALS AND DISCUSS SUCCESSES AND CHALLENGES OF REACHING THOSE GOALS
8. REFLECT UPON PREVIOUS YEAR'S LONG-TERM GOAL AND REVISE AS NECESSARY, FOCUSING ON SPECIFIC GOALS DEDICATED TO PLANNING FOR COLLEGE AND A CAREER

C. COMMUNITY AND SCHOOL INVOLVEMENT
1. CONTINUE WITH SELECT SCHOOL ACTIVITIES/CLUBS AND COMMUNITY SERVICE OPPORTUNITIES THROUGHOUT THE YEAR, ESPECIALLY CLUBS FOR UPPER-CLASSMEN (E.G., NATIONAL HONOR SOCIETY)
2. FOCUS ON LEADERSHIP POSITIONS WITHIN SCHOOL CLUBS
3. TRACK COMMUNITY SERVICE HOURS AND EXTRACURRICULAR ACTIVITY PARTICIPATION IN A MULTI-YEAR STUDENT PORTFOLIO
4. CONSIDER PUTTING ON CLASS COMMUNITY SERVICE ACTIVITY WITHIN COLLABORATIVE GROUPS
5. ASK FOR LETTERS OF RECOMMENDATION FROM CLUB ADVISORS WITH WHOM A STRONG RELATIONSHIP HAS BEEN ESTABLISHED

D. OWNERSHIP OF LEARNING
1. ACCESS GRADES ONLINE OR FROM TEACHERS ON A REGULAR BASIS
2. ANALYZE GRADE REPORTS TO CREATE A STUDY/ACTION PLAN FOR CONTINUED ACADEMIC IMPROVEMENT
3. COMMUNICATE EFFECTIVELY WITH TEACHERS, COUNSELORS AND ADMINISTRATORS TO DISCUSS AREAS OF CONCERN OR A NEED FOR CLARITY
4. INCREASE AWARENESS OF HOW VARIOUS CONTENT AREAS ARE CONNECTED
5. INTEGRATE ACADEMIC QUESTIONS BEFORE, DURING AND AFTER CLASS WITH TEACHERS AND PEERS

UNIT 2: COMMUNICATION

A. SPEAKING
1. REFINE ALL ASPECTS OF PUBLIC SPEAKING AND PRESENTING
2. SEAMLESSLY INCORPORATE VISUAL AIDS OF VARYING TYPES INTO SPEECHES AND PRESENTATIONS
3. PRESENT RESEARCH FINDINGS AS A GROUP
4. REFINE SPEAKING SKILLS THROUGH WORKING WITH PEERS TO PROMOTE CIVIL, DEMOCRATIC DISCUSSIONS AND DECISION-MAKING
5. SPEAK IN A VARIETY OF PUBLIC VENUES AS AN AVID REPRESENTATIVE OR AMBASSADOR

B. LISTENING
1. LISTEN AND RESPOND TO OTHERS IN FORMAL AND INFORMAL SETTINGS
2. EFFECTIVELY SUMMARIZE IDEAS FROM A DISCUSSION, NOTING HOW THEIR PERSONAL VIEWS ON THE TOPIC HAVE CHANGED OR BEEN INFLUENCED
3. CRITICALLY EVALUATE AND ANALYZE ORAL PRESENTATIONS

UNIT 3: WRITING

A. THE WRITING PROCESS
1. ORGANIZE, MONITOR PROGRESS, AND EFFECTIVELY MANAGE TIME REQUIREMENTS SURROUNDING COMPLEX WRITING ASSIGNMENTS
2. ANALYZE A PROMPT, DISTINGUISHING BETWEEN WRITING UNDER TESTING CONDITIONS AND UNTIMED SITUATIONS
3. REVISE DRAFTS AS NECESSARY UNTIL ALL IDEAS ARE EXPRESSED IN THE BEST POSSIBLE MANNER

4. EDIT STUDENTS' ESSAYS, ESPECIALLY CHECKING FOR INTEGRATION OF QUOTES AND CITATIONS
5. USE A VARIETY OF RUBRICS TO GRADE ESSAYS, ESPECIALLY THOSE USED TO GRADE ESSAYS FOR THE SAT AND OTHER COLLEGE ADMISSIONS TESTS
6. REFLECT ON ONE'S OWN WRITING TO SET FUTURE GOALS AND/OR DETERMINE NEXT STEPS OR NEEDS AS A WRITER

B. WRITING SKILLS
1. DEVELOP WELL-CONSTRUCTED THESIS STATEMENTS, WHICH PROPERLY CAPTURES THE PAPER'S TOPIC
2. EFFECTIVELY INTEGRATE QUOTES INTO WRITING
3. UTILIZE MULTIPLE STRUCTURES COMMONLY USED AT COLLEGIATE LEVELS, SUCH AS MLA/APA CITATIONS, SOURCE INTEGRATION AND ABSTRACT WRITING
4. FOCUS ON IMPROVING SENTENCES THROUGH WORD CHOICE AND VARYING SENTENCE STRUCTURE

C. WRITING APPLICATIONS
1. DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A RESEARCH PAPER
2. DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A COLLEGE ADMISSIONS ESSAY
3. DEVELOP AND STRENGTHEN WRITING THROUGH THE CREATION OF A 'LIFE GOALS' ESSAY FOCUSED ON COLLEGE
4. PRODUCE A FRIENDLY LETTER FOCUSING ON PROFESSIONAL RESPONSE, REFLECTING NEEDS IN COLLEGE AND PROFESSIONAL CAREERS
5. DRAFT AND RESPOND TO SUMMER INSTITUTE SPEAKER CONTESTS

D. WRITING TO LEARN
1. REFINE SKILLS OF SUMMARIZING INFORMATION IN VARIOUS CONTEXTS
2. REFLECT UPON RESEARCH SKILLS GAINED DURING THE RESEARCH PROJECT AND HOW THOSE SKILLS WILL RELATE TO POSTSECONDARY EDUCATION

UNIT 4: INQUIRY

A. COSTA'S LEVELS OF THINKING
1. REFINE COLLABORATIVE GROUP STUDY SKILLS DURING ACADEMIC TUTORIALS SO THAT STUDENTS ARE ABLE TO FORM GROUPS INDEPENDENTLY FOR EACH CORE CLASS, ESPECIALLY AROUND COLLEGE LEVEL COURSES

B. TUTORIALS
1. STUDENT GROUP MEMBERS AND PRESENTER WILL LEAD THE DISCUSSION WITH MINIMAL TUTOR INPUT
2. STUDENTS COMPLETE A HIGHER-LEVEL REFLECTION ABOUT THE LEARNING PROCESS DURING TUTORIALS

C. SOCRATIC SEMINAR AND PHILOSOPHICAL CHAIRS
1. STUDENTS PROVIDE THE CENTRAL STATEMENT FOR PHILOSOPHICAL CHAIRS
2. FORMULATE QUESTIONS TO MAKE A PERSONAL CONNECTION WITH TEXT(S) AND/OR OTHER CONTENT/CONCEPTS
3. EVALUATE IDEAS/POINTS OF VIEW WITHIN THE DISCUSSION AND GENERATE/CONSTRUCT APPROPRIATE RESPONSES
4. APPRECIATE MULTIPLE PERSPECTIVES, IN ORDER TO NEGOTIATE MULTIPLE MEANINGS OR IDEAS DURING THE DISCUSSION
5. PREPARE AN ACADEMIC ARGUMENT ON A CONTROVERSIAL TOPIC, INTEGRATING FULLY DEVELOPED CLAIMS
6. ANALYZE A 17TH, 18TH, OR 19TH CENTURY FOUNDATIONAL U.S DOCUMENT OF HISTORICAL AND LITERARY SIGNIFICANCE (E.G., THE DECLARATION OF INDEPENDENCE OR THE PREAMBLE TO THE CONSTITUTION) FOR THEIR THEMES, PURPOSES AND RHETORICAL FEATURES IN A SOCRATIC SEMINAR OR PHILOSOPHICAL CHAIRS DISCUSSION

UNIT 5: COLLABORATION

A. TYPES OF INTERACTIONS
   1. INDEPENDENTLY CREATE STUDY GROUPS FOR ACADEMICALLY RIGOROUS COURSEWORK, WITH DISCUSSION ON CREATING GROUP NORMS AND EXPECTATIONS
   2. DEVELOP POSITIVE PEER RELATIONSHIPS, ESPECIALLY WITH THOSE TAKING ADVANCED COURSEWORK
   3. PROVIDE OPPORTUNITY FOR PEER TUTORING IN AFTER-SCHOOL PROGRAMS OR AT SURROUNDING MIDDLE SCHOOLS

UNIT 6: ORGANIZATION

A. ORGANIZATION AND TIME MANAGEMENT
   1. REFINE THE USE OF ORGANIZATIONAL TOOLS, SUCH AS ASSIGNMENT LOGS, CALENDARS, AGENDAS, AND PLANNERS, CONSIDER COLOR CODING TO DISTINGUISH TYPES OF TASKS AND DEVELOP AN INDIVIDUALIZED STYLE
   2. ADJUST COMMITMENTS TO ENSURE THAT SUFFICIENT TIME IS AVAILABLE TO MEET ACADEMIC GOALS, AS WELL AS EXTRACURRICULAR ACTIVITIES AND A JOB, AS NECESSARY
   3. REFLECT AT THE END OF ELEVENTH GRADE ABOUT SUMMER PRIORITIES, NEXT YEAR'S TIME COMMITMENT, AND POTENTIAL TO SUCCESSFULLY NAVIGATE ALL COURSES, ESPECIALLY COLLEGE LEVEL COURSEWORK, SUCCESSFULLY
   4. REFLECT ON ACADEMIC PERFORMANCE AND INDEPENDENTLY ADJUST STUDY HABITS AND TIME MANAGEMENT SKILLS AS NEEDED
   5. CONTINUOUSLY ADD TO AND REFLECT ON MULTI-GRADE LEVEL PORTFOLIO THROUGHOUT THE SCHOOL YEAR
   6. PUBLISH FINAL VERSIONS OF WRITING FOR THE ACADEMIC PORTFOLIO

B. NOTE-TAKING
   1. TAKE 15 TO 25 PAGES OF QUALITY CORNELL NOTES PER WEEK
   2. UTILIZE CORNELL NOTES AS AN ADVANCED STUDY TOOL, WHICH WILL BE CONTINUALLY REFINED AND STUDIED INDEPENDENTLY
   3. ADAPT ORGANIZATION STRATEGY OF NOTE-TAKING TO MEET REQUIRED ACADEMIC TASKS, SUCH AS LECTURES, LAB WORK, READING OR COLLABORATIVE WORK
   4. USE THE SKILLS OF UNDERLINING KEY TERMS, HIGHLIGHTING AND GOING BACK TO FILL IN GAPS TO SUFFICIENTLY PROCESS NOTES THAT HAVE BEEN TAKEN
   5. REVIEW, REFINE AND USE COLOR-CODING ON NOTES FOCUSING ON UNIMPORTANT INFORMATION, KEY INFORMATION AND POTENTIAL TEST QUESTIONS
   6. REFINE CONTENT ON NOTES AS NEW UNDERSTANDING IS GAINED THROUGH READING TEXTBOOK(S), TUTORIAL SESSIONS, STUDY GROUPS AND DISCUSSIONS WITH THE TEACHER/PEERS
   7. REFINE WRITING OF HIGHER-LEVEL QUESTIONS IN THE LEFT COLUMN THAT CORRESPONDS TO CHUNKS OF INFORMATION IN THE NOTES SECTION TO ENSURE THAT THEY WILL GENERATE HIGHER-LEVEL THINKING
   8. REFLECT ON ALL NOTES TAKEN DURING A UNIT OF STUDY AFTER THE TEST IS RETURNED AND CONSIDER GAPS OF STUDY THAT LED TO MISSED QUESTIONS

C. RESEARCH AND TECHNOLOGY
   1. EXPAND PROFICIENCY WITH TECHNOLOGICAL LEARNING TOOLS, ESPECIALLY ADVANCED FEATURES OF MS WORD, POWERPOINT, AND VIDEO EDITING SOFTWARE
   2. COMPLETE AN IN-DEPTH RESEARCH PROJECT WHERE THE STUDENT UTILIZES BOOKS, INTERNET, AND PRIMARY SOURCE DOCUMENTS
   3. WORK AS A CLASS TO COMPLETE A RESEARCH PROJECT
   4. WORK WITH A SMALL GROUP TO COMPLETE A RESEARCH PROJECT
   5. RESEARCH AND APPLY FOR COLLEGE SCHOLARSHIPS

D. TEST PREPARATION/TEST-TAKING

1. DISCUSS TEST-TAKING STRATEGIES WITH CORE CONTENT TEACHERS, IN ORDER TO SUPPORT EFFORTS IN PREPARING FOR EXAMS
2. ANALYZE TEST RESULTS AND BRING MISSED QUESTIONS TO TUTORIALS TO DISCUSS AND SOLVE WITH PEER GROUPS

UNIT 7: READING

A. VOCABULARY
   1. RELATE NEW VOCABULARY TO FAMILIAR WORDS
   2. INFER WORD MEANING USING KNOWLEDGE OF ADVANCED PREFIXES, SUFFIXES AND ROOT WORDS
   3. CHART NEW WORDS DURING READING OF INCREASINGLY COMPLEX TEXTS
   4. UTILIZE CONCEPT MAPPING TO DETERMINE WORD USAGE AND VARIOUS MEANINGS

B. TEXTUAL ANALYSIS
   1. ANALYZE MULTIPLE INTERPRETATIONS OF A STORY, DRAMA OR POEM, EVALUATING HOW EACH VERSION INTERPRETS THE SOURCE TEXT
   2. ANALYZE COLLEGIATE LEVEL WRITING PROMPTS TO DETERMINE PURPOSE
   3. ANALYZE THE FEATURES AND RHETORICAL DEVICES USED IN DIFFERENT TYPES OF NON-FICTION: ESSAYS, SPEECHES, EDITORIALS, SCIENTIFIC REPORTS AND HISTORICAL DOCUMENTS
   4. EFFECTIVELY SUMMARIZE SECTIONS OF AN ARGUMENT, TEXT OR FILM
   5. FOCUS ON A THREE-PART SOURCE INTEGRATION, INCLUDING SOURCE, PARAPHRASE/DIRECT QUOTE, AND COMMENT ABOUT ITS RELEVANCE TO THE ARGUMENT
   6. DELIBERATELY SELECT REREADING STRATEGIES THAT WILL ASSIST IN UNDERSTANDING OF THE TEXT
   7. DETERMINE HOW TO BEST TAKE NOTES OR RECORD INFORMATION GARNERED FROM READINGS OR FILMS, ESPECIALLY THOSE DEALING WITH ADVANCED CONTENT
   8. ANALYZE PHILOSOPHICAL AND POLITICAL ARGUMENTS
   9. ANALYZE AN AUTHOR'S PROOF IN ORDER TO ISOLATE KEY EVIDENCE, IDENTIFY TYPES OF EVIDENCE BEING PRESENTED, AND ANALYZE ITS VALUE AND IMPACT ON THE ARGUMENT

UNIT 8: COLLEGE PREPAREDNESS

A. GUEST SPEAKERS
   1. INVESTIGATE POSSIBLE GUEST SPEAKERS TO SUPPORT RESEARCH AND CAREER PROJECTS
   2. FORMULATE AND ASK QUESTIONS DURING GUEST SPEAKER PRESENTATIONS, SUCH AS COLLEGE ADMISSIONS OFFICERS, FINANCIAL AID ADVISORS, CURRENT COLLEGE STUDENTS AND/OR AVID GRADUATES, OR PROFESSIONALS FROM VARIOUS CAREERS
   3. UTILIZE CORNELL NOTES AS A MEANS TO TRACK MAIN POINTS FROM GUEST SPEAKERS, KEEPING THEM AS AN ONGOING REFLECTIVE TOOL AS A PART OF A MULTI-YEAR PORTFOLIO
   4. REFLECT UPON THE GUEST SPEAKERS OF THE PREVIOUS TWO YEARS
   5. REFLECT UPON GUEST SPEAKERS AND AREAS OF INTEREST, POSSIBLY SEEKING OPPORTUNITIES TO JOB SHADOW OR POTENTIAL INTERNSHIPS IN AREAS OF INTEREST

B. FIELD TRIPS
   1. ATTEND AS MANY COLLEGE/UNIVERSITY VISITS AS POSSIBLE, WITH OPPORTUNITIES TO SIT IN ON COLLEGE CLASSES OR ATTEND A CULTURAL EVENT ON CAMPUS
   2. DETERMINE AND PLAN THE SPRING COLLEGE/UNIVERSITY FIELD TRIP, INCLUDING CONTACTING OF ADMISSIONS COUNSELORS AND STUDENT GUIDES
   3. VISIT SCHOOLS OF INTEREST INDEPENDENTLY DURING WEEKENDS OR SUMMER TO GAIN FURTHER EXPOSURE TO POSTSECONDARY OPPORTUNITIES
   4. REFLECT ON COURSE PERFORMANCE/GPA TO DETERMINE WHICH SCHOOLS MIGHT BEST FIT WITH AREAS OF CAREER INTEREST

C. COLLEGE AND CAREER KNOWLEDGE

1. DEVELOP AN UNDERSTANDING OF THE SCHOLARSHIP APPLICATION PROCESS AND REQUIRED INFORMATION
2. DETERMINE WHICH COLLEGES/UNIVERSITIES WILL BEST MEET ACADEMIC PURSUITS
3. EXAMINE COST OF COLLEGES AND DETERMINE HOW FINANCIAL AID, GRANTS, SCHOLARSHIP, WORK STUDY PROGRAMS AND OTHER FUNDING SOURCES CAN HELP MEET THOSE COST NEEDS
4. EXAMINE FAFSA REQUIREMENTS AND DETERMINE APPROPRIATE ACTION STEPS TO MEET DEADLINES
5. BEGIN A BASIC UNDERSTANDING OF SELECTING AND SCHEDULING COURSES IN COLLEGE

D. COLLEGE ENTRANCE TESTING
1. PREPARE FOR AND TAKE THE PSAT IN THE FALL OF ELEVENTH GRADE YEAR
2. CHART SCORES FROM PSAT/PLAN, MONITORING AREAS OF WEAKNESS AND CREATING A STUDY PLAN TO MEET TESTING NEEDS
3. PREPARE FOR AND TAKE THE SAT AND/OR THE ACT AT LEAST ONCE DURING THE SPRING SEMESTER
4. ANALYZE TEST RESULTS AND DEVELOP A STUDY PLAN FOR THE SPRING AND SUMMER TO PREPARE FOR TESTING DURING THE TWELFTH-GRADE YEAR
5. ANALYZE THE STRUCTURE AND FORMATTING OF COLLEGE ENTRANCE EXAMS AND DEVELOP A TEST-TAKING PLAN THAT WILL LEAD TO HIGHER SCORES
6. PRACTICE COLLEGE ENTRANCE SAMPLE QUESTIONS AND DISCUSS HOW TO BEST APPROACH SOLUTIONS
7. EXAMINE OTHER COLLEGE ENTRANCE EXAMS, SUCH AS THOSE THAT WOULD EXEMPT STUDENTS FROM COLLEGE REMEDIATION COURSEWORK
8. TRACK ALL PERSONAL TEST RESULTS IN A STUDENT PORTFOLIO AND MONITOR SCORES IN COMPARISON TO THE REQUIREMENTS OF COLLEGES AND UNIVERSITIES OF CHOICE

E. COLLEGE ADMISSIONS/FINANCIAL AID
1. TRACK REQUIREMENTS FOR VARIOUS POSTSECONDARY OPPORTUNITIES INCLUDING AVERAGE GPAS, SAT/ACT SCORES AND EXTRACURRICULAR ACTIVITIES
2. REGULARLY UPDATE ACTIVITY INFORMATION AND ADMISSIONS MATERIALS IN THE STUDENT PORTFOLIO
3. BEGIN WRITING PERSONAL STATEMENT ESSAYS AND A PERSONAL RESUME FOR COLLEGE APPLICATIONS

3. Key Assignments:

~~Lessons are offered in note taking, study skills, test taking, time management, SAT and college entrance/placement exam preparation, effective textbook reading, and library research skills.~~

GOALS

1. STUDENTS WILL DEMONSTRATE THE ABILITY TO READ, WRITE AND THINK CRITICALLY WHILE PARTICIPATING IN CHALLENGING COLLABORATIVE GROUP AND INDIVIDUAL PROJECTS.
2. STUDENTS WILL LEARN TO DRAW CORRELATIONS BETWEEN DIVERSE IDEAS AND PHILOSOPHIES AND THEIR OWN BELIEFS AND VALUES.
3. STUDENTS WILL DEMONSTRATE THE ABILITY TO WRITE ANALYTICAL ESSAYS THAT REQUIRE SKILL IN ASSESSING NEW INFORMATION, SUMMARIZING AND MAKING APPLICATIONS TO NEW SITUATIONS.
4. STUDENTS WILL LEARN AND PRACTICE THE CRITICAL READING, WRITING AND COMMUNICATION SKILLS NEEDED TO SUCCEED IN COLLEGE LEVEL WORK.
5. STUDENTS WILL LEARN HOW TO COMPARE, EVALUATE AND JUDGE DIVERSE IDEAS, VALUES AND THEORIES THAT INFLUENCE SOCIETY.
6. STUDENTS WILL LEARN HOW TO PREPARE FOR AND EXPLORE THE VARIOUS OPPORTUNITIES AND PROCESSES FOR COLLEGE ADMISSION.

OBJECTIVES

1. STUDENTS WILL LEARN TO ANALYZE THE FEATURES AND RHETORICAL DEVICES USED IN DIFFERENT TYPES OF NON-FICTION: ESSAYS, SPEECHES, EDITORIALS, SCIENTIFIC REPORTS AND HISTORICAL DOCUMENTS.

2. STUDENTS WILL DEMONSTRATE A COMPREHENSIVE UNDERSTANDING OF SIGNIFICANT IDEAS EXPRESSED IN A VARIETY OF WRITTEN WORKS BY IDENTIFYING IMPORTANT IDEAS, RECOGNIZING INFERENCES AND DRAWING CONCLUSIONS.
3. STUDENTS WILL DEVELOP VARIOUS STRATEGIES TO RESPOND TO A TEXT INCLUDING, ANNOTATING A TEXT, WRITING LEARNING LOGS, AND DEVELOPING DOUBLE ENTRY JOURNALS AND SUMMARIES.
4. STUDENTS WILL DEVELOP THEIR ABILITY TO RELATE PRIOR KNOWLEDGE TO NEW INFORMATION AND MAKE CONNECTIONS TO RELATED TOPICS OF INFORMATION.
5. STUDENTS WILL DEMONSTRATE AN ABILITY TO ARTICULATE A CLEAR THESIS ON A TOPIC, AND IDENTIFY, EVALUATE AND USE EVIDENCE TO SUPPORT THEIR THESIS.
6. STUDENTS WILL DEVELOP THEIR ABILITY TO WRITE WELL-ORGANIZED ESSAYS THAT ARE CONSISTENTLY COHERENT AND LOGICALLY DEVELOPED.
7. STUDENTS WILL CONTINUE TO LEARN TO EFFECTIVELY SUMMARIZE IDEAS CONTAINED IN A TEXT.
8. STUDENTS WILL DEVELOP SKILL IN WRITING SHORT ANSWER RESPONSE ESSAYS, INCLUDING, TIMED ESSAYS.
9. STUDENTS WILL PARTICIPATE IN RESEARCH PROJECTS THAT EXTEND THEIR KNOWLEDGE OF A PARTICULAR TOPIC AND DEVELOP AND SUPPORT THEIR OWN IDEAS AND OPINIONS.
10. STUDENTS WILL PARTICIPATE IN DISCUSSIONS, PRESENTING THEIR IDEAS IN A CLEAR AND ARTICULATE MANNER.
11. STUDENTS WILL LISTEN TO AND RESPOND TO THE IDEAS OF OTHERS.
12. STUDENTS WILL DEVELOP A LEADERSHIP ROLE IN SOCRATIC SEMINARS.
13. STUDENT WILL DEVELOP THEIR SKILLS IN RESEARCH TECHNIQUES.
14. STUDENTS WILL PRODUCTIVELY PARTICIPATE IN BOTH INDIVIDUAL AND GROUP PROJECTS AND DISCUSSIONS.
15. STUDENTS WILL IMPROVE THEIR ORAL COMMUNICATION SKILLS THROUGH A VARIETY OF MEANS, INCLUDING PRESENTATION, DEBATE, AND SOCRATIC SEMINAR.
16. STUDENTS WILL LEARN TO EVALUATE THEIR OWN AND OTHERS' WRITING, USING RUBRICS AND SCORING GUIDES MODELED ON UC AND CSU ENTRANCE EXAMS.
17. STUDENTS WILL LEARN SPECIFIC STRATEGIES TO NAVIGATE THE COLLEGE ADMISSION PROCESS BY ENGAGING IN A VARIETY OF ACTIVITIES AND TASKS.

4. Instructional Methods and/or Strategies:

- INTERACTING WITH TEXT AND VISUALS
- STRATEGIES TO SUPPORT READING FOR UNDERSTANDING
- USING GRAPHIC ORGANIZERS
- WRITING TO LEARN AND LEARNING TO WRITE
- ANALYZING PRIMARY SOURCES
- STRUCTURED DISCUSSION
- STRUCTURED ORAL PRESENTATIONS

5. Assessment Including Methods and/or Tools:

THE EVALUATION OF STUDENT PROGRESS AND EVALUATION WILL BE BASED ON THE FOLLOWING CRITERIA OUTLINED IN BOARD POLICY:

- ASSESSMENTS: 60-75% OF THE FINAL GRADE
- ASSIGNMENTS AND CLASS DISCUSSIONS: 25-40% OF THE FINAL GRADE

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D., Director, Secondary Curriculum and Instruction

SUBJECT: **COURSE MODIFICATION: INTRODUCTION TO DESIGN**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Introduction to Design is a high school level foundation course that is part of the Project Lead the Way Engineering Program. The course introduces the engineering process through structured activities that require planning, documentation, and other professional skills. This course is being modified to include the newest California Career and Technical Education model curriculum Standards and fulfills the introductory level course in the Engineering and Design Pathway.

New language is provided in UPPER CASE while old language to be deleted is ~~lined through~~.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education receive for information the course modification for Introduction to Design.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr., Chino, CA 91710 Phone: (909) 628-1201 Web Site: www.chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Introduction to Design
2. Transcript Title/Abbreviation:	Intro to Design
3. Transcript Course Code/Number:	5P02; C5P02-1
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "f" Visual Performing Arts requirement
6. Grade Level(s):	9-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	Yes
9. Classified as a Career Technical Education Course:	Yes
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	December 10, 2009
Date of Revision Approval:	July 14, 2011
Date of Revision Approval:	

13. Brief Course Description:

~~The major focus of the course is to introduce students to the design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. Introduction to Design gives students the opportunity to develop skills and understanding of course concepts through activity-, project-, and problem-based learning. Students will employ engineering and scientific concepts in the form of engineering design problems. In addition, students use a 3D solid modeling design software package to help them design solutions to solve proposed problems. Introduction to Design is for students interested in biomechanics, aeronautics, and other applied math and science arenas. This course is aligned to the Project Lead the Way program.~~

INTRODUCTION TO DESIGN IS A HIGH SCHOOL LEVEL FOUNDATION COURSE IN THE PROJECT LEAD THE WAY) ENGINEERING PROGRAM (PLTW). IN INTRODUCTION TO DESIGN STUDENTS ARE INTRODUCED TO THE ENGINEERING PROFESSION AND A COMMON APPROACH TO THE SOLUTION OF ENGINEERING PROBLEMS, AN ENGINEERING DESIGN PROCESS. UTILIZING THE ACTIVITY-PROJECT-PROBLEM-BASED (APB) TEACHING AND LEARNING PEDAGOGY, STUDENTS WILL PROGRESS FROM COMPLETING STRUCTURED ACTIVITIES TO SOLVING OPEN-ENDED PROJECTS AND PROBLEMS THAT REQUIRE THEM TO DEVELOP PLANNING, DOCUMENTATION, COMMUNICATION, AND OTHER PROFESSIONAL SKILLS.

14. Prerequisites:	~~Concurrent enrollment in Geometry or higher~~ CONCURRENT ENROLLMENT IN OR COMPLETION OF INTEGRATED MATH I OR HIGHER RECOMMENDED.

15. Context for Course:

From the buildings in which we live and work, to the cars we drive, everything we use was designed to create a marriage between form and function. We constantly endeavor to make a product interesting and attractive. The design process behind any successful product demands that all members work as a team, be active participants in problem solving,

conduct research, analyze data, understand real world impacts, think outside the box, and speak to a public audience. These skills are important to becoming a contributing member of society.

16. History of Course Development:
THIS COURSE WAS DESIGNED TO PROVIDE STUDENTS WITH SKILLS AND KNOWLEDGE IN A CAREER TECHNICAL EDUCATION (CTE) PATHWAY. COURSEWORK IS MEANT TO PREPARE STUDENTS FOR PROFESSIONAL LIFE AS INDICATED BY THE COLLEGE AND CAREERS READINESS STANDARDS. THE COURSE HAS BEEN UPDATED TO REFLECT THE CHANGES IN CTE STANDARDS.

17. Textbooks:	Project Lead the Way's electronic classroom resources including the PLTW Online Course for Introduction to Engineering Design.
18. Supplemental Instructional Materials:	None

C. COURSE CONTENT

1. Course Purpose:
THROUGH BOTH INDIVIDUAL AND COLLABORATIVE TEAM ACTIVITIES, PROJECTS, AND PROBLEMS, STUDENTS WILL PROBLEM SOLVE AS THEY PRACTICE COMMON ENGINEERING DESIGN AND DEVELOPMENT PROTOCOLS SUCH AS PROJECT MANAGEMENT AND PEER REVIEW. STUDENTS WILL DEVELOP SKILL IN TECHNICAL REPRESENTATION AND DOCUMENTATION OF DESIGN SOLUTIONS ACCORDING TO ACCEPTED TECHNICAL STANDARDS, AND THEY WILL USE CURRENT 3D DESIGN AND MODELING SOFTWARE TO REPRESENT AND COMMUNICATE SOLUTIONS. IN ADDITION, THE DEVELOPMENT OF COMPUTATIONAL METHODS THAT ARE COMMONLY USED IN ENGINEERING PROBLEM SOLVING, INCLUDING STATISTICAL ANALYSIS AND MATHEMATICAL MODELING, ARE EMPHASIZED. ETHICAL ISSUES RELATED TO PROFESSIONAL PRACTICE AND PRODUCT DEVELOPMENT ARE ALSO PRESENTED.

THIS COURSE IS DESIGNED FOR THE CALIFORNIA CAREER AND TECHNICAL EDUCATION **ENGINEERING AND ARCHITECTURE (EA) SECTOR**. THIS COURSE IS ALIGNED TO THE CALIFORNIA CAREER AND TECHNICAL EDUCATION STANDARDS: **ENGINEERING AND DESIGN PATHWAY** AND IS DESIGNED TO BE A **INTRODUCTORY LEVEL COURSE**.

2. Course Outline:

~~Standard 1 – (Introduction to Design) Students understand the different facets of design, proper sketching techniques, measurement, and tools used in design.~~

~~1.1 Objective: Learn the tools that engineers use to solve problems.~~

~~1.1.1 Performance Indicator: Students will apply engineering notebook standards and protocols when documenting their work during the school year.~~

~~1.1.2 Performance Indicator: Students will identify and apply group brainstorming techniques and the rules associated with brainstorming.~~

~~1.1.3 Performance Indicator: Students will research a product's history, develop a PowerPoint presentation, list chronologically the major innovations to a product, and present findings to a group.~~

~~1.1.4 Performance Indicator: Students will use online and published works to research aspects of design problems.~~

~~1.1.5 Performance Indicator: Students will identify the design process steps used in given scenarios, be able to list the steps, and identify any missing steps.~~

~~1.2 Objective: Know how to draw different types of sketches. 1.2.1 Performance Indicator: Students will identify, sketch, and explain the function of points, construction lines, object lines, and hidden lines.~~

~~1.2.2 Performance Indicator: Students will plot points on grid paper to aid in the creation of sketches and drawings.~~

~~1.2.3 Performance Indicator: Students will explain the concepts of technical sketching and drawing.~~

~~1.2.4 Performance Indicator: Students will sketch an isometric view of simple geometric solids.~~

~~1.2.5 Performance Indicator: Students will explain how an oblique view of simple geometric solids differs from an isometric view.~~

1.2.6 Performance Indicator: Students will sketch one-point, two-point, and three-point perspectives of simple geometric solids.
1.2.7 Performance Indicator: Students will describe the concept of proportion as it relates to freehand sketching.
1.2.8 Performance Indicator: Students will sketch multi-view drawings of simple geometric solids.
1.3 Objective: Learn about measurement and statistics.
1.3.1 Performance Indicator: Students will research and design a CD cover or book jacket on the origins of the measurement systems.
1.3.2 Performance Indicator: Students will measure and record linear distances using a scale to a precision of 1/16 inch and 1 mm.
1.3.3 Performance Indicator: Students will measure and record linear distances using a dial caliper to a precision of 0.001 inch.
1.3.4 Performance Indicator: Students will add and subtract U.S. standard and metric linear measurements.
1.3.5 Performance Indicator: Students will convert linear distance measurements from inches to millimeters and vice versa.
1.3.6 Performance Indicator: Students will apply linear dimensions to a multi- view drawing.
1.3.7 Performance Indicator: Students will calculate the mean, mode, median, and range of a data set.
1.3.8 Performance Indicator: Students will create a histogram of recorded measurements showing data elements or class intervals and frequency.
1.4 Objective: Learn how to create a product from conception to reality.
1.4.1 Performance Indicator: Students will brainstorm and sketch possible solutions to an existing design problem.
1.4.2 Performance Indicator: Students will select an approach that meets or satisfies the constraints given in a design brief.
1.4.3 Performance Indicator: Students will create simple extruded solid Computer Aided Design (CAD) models from dimensioned sketches.
1.4.4 Performance Indicator: Students will generate dimensioned multi-view drawings from simple CAD models.
1.4.5 Performance Indicator: Students will measure and fabricate parts for a functional prototype from the CAD multi-view drawings.
1.4.6 Performance Indicator: Students will assemble the product using the CAD modeling software.
1.4.7 Performance Indicator: Students will test and evaluate the prototype and record results.
1.4.8 Performance Indicator: Students will apply geometric and numeric constraints to CAD sketches.
1.4.9 Performance Indicator: Students will identify the purpose of packaging in the design of consumer products.

Standard 2 – (Design Solutions) Students understand the in-depth study of geometric shapes and solids, dimensioning, 3D modeling software, and advanced design.
2.1 Objective: Calculate area, surface area, volume, and weight of geometric shapes.
2.1.1 Performance Indicator: Students will identify common geometric shapes and forms by name.
2.1.2 Performance Indicator: Students will calculate the area of simple geometric shapes.
2.1.3 Performance Indicator: Students will calculate the surface area and volume of simple geometric forms.
2.1.4 Performance Indicator: Students will identify and explain the various geometric relationships that exist between the elements of two- dimensional shapes and three-dimensional forms.
2.1.5 Performance Indicator: Students will identify and define the axes, planes, and sign conventions associated with the Cartesian coordinate system.
2.1.6 Performance Indicator: Students will apply geometric and numeric constraints to CAD sketches.
2.1.7 Performance Indicator: Students will utilize sketch based work reference and placed features to develop solid CAD models from dimensioned drawings.

2.1.8 Performance Indicator: Students will explain how a given object's geometry is the result of sequential additive and subtractive processes.

2.2 Objective: Understand design language.

2.2.1 Performance Indicator: Students will explain the differences between size and location dimensions.

2.2.2 Performance Indicator: Students will differentiate between datum dimensioning and chain dimensioning.

2.2.3 Performance Indicator: Students will identify dimension fillets, rounds, diameters, chamfers, holes, slots, and screw threads in orthographic projection drawings.

2.2.4 Performance Indicator: Students will explain the rules that are associated with the application of dimensions to multi-view drawings.

2.2.5 Performance Indicator: Students will identify, sketch, and explain the difference between general tolerances, limit dimensions, unilateral, and bilateral tolerances.

2.2.6 Performance Indicator: Students will differentiate between clearance and interference fits.

2.3 Objective: Learn about the 3D functions used to develop CAD solid models.

2.3.1 Performance Indicator: Students will sketch and model an auxiliary view of a given object to communicate the true size and shape of its inclined surface.

2.3.2 Performance Indicator: Students will describe the purpose and demonstrate the application of section lines and cutting plane lines in a section view drawing.

2.3.3 Performance Indicator: Students will sketch a full and half section view of a given object to communicate its interior features.

2.3.4 Performance Indicator: Students will identify algebraic relationships between the dimensional values of a given object.

2.3.5 Performance Indicator: Students will apply assembly constraints to individual CAD models to create mechanical systems.

2.3.6 Performance Indicator: Students will perform part manipulation during the creation of an assembly model.

2.3.7 Performance Indicator: Students will explain how assembly constraints are used to systematically remove the degrees of freedom for a set of components in a given assembly.

2.3.8 Performance Indicator: Students will create an exploded model of a given assembly.

2.3.9 Performance Indicator: Students will determine ratios and apply algebraic formulas to animate multiple parts within an assembly model.

2.3.10 Performance Indicator: Students will create and describe the purpose of the following items: exploded isometric assembly view, balloons, and parts list.

2.4 Objective: Teams apply the design process to solve a problem.

2.4.1 Performance Indicator: Students will brainstorm and sketch possible solutions to an existing design problem.

2.4.2 Performance Indicator: Students will create a decision making matrix.

2.4.3 Performance Indicator: Students will select an approach that meets or satisfies the constraints given in a design brief.

2.4.4 Performance Indicator: Students will create solid CAD models of each part from dimensioned sketches using a variety of methods.

2.4.5 Performance Indicator: Students will apply geometric, numeric, and parametric constraints to form CAD modeled parts.

2.4.6 Performance Indicator: Students will generate dimensioned multi-view drawings from simple CAD modeled parts.

2.4.7 Performance Indicator: Students will assemble the product using the CAD modeling software.

2.4.8 Performance Indicator: Students will explain what constraints are and why they are included in a design brief.

~~2.4.9 Performance Indicator: Students will create a threefold brochure marketing the designed solution for the chosen problem, such as a consumer product, a dispensing system, a new form of control system, or extend a product design to meet a new requirement.~~

~~2.4.10 Performance Indicator: Students will explain the concept of fluid power and the difference between hydraulic and pneumatic power systems.~~

~~Standard 3 – (Reverse Engineering) Students analyze product function, structure, and visual elements.~~

~~3.1 Objective: Learn the principles and elements of design and be able to communicate their understanding in a variety of medium.~~

~~3.1.1 Performance Indicator: Students will identify visual design elements within a given object.~~

~~3.1.2 Performance Indicator: Students will explain how visual design principles were used to manipulate design elements within a given object.~~

~~3.1.3 Performance Indicator: Students will explain what aesthetics is and how it contributes to a design's commercial success.~~

~~3.1.4 Performance Indicator: Students will identify the purpose of packaging in the design of consumer products.~~

~~3.1.5 Performance Indicator: Students will identify visual design principles and elements that are present within marketing advertisements.~~

~~3.1.6 Performance Indicator: Students will identify the intent of a given marketing advertisement and demographics of the target consumer group for which it was intended.~~

~~3.2 Objective: Learn the reverse engineering process.~~

~~3.2.1 Performance Indicator: Students will identify the reasons why engineers perform reverse engineering on products.~~

~~3.2.2 Performance Indicator: Students will describe the function of a given manufactured object as a sequence of operations through visual analysis and inspection (prior to dissection).~~

~~3.3 Objective: Build several solid models of a product and determine the mass properties of a product.~~

~~3.3.1 Performance Indicator: Students will describe the differences between joinery, fasteners, and adhesives.~~

~~3.3.2 Performance Indicator: Students will identify the types of structural connections that exist in a given object.~~

~~3.3.3 Performance Indicator: Students will use dial calipers to precisely measure outside and inside diameter, whole depth, and object thickness.~~

~~3.3.4 Performance Indicator: Students will identify a given object's material type.~~

~~3.3.5 Performance Indicator: Students will identify material processing methods that are used to manufacture the components of a given commercial product.~~

~~3.3.6 Performance Indicator: Students will assign a density value to a material and apply it to a given solid CAD model.~~

~~3.3.7 Performance Indicator: Students will perform computer analysis to determine mass, volume, and surface area of a given object.~~

~~3.4 Objective: Identify visual, structural, or functional issues with their reverse engineered products, initiate product improvements, and communicate their designs through technical reports.~~

~~3.4.1 Performance Indicator: Students will write design briefs that focus on product innovation.~~

~~3.4.2 Performance Indicator: Students will identify group brainstorming techniques and the rules associated with brainstorming.~~

~~3.4.3 Performance Indicator: Students will use decision matrices to make design decisions.~~

~~3.4.4 Performance Indicator: Students will explain the difference between invention and innovation.~~

~~Standard 4 – (Design Problems) Students combine knowledge and information learned in the previous units to an open-ended design problem.~~

~~4.1 Objective: Investigate different materials, manufacturing processes, and the short- and long-term impacts that their decision-making may have on society.~~

4.1.1 Performance Indicator: Students will create a brainstorming list of different products made from common materials that are used daily.

4.1.2 Performance Indicator: Students will research and construct a product impact timeline presentation of a product from the brainstorming list and present how the product may be recycled and used to make other products after its lifecycle is complete.

4.1.3 Performance Indicator: Students will identify the five steps of a product's lifecycle and investigate and propose recyclable uses for the material once the lifecycle of the product is complete.

4.2 Objective: Virtual design teams with students from other Project Lead the Way schools will solve the selected design problem. Develop and deliver individual presentations that chronicle design's development.

4.2.1 Performance Indicator: Students will explain why teams of people are used to solve problems.

4.2.2 Performance Indicator: Students will identify group norms that allow a virtual design team to function efficiently.

4.2.3 Performance Indicator: Students will establish file management and file revision protocols to ensure the integrity of current information.

4.2.4 Performance Indicator: Students will use Internet resources, such as email, to communicate with a virtual design team member throughout a design challenge.

4.2.5 Performance Indicator: Students will identify strategies for addressing and solving conflicts that occur between team members.

4.2.6 Performance Indicator: Students will create a Gantt chart to manage the various phases of their design challenge.

Standard 5 – (Artistic Perception and Creative Expression) Students perceive and respond to works of art, objects in nature, events, and the environment. They apply artistic processes and skills, using a variety of media to communicate meaning and intent of original works of art.

5.1 Objective: Develop perceptual skills and visual arts vocabulary.

5.1.1 Performance Indicator: Students will analyze and discuss complex ideas, such as distortion, color theory, arbitrary color, scale, expressive content, and real versus virtual in works of art.

5.1.2 Performance Indicator: Students will analyze works of art as to personal direction and style.

5.2 Objective: Rationalize impact of media choice.

5.2.1 Performance Indicator: Students will select three works of art from their portfolio and discuss the intent of the work and the use of the media.

5.3 Objective: Use skills, processes, materials, and tools.

5.3.1 Performance Indicator: Students will assemble and display objects or works of art as a part of a public exhibition.

5.4 Objective: Communication and expression through original works of art.

5.4.1 Performance Indicator: Students will demonstrate, in their own works of art, a personal style and an advanced proficiency in communicating an idea, theme, or emotion.

5.4.2 Performance Indicator: Students will use innovative visual metaphors in creating works of art.

5.4.3 Performance Indicator: Students will present a universal concept in a multimedia work of art that demonstrates knowledge of technology skills.

Standard 6 – (Context, Connections, Relationships, and Applications) Students analyze the role and development of the visual arts in past and present cultures. They develop competencies and creative skills in problem solving, communication, and management of time and resources that contribute to lifelong learning and career skills. They also learn about careers in and related to the visual arts.

6.1 Objective: Identify the role and development of the visual arts.

6.1.1 Performance Indicator: Students will identify contemporary styles and discuss the diverse social, economic, and political developments reflected in the works of art examined.

~~6.1.2 Performance Indicator: Students will identify contemporary artists worldwide who have achieved regional, national, or international recognition and discuss ways in which their work reflects, plays a role in, and influences present day culture.~~

~~6.2 Objective: Investigate diversity of the visual arts.~~

~~6.2.1 Performance Indicator: Students will investigate and discuss universal concepts expressed in works of art from diverse cultures.~~

~~6.3 Objective: Create connections and applications.~~

~~6.3.1 Performance Indicator: Students will speculate on how advances in technology might change the definition and function of the visual arts.~~

~~6.4 Objective: Investigate careers and demonstrate career related skills.~~

~~6.4.1 Performance Indicator: Students will prepare portfolios of their original works of art for a variety of purposes (e.g., review for post-secondary application, exhibition, job application, and personal collection).~~

~~Standard 7 – (Aesthetic Valuing) – Students analyze, assess, and derive meaning from works of art, including their own, according to the elements of art, the principles of design, and aesthetic qualities.~~

~~7.1 Objective: Derive meaning from works of art.~~

~~7.1.1 Performance Indicator: Students will analyze and articulate how society influences the interpretation and message of a work of art.~~

~~7.2 Objective: Make informed judgments.~~

~~7.2.1 Performance Indicator: Students will develop written criteria for the selection of a body of work from their portfolios that represent significant achievements.~~

UNIT 1: DESIGN PROCESS

EA: B1.0, B2.0, B6.0, B11.0

OVERVIEW: THE GOAL OF UNIT 1 IS TO INTRODUCE STUDENTS TO THE BROAD FIELD OF ENGINEERING AND A DESIGN PROCESS THAT ENGINEERS USE TO DEVELOP INNOVATIVE SOLUTIONS TO REAL PROBLEMS. STUDENTS BECOME FAMILIAR WITH THE TRADITIONAL BIG FOUR DISCIPLINES OF ENGINEERING AND THE EXTENSIVE ARRAY OF CAREER OPPORTUNITIES AND ENGINEERING PROBLEMS ADDRESSED WITHIN EACH DISCIPLINE. A DESIGN PROCESS IS PRESENTED AS A STRUCTURED METHOD FOR APPROACHING AND DEVELOPING SOLUTIONS TO A PROBLEM. THE ART AND SKILL OF BRAINSTORMING IS EMPHASIZED AS STUDENTS BEGIN TO DEVELOP SKILL IN GRAPHICALLY REPRESENTING IDEAS THROUGH CONCEPT SKETCHING.

STUDENTS WILL:

- IDENTIFY THE STEPS IN AN ENGINEERING DESIGN PROCESS AND DESCRIBE THE ACTIVITIES INVOLVED IN EACH STEP OF THE PROCESS.
- EXPLAIN THE CONCEPT OF PROPORTION AND HOW IT RELATES TO FREEHAND SKETCHING
- IDENTIFY AND DESCRIBE A VARIETY OF BRAINSTORMING TECHNIQUES AND RULES FOR BRAINSTORMING.
- DIFFERENTIATE BETWEEN INVENTION AND INNOVATION.
- IDENTIFY AND DIFFERENTIATE BETWEEN THE WORK OF AN ENGINEER AND THE WORK OF A SCIENTIST.
- IDENTIFY AND DIFFERENTIATE BETWEEN MECHANICAL, ELECTRICAL, CIVIL, AND CHEMICAL ENGINEERING FIELDS.
- GENERATE AND DOCUMENT MULTIPLE IDEAS OR SOLUTION PATHS TO A PROBLEM THROUGH BRAINSTORMING.
- DESCRIBE THE DESIGN PROCESS USED IN THE SOLUTION OF A PARTICULAR PROBLEM AND REFLECT ON ALL STEPS OF THE DESIGN PROCESS.

- UTILIZE AN ENGINEERING NOTEBOOK TO CLEARLY AND ACCURATELY DOCUMENT THE DESIGN PROCESS ACCORDING TO ACCEPTED STANDARDS AND PROTOCOLS TO PROVE THE ORIGIN AND CHRONOLOGY OF A DESIGN.
- CREATE SKETCHES OR DIAGRAMS AS REPRESENTATIONS OF OBJECTS, IDEAS, EVENTS, OR SYSTEMS.
- EXPLAIN THE CONTRIBUTIONS OF ENGINEERS FROM DIFFERENT ENGINEERING FIELDS IN THE DESIGN AND DEVELOPMENT OF A PRODUCT, SYSTEM, OR TECHNOLOGY.
- REVIEW AND EVALUATE THE WRITTEN WORK OF PEERS AND MAKE RECOMMENDATIONS FOR IMPROVEMENT.

UNIT 2: TECHNICAL SKETCHING AND DRAWING
EA: B1.0, B2.0, B11.0

OVERVIEW: THE GOAL OF UNIT 2 IS FOR STUDENTS TO DEVELOP AN UNDERSTANDING OF THE PURPOSE AND PRACTICE OF VISUAL REPRESENTATIONS AND COMMUNICATION WITHIN ENGINEERING IN THE FORM OF TECHNICAL SKETCHING AND DRAWING. STUDENTS BUILD SKILL AND GAIN EXPERIENCE IN REPRESENTING THREE-DIMENSIONAL OBJECTS IN TWO DIMENSIONS. STUDENTS WILL CREATE VARIOUS TECHNICAL REPRESENTATIONS USED IN VISUALIZATION, EXPLORING, COMMUNICATING, AND DOCUMENTING DESIGN IDEAS THROUGHOUT THE DESIGN PROCESS, AND THEY WILL UNDERSTAND THE APPROPRIATE USE OF SPECIFIC DRAWING VIEWS (INCLUDING ISOMETRIC, OBLIQUE, PERSPECTIVE, AND ORTHOGRAPHIC PROJECTIONS). THEY PROGRESS FROM CREATING FREE HAND TECHNICAL SKETCHES USING A PENCIL AND PAPER TO DEVELOPING ENGINEERING DRAWINGS ACCORDING TO ACCEPTED STANDARDS AND PRACTICES THAT ALLOW FOR UNIVERSAL
INTERPRETATION OF THEIR DESIGN.

STUDENTS WILL:

- IDENTIFY LINE TYPES (INCLUDING CONSTRUCTION LINES, OBJECT LINES, HIDDEN LINES, AND CENTERLINES) USED ON A TECHNICAL DRAWING PER ANSI LINE CONVENTIONS AND LETTERING AND EXPLAIN THE PURPOSE OF EACH LINE.
- IDENTIFY AND DEFINE TECHNICAL DRAWING REPRESENTATIONS INCLUDING ISOMETRIC, ORTHOGRAPHIC PROJECTION, OBLIQUE, AND PERSPECTIVE VIEWS.
- IDENTIFY THE PROPER USE OF EACH TECHNICAL DRAWING REPRESENTATION INCLUDING ISOMETRIC, ORTHOGRAPHIC PROJECTION, OBLIQUE, AND PERSPECTIVE VIEWS.
- APPLY TONAL SHADING TO ENHANCE THE APPEARANCE OF A PICTORIAL SKETCH AND CREATE A MORE REALISTIC APPEARANCE OF A SKETCHED OBJECT.
- HAND SKETCH ISOMETRIC VIEWS OF A SIMPLE OBJECT OR PART AT A GIVEN SCALE USING THE ACTUAL OBJECT, A DETAILED VERBAL DESCRIPTION OF THE OBJECT, A PICTORIAL VIEW OF THE OBJECT, OR A SET OF ORTHOGRAPHIC PROJECTIONS.
- HAND SKETCH 1-POINT AND 2-POINT PERSPECTIVE PICTORIAL VIEWS OF A SIMPLE OBJECT OR PART GIVEN THE OBJECT, A DETAILED VERBAL DESCRIPTION OF THE OBJECT, A PICTORIAL VIEW OF THE OBJECT, AND/OR A SET OF ORTHOGRAPHIC PROJECTIONS.
- SELECT FLAT PATTERNS (NETS) THAT FOLD INTO GEOMETRIC SOLID FORMS.
- HAND SKETCH ORTHOGRAPHIC PROJECTIONS AT A GIVEN SCALE AND IN THE CORRECT ORIENTATION TO FULLY DETAIL AN OBJECT OR PART USING THE ACTUAL OBJECT, A DETAILED VERBAL DESCRIPTION OF THE OBJECT, OR A PICTORIAL AND ISOMETRIC VIEW OF THE OBJECT.
- DETERMINE THE MINIMUM NUMBER AND TYPES OF VIEWS NECESSARY TO FULLY DETAIL A PART.
- CHOOSE AND JUSTIFY THE CHOICE FOR THE BEST ORTHOGRAPHIC PROJECTION OF AN OBJECT TO USE AS A FRONT VIEW ON TECHNICAL DRAWINGS.

UNIT 3: MEASUREMENT AND STATISTICS
EA: B1.0, B7.0, B11.0

THE GOAL OF UNIT 3 IS FOR STUDENTS TO BECOME FAMILIAR WITH APPROPRIATE PRACTICES AND THE APPLICATIONS OF MEASUREMENT (USING BOTH U. S. CUSTOMARY AND SI UNITS) AND STATISTICS WITHIN THE DISCIPLINE OF ENGINEERING. STUDENTS WILL LEARN APPROPRIATE METHODS OF MAKING AND RECORDING MEASUREMENTS, INCLUDING THE USE OF DIAL CALIPERS, AS THEY COME TO UNDERSTAND THE IDEAS OF PRECISION AND ACCURACY OF MEASUREMENT AND THEIR IMPLICATIONS ON ENGINEERING DESIGN. THE CONCEPTS OF DESCRIPTIVE AND INFERENTIAL STATISTICS ARE INTRODUCED AS METHODS TO MATHEMATICALLY REPRESENT INFORMATION AND DATA AND ARE APPLIED IN THE DESIGN PROCESS TO IMPROVE PRODUCT DESIGN, ASSESS DESIGN SOLUTIONS, AND JUSTIFY DESIGN DECISIONS. STUDENTS ARE ALSO PROVIDED WITH PRACTICE IN UNIT CONVERSION AND THE USE OF MEASUREMENT UNITS AS AN AID IN SOLVING PRACTICAL PROBLEMS INVOLVING QUANTITIES. A SPREADSHEET PROGRAM IS USED TO STORE, MANIPULATE, REPRESENT, AND ANALYZE DATA, THEREBY ENHANCING AND EXTENDING STUDENT APPLICATION OF THESE STATISTICAL CONCEPTS.

STUDENTS WILL:

- IDENTIFY GENERAL RULES FOR DIMENSIONING ON TECHNICAL DRAWINGS USED IN STANDARD ENGINEERING PRACTICE.
- DISTINGUISH BETWEEN SAMPLE STATISTICS AND POPULATION STATISTICS AND KNOW APPROPRIATE APPLICATIONS OF EACH.
- DISTINGUISH BETWEEN PRECISION AND ACCURACY OF MEASUREMENT.
- MEASURE LINEAR DISTANCES (INCLUDING LENGTH, INSIDE DIAMETER, AND HOLE DEPTH) WITH ACCURACY USING A SCALE, RULER, OR DIAL CALIPER AND REPORT THE MEASUREMENT USING AN APPROPRIATE LEVEL OF PRECISION.
- USE UNITS TO GUIDE THE SOLUTION TO MULTI-STEP PROBLEMS THROUGH DIMENSIONAL ANALYSIS AND CHOOSE AND INTERPRET UNITS CONSISTENTLY IN FORMULAS.
- CONVERT QUANTITIES BETWEEN UNITS IN THE SI AND THE US CUSTOMARY MEASUREMENT SYSTEMS.
- CONVERT BETWEEN DIFFERENT UNITS WITHIN THE SAME MEASUREMENT SYSTEM INCLUDING THE SI AND US CUSTOMARY MEASUREMENT SYSTEMS.
- DIMENSION ORTHOGRAPHIC PROJECTIONS OF SIMPLE OBJECTS OR PARTS ACCORDING TO A SET OF DIMENSIONING STANDARDS AND ACCEPTED PRACTICES.
- IDENTIFY AND CORRECT ERRORS AND OMISSIONS IN THE DIMENSIONS APPLIED IN A TECHNICAL DRAWING BASED ON ACCEPTED PRACTICE AND A SET OF DIMENSIONING RULES.
- CALCULATE STATISTICS RELATED TO CENTRAL TENDENCY INCLUDING MEAN, MEDIAN, AND MODE.
- CALCULATE STATISTICS RELATED TO VARIATION OF DATA INCLUDING (SAMPLE AND POPULATION) STANDARD DEVIATION AND RANGE.
- REPRESENT DATA WITH PLOTS ON THE REAL NUMBER LINE (E.G., DOT PLOTS, HISTOGRAMS, AND BOX PLOTS).
- USE STATISTICS TO QUANTIFY INFORMATION, SUPPORT DESIGN DECISIONS, AND JUSTIFY PROBLEM SOLUTIONS.
- USE A SPREADSHEET PROGRAM TO STORE AND MANIPULATE RAW DATA.
- USE A SPREADSHEET PROGRAM TO PERFORM CALCULATIONS USING FORMULAS.
- USE A SPREADSHEET PROGRAM TO CREATE AND DISPLAY A HISTOGRAM TO REPRESENT A SET OF DATA.
- USE FUNCTION TOOLS WITHIN A SPREADSHEET PROGRAM TO CALCULATE STATISTICS FOR A SET OF DATA INCLUDING MEAN, MEDIAN, MODE, RANGE, AND STANDARD DEVIATION.
- USE THE EMPIRICAL RULE TO INTERPRET DATA AND IDENTIFY RANGES OF DATA THAT INCLUDE 68 PERCENT OF THE DATA, 95 PERCENT OF THE DATA, AND 99.7 PERCENT OF THE DATA GIVEN THE APPROPRIATE DESCRIPTIVE STATISTICS.

- CHOOSE A LEVEL OF PRECISION AND ACCURACY APPROPRIATE TO LIMITATIONS ON MEASUREMENT WHEN REPORTING QUANTITIES.
- EVALUATE AND COMPARE THE ACCURACY AND PRECISION OF DIFFERENT MEASURING DEVICES.

UNIT 4: MODELING SKILLS
EA: B1.0, B2.0, B4.0, B6.0, B7.0, B11.0

THIS UNIT INTRODUCES STUDENTS TO A VARIETY OF MODELING METHODS AND FORMATS USED TO REPRESENT SYSTEMS, COMPONENTS, PROCESSES, AND OTHER DESIGNS. STUDENTS ARE PROVIDED EXPERIENCE IN INTERPRETING AND CREATING MULTIPLE FORMS OF MODELS COMMON TO ENGINEERING AS THEY APPLY THE DESIGN PROCESS TO CREATE A DESIGN SOLUTION. STUDENTS CREATE GRAPHICAL MODELS OF DESIGN IDEAS USING SKETCHES AND ENGINEERING DRAWINGS AND CREATE GRAPHS AND CHARTS TO REPRESENT QUANTITATIVE DATA. IN THIS UNIT STUDENTS ARE INTRODUCED TO THREE-DIMENSIONAL COMPUTER MODELING. THEY LEARN TO REPRESENT SIMPLE OBJECTS IN A VIRTUAL 3D ENVIRONMENT THAT ALLOWS FOR REALISTIC INTERACTIONS AND ANIMATION. THE MODELING SOFTWARE IS ALSO USED TO PROVIDE AN EFFICIENT METHOD OF CREATING TECHNICAL DOCUMENTATION OF OBJECTS. STUDENTS ARE PROVIDED THE OPPORTUNITY TO CREATE A PHYSICAL MODEL OF A DESIGN SOLUTION TO BE USED FOR TESTING PURPOSES. MATHEMATICAL MODELING IS INTRODUCED, AND
STUDENTS LEARN TO FIND MATHEMATICAL REPRESENTATIONS (IN THE FORM OF LINEAR FUNCTIONS) TO REPRESENT RELATIONSHIPS DISCOVERED DURING THE TESTING PHASE OF THE DESIGN PROCESS.

STUDENTS WILL:

- EXPLAIN THE TERM “FUNCTION” AND IDENTIFY THE SET OF INPUTS FOR THE FUNCTION AS THE DOMAIN AND THE SET OF OUTPUTS FROM THE FUNCTION AS THE RANGE.
- BE FAMILIAR WITH THE TERMINOLOGY RELATED TO AND THE USE OF A 3D SOLID MODELING PROGRAM IN THE CREATION OF SOLID MODELS AND TECHNICAL DRAWINGS.
- DIFFERENTIATE BETWEEN ADDITIVE AND SUBTRACTIVE 3D SOLID MODELING METHODS.
- DEVELOP AND/OR USE GRAPHICAL, COMPUTER, PHYSICAL AND MATHEMATICAL MODELS AS APPROPRIATE TO REPRESENT OR SOLVE PROBLEMS.
- FABRICATE A SIMPLE OBJECT FROM TECHNICAL DRAWINGS THAT MAY INCLUDE AN ISOMETRIC VIEW AND ORTHOGRAPHIC PROJECTIONS.
- CREATE THREE-DIMENSIONAL SOLID MODELS OF PARTS WITHIN CAD FROM SKETCHES OR DIMENSIONED DRAWINGS USING APPROPRIATE GEOMETRIC AND DIMENSIONAL CONSTRAINTS.
- GENERATE CAD MULTI-VIEW TECHNICAL DRAWINGS, INCLUDING ORTHOGRAPHIC PROJECTIONS AND PICTORIAL VIEWS, AS NECESSARY, SHOWING APPROPRIATE SCALE, APPROPRIATE VIEW SELECTION, AND CORRECT VIEW ORIENTATION TO FULLY DESCRIBE A SIMPLE PART ACCORDING TO STANDARD ENGINEERING PRACTICE.
- CONSTRUCT A TESTABLE PROTOTYPE OF A PROBLEM SOLUTION.
- ANALYZE THE PERFORMANCE OF A DESIGN DURING TESTING AND JUDGE THE SOLUTION AS VIABLE OR NON-VIABLE WITH RESPECT TO MEETING THE DESIGN REQUIREMENTS.
- CREATE A SET OF WORKING DRAWINGS TO DETAIL A DESIGN PROJECT.
- ORGANIZE AND EXPRESS THOUGHTS AND INFORMATION IN A CLEAR AND CONCISE MANNER.
- UTILIZE PROJECT PORTFOLIOS TO PRESENT AND JUSTIFY DESIGN PROJECTS.
- USE A SPREADSHEET PROGRAM TO GRAPH BI-VARIATE DATA AND DETERMINE AN APPROPRIATE MATHEMATICAL MODEL USING REGRESSION ANALYSIS.
- CONSTRUCT A SCATTER PLOT TO DISPLAY BI-VARIATE DATA, INVESTIGATE PATTERNS OF ASSOCIATION, AND REPRESENT THE ASSOCIATION WITH A MATHEMATICAL MODEL (LINEAR EQUATION) WHEN APPROPRIATE.

- SOLVE EQUATIONS FOR UNKNOWN QUANTITIES BY DETERMINING APPROPRIATE SUBSTITUTIONS FOR VARIABLES AND MANIPULATING THE EQUATIONS.
- USE FUNCTION NOTATION TO EVALUATE A FUNCTION FOR INPUTS IN ITS DOMAIN AND INTERPRET STATEMENTS THAT USE FUNCTION NOTATION IN TERMS OF A CONTEXT.
- BUILD A FUNCTION THAT DESCRIBES A RELATIONSHIP BETWEEN TWO QUANTITIES GIVEN A GRAPH, A DESCRIPTION OF A RELATIONSHIP, OR TWO INPUT-OUTPUT PAIRS.
- INTERPRET A FUNCTION TO SOLVE PROBLEMS IN THE CONTEXT OF THE DATA.
- INTERPRET THE SLOPE (RATE OF CHANGE) AND THE INTERCEPT (CONSTANT TERM) OF A LINEAR FUNCTION IN THE CONTEXT OF DATA.
- COMPARE THE EFFICIENCY OF THE MODELING METHOD OF AN OBJECT USING DIFFERENT COMBINATIONS OF ADDITIVE AND SUBTRACTIVE METHODS.

UNIT 5: GEOMETRY OF DESIGN

EA: B2.0, B4.0, B6.0, B9.0, B11.0

IN THIS UNIT STUDENTS ARE PROVIDED OPPORTUNITIES TO APPLY TWO- AND THREE DIMENSIONAL GEOMETRIC CONCEPTS AND KNOWLEDGE TO PROBLEM SOLVING AND ENGINEERING DESIGN. FLUENCY IN THESE GEOMETRIC CONCEPTS IS ESSENTIAL IN EVERY PHASE OF THE DESIGN PROCESS AS PROBLEMS ARE DEFINED, POTENTIAL SOLUTIONS ARE GENERATED TO MEET PHYSICAL CONSTRAINTS, ALTERNATE DESIGN SOLUTIONS ARE COMPARED AND SELECTED, FINAL DESIGNS ARE DOCUMENTED, AND SPECIFICATIONS ARE DEVELOPED. GEOMETRIC CONCEPTS ARE ALSO IMPORTANT IN THE APPROPRIATE APPLICATION OF GEOMETRIC AND DIMENSIONAL RELATIONSHIPS AND CONSTRAINTS FOR EFFECTIVE USE OF THREE-DIMENSIONAL COMPUTER MODELING ENVIRONMENTS THAT EMPLOY PARAMETRIC DESIGN FUNCTIONALITY. IN THIS UNIT STUDENTS USE GEOMETRIC CONCEPTS AND PHYSICAL PROPERTIES TO SOLVE A WIDE VARIETY OF PROBLEMS, PROGRESSING FROM COMPUTATIONS OF SURFACE AREA, WEIGHT, OR VOLUME IN ORDER TO PROVIDE COST ESTIMATES TO THE IDENTIFICATION OF MATERIALS BASED ON PHYSICAL PROPERTY OBSERVATIONS. STUDENTS WILL ALSO USE 3D COMPUTER MODELS TO COMPUTE PHYSICAL PROPERTIES THAT CAN BE USED IN PROBLEM SOLVING AND CREATION OF DESIGN SOLUTIONS.

STUDENTS WILL:

- IDENTIFY TYPES OF POLYGONS INCLUDING A SQUARE, RECTANGLE, PENTAGON, HEXAGON, AND OCTAGON.
- DIFFERENTIATE BETWEEN INSCRIBED AND CIRCUMSCRIBED SHAPES.
- IDENTIFY AND DIFFERENTIATE GEOMETRIC CONSTRUCTIONS AND CONSTRAINTS (SUCH AS HORIZONTAL LINES, VERTICAL LINES, PARALLEL LINES, PERPENDICULAR LINES, COLINEAR POINTS, TANGENT LINES, TANGENT CIRCLES, AND CONCENTRIC CIRCLES) AND THE RESULTS WHEN APPLIED TO SKETCH FEATURES WITHIN A 3D SOLID MODELING ENVIRONMENT.
- DISTINGUISH BETWEEN THE MEANINGS OF THE TERMS WEIGHT AND MASS.
- DEFINE THE TERM “PHYSICAL PROPERTY” AND IDENTIFY THE PROPERTIES OF LENGTH, VOLUME, MASS, WEIGHT, DENSITY, AND SURFACE AREA AS PHYSICAL PROPERTIES.
- IDENTIFY THREE-DIMENSIONAL OBJECTS GENERATED BY ROTATIONS OF TWO-DIMENSIONAL SHAPES AND VICE-VERSA.
- DEFINE THE TERM "CENTER OF GRAVITY".
- EXPLAIN STATIC EQUILIBRIUM AS THE STATE OF AN OBJECT THAT IS AT REST SO THAT THE FORCES ACTING ON THE OBJECT ARE BALANCED.
- SOLVE REAL WORLD AND MATHEMATICAL PROBLEMS INVOLVING AREA AND SURFACE AREA OF TWO- AND THREE-DIMENSIONAL OBJECTS COMPOSED OF TRIANGLES, QUADRILATERALS, POLYGONS, CUBES, RIGHT PRISMS, CYLINDERS, AND SPHERES.
- CREATE THREE-DIMENSIONAL SOLID MODELS OF PARTS WITHIN CAD FROM SKETCHES OR DIMENSIONED DRAWINGS USING APPROPRIATE GEOMETRIC AND DIMENSIONAL CONSTRAINTS AND MODEL FEATURES.

- MEASURE MASS WITH ACCURACY USING A SCALE AND REPORT THE MEASUREMENT USING AN APPROPRIATE LEVEL OF PRECISION.
- MEASURE VOLUME WITH ACCURACY AND REPORT THE MEASUREMENT WITH AN APPROPRIATE LEVEL OF PRECISION.
- CALCULATE A PHYSICAL PROPERTY INDIRECTLY USING AVAILABLE DATA OR PERFORM APPROPRIATE MEASUREMENTS TO GATHER THE NECESSARY DATA (E.G., DETERMINE AREA OR VOLUME USING LINEAR MEASUREMENTS OR DETERMINE DENSITY USING MASS AND VOLUME MEASUREMENTS).
- SOLVE VOLUME PROBLEMS USING VOLUME FORMULAS FOR RECTANGULAR SOLIDS, CYLINDERS, PYRAMIDS, CONES, AND SPHERES.
- USE PHYSICAL PROPERTIES TO SOLVE DESIGN PROBLEMS (E.G., DESIGN AN OBJECT OR STRUCTURE TO SATISFY PHYSICAL CONSTRAINTS OR MINIMIZE COST).
- ASSIGN A SPECIFIC MATERIAL (INCLUDED IN THE SOFTWARE LIBRARY) TO A PART AND USE THE CAPABILITIES OF THE CAD SOFTWARE TO DETERMINE THE MASS, VOLUME, AND SURFACE AREA OF AN OBJECT FOR WHICH A 3D SOLID MODEL HAS BEEN CREATED.
- ASSIGN A DENSITY VALUE TO A NEW MATERIAL (NOT INCLUDED IN THE SOFTWARE LIBRARY) AND APPLY THE MATERIAL TO A 3D SOLID MODEL WITHIN CAD SOFTWARE IN ORDER TO DETERMINE THE PHYSICAL PROPERTIES OF THE OBJECT.
- DETERMINE THE MOMENT OF A FORCE ABOUT A GIVEN POINT.
- DETERMINE THE FORCE REQUIRED TO TIP AN OBJECT AT REST ABOUT A GIVEN TIPPING POINT.

UNIT 6: REVERSE ENGINEERING

EA: B1.0, B2.0, B6.0, B7.0, B9.0, B11.0

UNIT 6 EXPOSES STUDENTS TO THE APPLICATION OF ENGINEERING PRINCIPLES AND PRACTICES TO REVERSE ENGINEER A CONSUMER PRODUCT. REVERSE ENGINEERING INVOLVES DISASSEMBLING AND ANALYZING A PRODUCT OR SYSTEM IN ORDER TO UNDERSTAND AND DOCUMENT THE VISUAL, FUNCTIONAL, AND/OR STRUCTURAL ASPECTS OF ITS DESIGN. IN THIS UNIT STUDENTS WILL HAVE THE OPPORTUNITY TO ASSESS ALL THREE ASPECTS OF A PRODUCT'S DESIGN. STUDENTS WILL LEARN THE VISUAL DESIGN ELEMENTS AND PRINCIPLES AND THEIR APPLICATION IN DESIGN. THEY WILL PERFORM A FUNCTIONAL ANALYSIS TO HYPOTHESIZE THE OVERALL FUNCTION AND SEQUENTIAL OPERATIONS OF THE PRODUCT'S COMPONENT PARTS AND ASSESS THE INPUTS AND OUTPUTS OF THE PROCESS(ES) INVOLVED IN THE OPERATION OF THE PRODUCT. STUDENTS WILL PHYSICALLY DISASSEMBLE THE PRODUCT TO DOCUMENT THE CONSTITUENT PARTS, THEIR PROPERTIES, AND THEIR INTERACTION AND OPERATION. AFTER CAREFULLY DOCUMENTING THESE ASPECTS OF THE VISUAL, FUNCTIONAL, AND STRUCTURAL ASPECTS OF THE PRODUCT, STUDENTS WILL ASSESS THE STRENGTHS AND WEAKNESSES OF THE PRODUCT AND THE MANUFACTURING PROCESS BY WHICH IT WAS PRODUCED.

STUDENTS WILL:

- IDENTIFY AND DESCRIBE THE VISUAL PRINCIPLES AND ELEMENTS OF DESIGN APPARENT IN A NATURAL OR MAN-MADE OBJECT.
- DESCRIBE THE PROCESS OF REVERSE ENGINEERING.
- EXPLAIN THE VARIOUS REASONS TO PERFORM REVERSE ENGINEERING INCLUDING DISCOVERY, DOCUMENTATION, INVESTIGATION, AND PRODUCT IMPROVEMENT.
- EXPLAIN HOW THE VISUAL ELEMENTS AND PRINCIPLES OF DESIGN AFFECT THE AESTHETICS AND COMMERCIAL SUCCESS OF A PRODUCT.
- PERFORM A FUNCTIONAL ANALYSIS OF A PRODUCT IN ORDER TO DETERMINE THE PURPOSE, INPUTS AND OUTPUTS, AND THE OPERATION OF A PRODUCT OR SYSTEM.

- PERFORM A STRUCTURAL ANALYSIS OF A PRODUCT IN ORDER TO DETERMINE THE MATERIALS USED AND THE FORM OF COMPONENT PARTS AS WELL AS THE CONFIGURATION AND INTERACTION OF COMPONENT PARTS WHEN ASSEMBLED (IF APPLICABLE).
- SELECT AND UTILIZE TECHNOLOGY (SOFTWARE AND HARDWARE) TO CREATE HIGH IMPACT VISUAL AIDS.

UNIT 7: DOCUMENTATION
EA: B1.0, B2.0, B6.0, B9.0, B11.0

IN UNIT 7 STUDENTS WILL ENHANCE THEIR BASIC KNOWLEDGE OF TECHNICAL DRAWING REPRESENTATIONS LEARNED EARLIER IN THE COURSE TO INCLUDE THE CREATION OF ALTERNATE (SECTION AND AUXILIARY) VIEWS AND APPROPRIATE DIMENSIONING AND ANNOTATION OF TECHNICAL DRAWINGS. STUDENTS WILL ALSO BE INTRODUCED TO THE REALITY OF VARIATION IN DIMENSIONAL PROPERTIES OF MANUFACTURED PRODUCTS. THEY WILL LEARN THE APPROPRIATE USE OF DIMENSIONAL TOLERANCES AND ALTERNATE DIMENSIONING METHODS TO SPECIFY ACCEPTABLE RANGES OF THE PHYSICAL PROPERTIES IN ORDER TO MEET DESIGN CRITERIA. STUDENTS WILL APPLY THIS KNOWLEDGE TO CREATE ENGINEERING WORKING DRAWINGS THAT DOCUMENT MEASUREMENTS COLLECTED DURING A REVERSE ENGINEERING PROCESS. THESE SKILLS WILL ALSO ALLOW STUDENTS TO EFFECTIVELY DOCUMENT A PROPOSED NEW DESIGN. STUDENTS WILL USE 3D COMPUTER MODELING SOFTWARE TO MODEL THE ASSEMBLY OF THE CONSUMER PRODUCT, AS SUCH A MODEL CAN BE USED TO REPLICATE FUNCTIONAL OPERATION AND PROVIDE VIRTUAL TESTING OF PRODUCT DESIGN.

STUDENTS WILL:

- IDENTIFY AND DIFFERENTIATE BETWEEN SIZE DIMENSIONS AND LOCATION DIMENSIONS.
- IDENTIFY AND CORRECTLY APPLY CHAIN DIMENSIONING OR DATUM DIMENSIONING METHODS TO A TECHNICAL DRAWING.
- IDENTIFY DIMENSIONING STANDARDS COMMONLY USED IN TECHNICAL DRAWING.
- IDENTIFY THE SHAPES OF TWO-DIMENSIONAL CROSS SECTIONS OF THREE DIMENSIONAL OBJECTS.
- IDENTIFY, DEFINE AND EXPLAIN THE PROPER USE OF A SECTION VIEW IN TECHNICAL DRAWING.
- READ AND INTERPRET A HOLE NOTE TO IDENTIFY THE SIZE AND TYPE OF HOLE INCLUDING THROUGH, CLEARANCE, BLIND, COUNTER BORE, AND COUNTERSINK HOLES.
- IDENTIFY AND DIFFERENTIATE AMONG LIMIT DIMENSIONS, A UNILATERAL TOLERANCE, AND A BILATERAL TOLERANCE.
- DIFFERENTIATE BETWEEN CLEARANCE AND INTERFERENCE FIT.
- EXPLAIN EACH ASSEMBLY CONSTRAINT (INCLUDING MATE, FLUSH, INSERT, AND TANGENT), ITS ROLE IN AN ASSEMBLY MODEL, AND THE DEGREES OF FREEDOM THAT IT REMOVES FROM THE MOVEMENT BETWEEN PARTS.
- HAND SKETCH A SCALED FULL OR HALF SECTION VIEW IN THE CORRECT ORIENTATION TO FULLY DETAIL AN OBJECT OR PART GIVEN THE ACTUAL OBJECT, A DETAILED VERBAL DESCRIPTION OF THE OBJECT, A PICTORIAL VIEW OF THE OBJECT, OR A SET OF ORTHOGRAPHIC PROJECTIONS.
- GENERATE SECTION VIEWS USING CAD ACCORDING TO STANDARD ENGINEERING PRACTICE.
- DIMENSION A SECTION VIEW OF A SIMPLE OBJECT OR PART ACCORDING TO A SET OF DIMENSIONING STANDARDS AND ACCEPTED PRACTICES.

- ANNOTATE (INCLUDING SPECIFIC AND GENERAL NOTES) WORKING DRAWINGS ACCORDING TO ACCEPTED ENGINEERING PRACTICE. INCLUDE DIMENSIONING ACCORDING TO A SET OF DIMENSIONING RULES, PROPER HOLE AND THREAD NOTES, PROPER TOLERANCE ANNOTATION, AND THE INCLUSION OF OTHER NOTES NECESSARY TO FULLY DESCRIBE A PART ACCORDING TO STANDARD ENGINEERING PRACTICE.

- CREATE SPECIFIC NOTES ON A TECHNICAL DRAWING TO CONVEY IMPORTANT INFORMATION ABOUT A SPECIFIC FEATURE OF A DETAILED OBJECT, AND CREATE GENERAL NOTES TO CONVEY DETAILS THAT PERTAIN TO INFORMATION PRESENTED ON THE ENTIRE DRAWING (SUCH AS UNITS, SCALE, PATENT DETAILS, ETC.).
- MODEL AND ANNOTATE (WITH A HOLE NOTE) THROUGH, CLEARANCE, BLIND, COUNTER BORE, AND COUNTERSINK HOLES.
- COMPARE THE EFFECT OF CHAIN DIMENSIONING AND DATUM DIMENSIONING ON THE TOLERANCE OF A PARTICULAR SPECIFIED DIMENSION.
- DETERMINE THE SPECIFIED DIMENSION, TOLERANCE, UPPER LIMIT, AND LOWER LIMIT FOR ANY GIVEN DIMENSION AND RELATED TOLERANCE (OR ANY DISTANCE THAT IS DEPENDENT ON GIVEN DIMENSIONS) SHOWN ON A TECHNICAL DRAWING.
- DETERMINE THE ALLOWANCE BETWEEN TWO MATING PARTS OF AN ASSEMBLY BASED ON DIMENSIONS GIVEN ON A TECHNICAL DRAWING.
- IDENTIFY THE TYPE OF FIT GIVEN A DRAWING, A DESCRIPTION, OR A PHYSICAL EXAMPLE OF TWO MATING PARTS.
- CREATE ASSEMBLIES OF PARTS IN CAD AND USE APPROPRIATE ASSEMBLY CONSTRAINTS TO CREATE AN ASSEMBLY THAT ALLOWS CORRECT REALISTIC MOVEMENT AMONG PARTS. MANIPULATE THE ASSEMBLY MODEL TO DEMONSTRATE THE MOVEMENT.
- CREATE A CAD ASSEMBLY DRAWING. IDENTIFY EACH COMPONENT OF THE ASSEMBLY WITH IDENTIFICATION NUMBERS AND CREATE A PARTS LIST TO DETAIL EACH COMPONENT USING CAD.
- ANALYZE INFORMATION GATHERED DURING REVERSE ENGINEERING TO IDENTIFY SHORTCOMING OF THE DESIGN AND/OR OPPORTUNITIES FOR IMPROVEMENT OR INNOVATION.
- DEFINE AND JUSTIFY A DESIGN PROBLEM AND EXPRESS THE CONCERNS, NEEDS, AND DESIRES OF THE PRIMARY STAKEHOLDERS.
- PRESENT AND JUSTIFY DESIGN SPECIFICATIONS, AND CLEARLY EXPLAIN THE CRITERIA AND CONSTRAINTS ASSOCIATED WITH A SUCCESSFUL DESIGN SOLUTION.
- WRITE A DESIGN BRIEF TO COMMUNICATE THE PROBLEM, PROBLEM CONSTRAINTS, AND SOLUTION CRITERIA.
- SUPPORT DESIGN IDEAS USING A VARIETY OF CONVINCING EVIDENCE.
- JOINTLY DEVELOP A DECISION MATRIX BASED ON ACCEPTED OUTCOME CRITERIA AND CONSTRAINTS.
- CLEARLY JUSTIFY AND VALIDATE A SELECTED SOLUTION PATH.
- CREATE A SET OF WORKING DRAWINGS TO DETAIL A DESIGN PROJECT.

UNIT 8: ADVANCED COMPUTER MODELING
EA: B1.0, B2.0, B6.0, B11.0

IN THIS UNIT STUDENTS WILL LEARN ADVANCED 3D COMPUTER MODELING SKILLS. THESE ADVANCED SKILLS INCLUDE CREATING EXPLODED AND ANIMATED ASSEMBLY VIEWS OF MULTI-PART PRODUCTS. STUDENTS WILL LEARN TO USE MATHEMATICAL FUNCTIONS TO REPRESENT RELATIONSHIPS IN DIMENSIONAL PROPERTIES OF A MODELED OBJECT WITHIN THE 3D ENVIRONMENT. STUDENTS WILL ALSO DEVELOP AND APPLY MATHEMATICAL RELATIONSHIPS TO ENFORCE APPROPRIATE DIMENSIONAL AND MOTION CONSTRAINTS. STUDENTS WILL REVERSE ENGINEER AND MODEL A CONSUMER PRODUCT, PROVIDING APPROPRIATE PARAMETRIC CONSTRAINTS TO CREATE A 3D MODEL AND REALISTIC OPERATION OF THE PRODUCT.

STUDENTS WILL:

- IDENTIFY, DEFINE, AND EXPLAIN THE PROPER USE OF AN AUXILIARY VIEW IN TECHNICAL DRAWING.
- USE ADVANCED MODELING FEATURES TO CREATE THREE-DIMENSIONAL SOLID MODELS OF COMPLEX PARTS AND ASSEMBLIES WITHIN CAD AND WITH LITTLE GUIDANCE GIVEN THE ACTUAL PART USING APPROPRIATE GEOMETRIC AND DIMENSIONAL CONSTRAINTS.

- FORMULATE EQUATIONS AND INEQUALITIES TO REPRESENT RELATIONSHIPS BETWEEN QUANTITIES.
- USING A CAD APPLICATION, CREATE RELATIONSHIPS AMONG PART FEATURES AND DIMENSIONS USING PARAMETRIC FORMULAS.
- CREATE AN EXPLODED ASSEMBLY VIEW OF A MULTI-PART PRODUCT. IDENTIFY EACH COMPONENT OF THE ASSEMBLY WITH IDENTIFICATION NUMBERS AND CREATE A PARTS LIST TO DETAIL EACH COMPONENT USING CAD.
- PERFORM A PEER REVIEW OF TECHNICAL DRAWINGS AND OFFER CONSTRUCTIVE FEEDBACK BASED ON STANDARD ENGINEERING PRACTICES.
- HAND SKETCH AN AUXILIARY VIEW IN THE CORRECT ORIENTATION TO FULLY DETAIL AN OBJECT OR PART GIVEN THE ACTUAL OBJECT, A DETAILED VERBAL DESCRIPTION OF THE OBJECT, A PICTORIAL VIEW OF THE OBJECT, OR A SET OF ORTHOGRAPHIC PROJECTIONS.
- GENERATE AN AUXILIARY VIEW USING CAD ACCORDING TO STANDARD ENGINEERING PRACTICE.

UNIT 9: DESIGN TEAM

EA: B1, B2, B6, B7, B9, B10, B11

IN THIS UNIT STUDENTS, WILL WORK AS A COLLABORATIVE TEAM WITH GEOGRAPHICALLY SEPARATE TEAM MEMBERS, THEREBY REQUIRING VIRTUAL COMMUNICATIONS. THROUGH THE DESIGN PROCESS, THE TEAM WILL EXPERIENCE SHARED DECISION MAKING AS THEY WORK TO SOLVE A NEW DESIGN CHALLENGE. THEY WILL REFLECT ON THE ETHICAL RESPONSIBILITIES OF ENGINEERS AS THEY INVESTIGATE DIFFERENT MATERIALS, MANUFACTURING PROCESSES, AND THE SHORT AND LONG-TERM IMPACTS THAT THEIR DECISION-MAKING MAY POTENTIALLY HAVE ON SOCIETY AND ON THE WORLD.

STUDENTS WILL:

- IDENTIFY AND DESCRIBE THE STEPS OF A TYPICAL PRODUCT LIFECYCLE (INCLUDING RAW MATERIAL EXTRACTION, PROCESSING, MANUFACTURE, USE AND MAINTENANCE, AND DISPOSAL).
- IDENTIFY AND EXPLAIN HOW THE BASIC THEORIES OF ETHICS RELATE TO ENGINEERING.
- IDENTIFY TEAM MEMBER SKILL SETS NEEDED TO PRODUCE AN EFFECTIVE TEAM.
- DEFINE THE TERM GROUP NORMS AND DISCUSS THE IMPORTANCE OF NORMS IN CREATING AN EFFECTIVE TEAM ENVIRONMENT.
- IDENTIFY THE ADVANTAGES AND DISADVANTAGES OF VIRTUAL DESIGN TEAMS COMPARED TO TRADITIONAL DESIGN TEAMS.
- ASSESS THE DEVELOPMENT OF AN ENGINEERED PRODUCT AND THE IMPACT OF THE PRODUCT ON SOCIETY AND THE ENVIRONMENT.
- UTILIZE RESEARCH TOOLS AND RESOURCES (SUCH AS THE INTERNET; MEDIA CENTERS; MARKET RESEARCH; PROFESSIONAL JOURNALS; PRINTED, ELECTRONIC, AND MULTIMEDIA RESOURCES; ETC.) TO VALIDATE DESIGN DECISIONS AND JUSTIFY A PROBLEM SOLUTION.
- SUMMARIZE KEY IDEAS IN INFORMATION SOURCES INCLUDING SCIENTIFIC AND ENGINEERING TEXTS, TABLES, DIAGRAMS, AND GRAPHS.
- DELIVER ORGANIZED ORAL PRESENTATIONS OF WORK TAILORED TO THE AUDIENCE.
- ORGANIZE AND EXPRESS THOUGHTS AND INFORMATION IN A CLEAR AND CONCISE MANNER.
- PARTICIPATE ON A VIRTUAL TEAM USING REMOTE COLLABORATION TOOLS TO SUPPORT TEAM COLLABORATION AND PROBLEM SOLVING.
- IDENTIFY APPROPRIATE TECHNOLOGY TO SUPPORT REMOTE COLLABORATION AMONG VIRTUAL DESIGN TEAM MEMBERS (SUCH AS ASYNCHRONOUS COMMUNICATIONS, AUDIO AND VIDEO CONFERENCING, INSTANT MESSAGING, SYNCHRONOUS FILE EDITING, AND FILE TRANSFER).

- DEMONSTRATE POSITIVE TEAM BEHAVIORS AND CONTRIBUTE TO A POSITIVE TEAM DYNAMIC.
- CONTRIBUTE EQUITABLY TO THE ATTAINMENT OF GROUP GOALS BASED ON ASSIGNED ROLES.
- PRACTICE APPROPRIATE CONFLICT RESOLUTION STRATEGIES WITHIN A TEAM ENVIRONMENT.
- IDENTIFY AN APPROPRIATE MODE OF TWO-WAY COMMUNICATION BASED ON THE AUDIENCE AND INTENDED GOAL OF THE COMMUNICATION.
- USE AN APPROPRIATE AND PROFESSIONAL TONE AND VERNACULAR BASED ON THE AUDIENCE OF THE CORRESPONDENCE.
- DOCUMENT CORRESPONDENCE AND CONVERSATIONS IN AN ACCURATE AND ORGANIZED MANNER. U8
- CREATE AND UTILIZE A GANTT CHART TO PLAN, MONITOR, AND CONTROL TASK COMPLETION DURING A DESIGN PROJECT.
- ADJUST VOICE AND WRITING STYLE TO ALIGN WITH AUDIENCE AND PURPOSE.
- DELIVER ORGANIZED ORAL PRESENTATIONS OF WORK TAILORED TO THE AUDIENCE.

<u>ENGINEERING AND ARCHITECTURE PATHWAY STANDARDS</u>
ENGINEERING TECHNOLOGY PATHWAY

B1.0 - COMMUNICATE AND INTERPRET INFORMATION CLEARLY IN INDUSTRY-STANDARD VISUAL AND WRITTEN FORMATS.
B2.0 - DEMONSTRATE THE SKETCHING PROCESS USED IN CONCEPT DEVELOPMENT.
B4.0 - UNDERSTAND THE CONCEPTS OF PHYSICS THAT ARE FUNDAMENTAL TO ENGINEERING TECHNOLOGY.
B6.0 - EMPLOY THE DESIGN PROCESS TO SOLVE ANALYSIS AND DESIGN PROBLEMS.
B7.0 - UNDERSTAND INDUSTRIAL ENGINEERING PROCESSES, INCLUDING THE USE OF TOOLS AND EQUIPMENT, METHODS OF MEASUREMENT, AND QUALITY ASSURANCE.
B7.0 - UNDERSTAND INDUSTRIAL ENGINEERING PROCESSES, INCLUDING THE USE OF TOOLS AND EQUIPMENT, METHODS OF MEASUREMENT, AND QUALITY ASSURANCE.
B9.0 - UNDERSTAND THE FUNDAMENTALS OF SYSTEMS AND MARKET INFLUENCES ON PRODUCTS AS THEY ARE DEVELOPED AND RELEASED TO PRODUCTION.
B10.0 - DESIGN AND CONSTRUCT A CULMINATING PROJECT EFFECTIVELY USING ENGINEERING TECHNOLOGY.
B11.0 - UNDERSTAND THE METHODS OF CREATING BOTH WRITTEN AND DIGITAL PORTFOLIOS.

3. Key Assignments:
UNIT 1:
ENGINEERING NOTEBOOK & PORTFOLIO - AN ENGINEERING NOTEBOOK CONTAINS ALL *DESIGN* WORK COMPLETED FOR A SPECIFIC DESIGN PROJECT. IT IS A CHRONOLOGICAL DOCUMENTATION OF ALL TASKS COMPLETED DURING A DESIGN PROCESS, INCLUDING CORRESPONDENCE, IDEAS, SKETCHES, JOURNAL ENTRIES RELATED TO DESIGN, CALCULATIONS, PHOTOGRAPHS, CLASS NOTES, MEETING NOTES, TEST PROCEDURES AND DATA, AND OTHER CRITICAL INFORMATION. A LONGITUDINAL OR GROWTH PORTFOLIO SHOWS GROWTH FROM EARLY TO LATER WORK IN REGARD TO SPECIFIC SKILLS AND EXTENT OF MASTERY. ENTRIES IN A LONGITUDINAL PORTFOLIO CAN SPAN SEVERAL YEARS AND COURSES.
CONCEPT SKETCHING - THE PURPOSE OF THIS ACTIVITY IS TO PRODUCE HAND-DRAWN REPRESENTATIONS OF REAL OBJECTS THAT CLOSELY RESEMBLE THE ACTUAL OBJECTS AND THAT APPEAR THREE-DIMENSIONAL. IN THIS ACTIVITY, STUDENTS WILL FOCUS ON OBTAINING THE CORRECT SHAPE AND PROPORTIONS OF EACH OBJECT FROM A SINGLE "STRAIGHT-ON" OR ORTHOGRAPHIC VIEW AND ADD SHADING TO PRODUCE A MORE REALISTIC THREE-DIMENSIONAL EFFECT. STUDENTS WILL START WITH SIMPLE FORMS AND PROGRESS TO MORE COMPLICATED PRODUCTS.
PRODUCT IMPROVEMENT - THIS ACTIVITY IS DESIGNED TO PROVIDE AN INTRODUCTION TO DESIGN. AS A TEAM OF TWO, STUDENTS WILL BRAINSTORM WAYS TO ENHANCE OR CHANGE A PLAIN OBJECT SO THAT NEARLY EVERY

CONSUMER WOULD WANT TO PURCHASE IT. STUDENTS APPLY THE RULES FOR BRAINSTORMING THAT WERE IDENTIFIED IN THE POWERPOINT DURING THIS ACTIVITY.

UNIT 2:
SKETCHING PRACTICE - IN THIS ACTIVITY STUDENTS WILL APPLY THE SKETCHING SKILLS (ISOMETRIC, OBLIQUE, PERSPECTIVE, AND MULTIVIEW) PREVIOUSLY LEARNED IN THIS UNIT TO MORE COMPLEX OBJECTS.

UNIT 3:
MAKING LINEAR MEASUREMENTS – IN THIS ACTIVITY STUDENTS PRACTICE MEASURING AND RECORDING DIMENSIONS USING A DIAL CALIPER.
LINEAR DIMENSIONS – IN THIS ACTIVITY STUDENTS WILL APPLY THEIR KNOWLEDGE OF DIMENSIONING TO IDENTIFY DIMENSIONING ERRORS AND PROVIDE MISSING DIMENSIONS ON MULTI-VIEW DRAWINGS. STUDENTS WILL ALSO FULLY DIMENSION MULTI-VIEW SKETCHES ACCORDING TO DIMENSIONING GUIDELINES.
STATISTICAL ANALYSIS WITH EXCEL – IN THIS ACTIVITY STUDENTS WILL COLLECT DATA AND USE MICROSOFT EXCEL TO PERFORM STATISTICAL ANALYSES AND CREATE STATISTICAL CHARTS TO DISPLAY DATA.
MANUFACTURING A BOX - IN THIS PROJECT, STUDENTS WILL WORK IN TEAMS TO DESIGN, TEST, AND IMPROVE A MANUFACTURING PROCESS TO BUILD BOXES. COLLECTIVELY STUDENTS WILL BUILD A BOX FOR EACH STUDENT IN THE CLASS. AS PART OF THE PROCESS, STUDENTS WILL TEST THE QUALITY OF THE BOXES USING STATISTICS. NOTE THAT THE BOX WILL BECOME PART OF THE STUDENT'S DESIGN FOR PROBLEM 8.2 AUTOMATA DESIGN CHALLENGE.

UNIT 4:
MODEL CREATION - TO EFFECTIVELY USE A CAD PROGRAM TO CREATE 3D MODELS OF A PART, A DESIGNER MUST BE FAMILIAR WITH THE BASIC STRATEGIES OF ADDITIVE AND SUBTRACTIVE MODELING METHODS. THIS ACTIVITY WILL HELP STUDENTS UNDERSTAND THE SKETCHING TOOLS AND EXTRUSION FEATURES THAT ARE COMMON TO MOST CAD PROGRAMS, PLAN AN EFFICIENT METHOD OF SIMPLE MODEL CREATION, AND GAIN EXPERIENCE CREATING SIMPLE 3D MODELS.
MATHEMATICAL MODELING - IN THIS ACTIVITY STUDENTS WILL COLLECT AND ANALYZE DATA IN ORDER TO MAKE PREDICTIONS BASED ON THAT DATA. STUDENTS WILL USE BOTH MANUAL AND COMPUTER METHODS TO RECORD, MANIPULATE, AND ANALYZE THE DATA IN ORDER TO DETERMINE MATHEMATICAL RELATIONSHIPS BETWEEN QUANTITIES. THESE MATHEMATICAL RELATIONSHIPS CAN BE REPRESENTED GRAPHICALLY AND BY EQUATIONS, ALSO KNOWN AS MATHEMATICAL MODELS. STUDENTS WILL THEN USE THE MATHEMATICAL MODELS TO MAKE PREDICTIONS RELATED TO THE QUANTITIES.
CAMS IN MOTION - IN THIS ACTIVITY, STUDENTS WILL CREATE A 3D SOLID MODEL OF A CAM. STUDENTS WILL PLACE THE 3D MODEL IN AN ASSEMBLY MODEL, SIMULATE THE ROTATION OF THE CAM, AND STUDY THE RESULTING MOTION OF ANOTHER PART CALLED A FOLLOWER. STUDENTS WILL THEN COLLECT DATA AND CREATE A MOTION GRAPH TO REPRESENT MOTION OF THE FOLLOWER. BY COMPARING THEIR MOTION GRAPH TO THOSE CREATED BY TEAMMATES, EACH TEAM WILL DEVELOP A MATHEMATICAL MODEL FOR THE VERTICAL DISPLACEMENT OF A FOLLOWER RESULTING FROM THE ROTATION OF DIFFERENT SIZED CAMS OF SIMILAR SHAPE.
DESIGN A CAM - IN THIS PROJECT, STUDENTS WILL DESIGN A CAM TO PROVIDE A SPECIFIED MOTION. STUDENTS WILL THEN CREATE A PHYSICAL MODEL AND TEST THEIR DESIGN TO COMPARE THE RESULTS AGAINST THE DESIRED OUTCOME.

UNIT 5:
INTRODUCTION TO CAD MODELING - IN THIS ACTIVITY, STUDENTS CREATE CAD MODELS THROUGH SEQUENTIALLY DEVELOPING GEOMETRIC SKETCHES AND GENERATING 3D FORMS. THIS ACTIVITY WILL HELP STUDENTS TO UNDERSTAND AND USE THE MOST FREQUENTLY USED SKETCHING AND FEATURE TOOLS THAT ARE COMMON TO MOST CAD PROGRAMS.

DETERMINING DENSITY – IN THIS ACTIVITY, STUDENTS MEASURE VOLUME AND MASS TO DETERMINE THE DENSITY OF GEOMETRIC AND COMPLEX OBJECTS.
PHYSICAL PROPERTY ANALYSIS - IN THIS ACTIVITY STUDENTS WILL CALCULATE THE VOLUME OF A PART AND THE SURFACE AREA; STUDENTS WILL LOOK UP THE DENSITY OF THE MATERIAL AND THEN CALCULATE THE MASS. NEXT, STUDENTS WILL CHECK THEIR WORK USING A 3D SOLID MODELING SOFTWARE PROGRAM. AFTER STUDENTS HAVE LEARNED HOW TO CALCULATE THE PHYSICAL PROPERTIES OF THE EXAMPLE PARTS PROVIDED, THEY WILL THEN DO AN ANALYSIS ON A PUZZLE CUBE PIECE AND PARTS OF THE AUTOMOBLOX VEHICLE OR OTHER CONSUMER PRODUCT.
REINDEER GAMES - IN THIS PROJECT, STUDENTS WILL DEVELOP A CONCEPTUAL DESIGN FOR A REINDEER YARD ORNAMENT THAT CAN BE MANUFACTURED FROM TREE DEBRIS OR PLYWOOD SCRAPS. STUDENTS WILL PRESENT THEIR PROPOSED DESIGN TO THE CLASS.

UNIT 6:
VISUAL ANALYSIS – IN THIS ACTIVITY STUDENT WILL CONDUCT A VISUAL ANALYSIS TO IDENTIFY THE VISUAL DESIGN PRINCIPLES AND ELEMENTS THAT GIVE AN OBJECT ITS VISUAL APPEAL (OR LACK THEREOF).
FUNCTIONAL ANALYSIS – IN THIS ACTIVITY STUDENTS WILL CONDUCT A STUDY OF THE OBJECT'S FUNCTION. THIS IS DONE THROUGH CAREFUL OBSERVATION OF THE OBJECT'S SEQUENTIAL OPERATION BEFORE IT IS DISASSEMBLED. BY FIRST OBSERVING THE PRODUCT, STUDENTS HYPOTHESIZE HOW A PRODUCT OPERATES AND THEN COMPARE THEIR PREDICTIONS TO THEIR ACTUAL FINDINGS AFTER THE PART IS DISSECTED.
STRUCTURAL ANALYSIS - DURING THIS ACTIVITY STUDENTS WILL INVESTIGATE VITAL PRODUCT CHARACTERISTICS WITH REGARD TO THE STRUCTURE OF THEIR PRODUCT. STUDENTS WILL RESEARCH AND DOCUMENT THEIR FINDINGS USING CAREFUL MEASUREMENTS, SKETCHES, AND NOTES WHICH WILL COMPLETE THE REVERSE ENGINEERING OF YOUR PRODUCT.
REVERSE ENGINEERING PRESENTATION - TO CONCLUDE THE PROJECT, STUDENT TEAM WILL MAKE A POSTER PRESENTATION OF THEIR FINDINGS. YOU WILL CREATE EITHER A PHYSICAL TRI-FOLD POSTER OR AN ELECTRONIC POSTER TO DISPLAY YOUR PRODUCT AND THE INFORMATION THAT YOU HAVE GATHERED.

UNIT 7:
ASSEMBLY MODELS - IN THIS PROJECT STUDENTS WILL DETAIL THE OBJECT FROM THEIR REVERSE ENGINEERING PROJECT WITH TECHNICAL DRAWINGS IN ORDER TO PROVIDE DETAILED INFORMATION NECESSARY TO DESIGN ACCESSORIES AND ENHANCEMENTS THAT WILL PROPERLY CONNECT WITH THE ORIGINAL DESIGN. IN ADDITION, STUDENTS WILL BEGIN THE PROCESS OF ASSEMBLING A PORTFOLIO TO PRESENT THEIR REVERSE-ENGINEERING EFFORTS AND TECHNICAL DOCUMENTATION OF THE PRODUCT.
PRODUCT ENHANCEMENT - IN THIS ACTIVITY STUDENT TEAMS WILL DESIGN AN ENHANCEMENT OR ACCESSORY TO THEIR REVERSE ENGINEERING OBJECT THAT CAN BE SOLD SEPARATELY OR THAT CAN BE MARKETED TO THE ORIGINAL COMPANY AS AN ADDITIONAL LINE OF PRODUCTS. THE ACCESSORY OR ENHANCEMENT MUST SOMEHOW ATTACH TO THE OBJECT AND CAN INCLUDE ANYTHING THAT WOULD APPEAL TO THE TARGET MARKET.

UNIT 8:
AUTOMATA DESIGN CHALLENGE - IN THIS PROBLEM, STUDENTS WILL DESIGN, BUILD AND TEST A MECHANICAL SYSTEM TO AUTOMATE THE MOTION OF OBJECTS. THE AUTOMATA WILL BE DESIGNED AS A TOY FOR A CHILD BETWEEN THE AGES OF 9 AND 12 YEARS OLD.

UNIT 9:
PRODUCT LIFECYCLE - IN THIS ACTIVITY STUDENTS WILL SELECT A CONSUMER PRODUCT AND RESEARCH ITS LIFECYCLE FROM THE BEGINNING TO END. STUDENTS WILL DETAIL THE FIVE STEPS (RAISE AND EXTRACT, PROCESS, MANUFACTURE, USE, AND DISPOSE) OF THE PRODUCT LIFECYCLE IN A PRESENTATION TO THE CLASS.
VIRTUAL DESIGN CHALLENGE - IN THIS PROJECT STUDENTS WILL BE TEAMED UP WITH ANOTHER STUDENT WHO IS NOT IN THEIR CLASS. STUDENTS WILL USE THEIR KNOWLEDGE OF DESIGN PROCESS, ENGINEERING TOOLS, THE

INTERNET, AND METHODS OTHER THAN DIRECT FACE-TO-FACE CONTACT TO COMMUNICATE AND WORK WITH THEIR PARTNER TO SOLVE A GIVEN PROBLEM.

4. Instructional Methods and/or Strategies:

STUDENTS WILL BE ENGAGED IN A VARIETY OF ACTIVITIES THAT BALANCE DIRECT INSTRUCTION WITH PROJECT WORK. STUDENTS WILL BE EXPECTED TO APPLY THE CONCEPTS AND PROCESSES LEARNED DURING DIRECT INSTRUCTION TO THEIR PROJECTS. STUDENTS WILL ATTEND LECTURES, COMPLETE LABS, BECOME INVOLVED WITH PROFESSIONAL MENTORS, COMPLETE REAL-WORLD PROJECTS, AND MAKE PRESENTATIONS THAT DEMONSTRATE UNDERSTANDING OF DESIGN/FABRICATION CONCEPTS AND THE RESEARCH PROCESS.

METHODS OF INSTRUCTION WILL INCLUDE:

- DIRECT INSTRUCTION (LECTURES, DISCUSSIONS, READINGS, AND LAB ACTIVITIES SPECIFIC FOR MASTERY OF CONTENT);
- USE OF ACTIVITY, PROBLEM, PROJECT-BASED LEARNING WITH SUPPORT FROM PROFESSIONAL MENTORS;
- DEVELOPMENT OF LANGUAGE ARTS SKILLS WHILE STUDENTS COMPLETE REPORTS, JOURNALS, ANALYSES, AND ESSAYS;
- USE OF EDUCATIONAL COURSEWARE, INTERFACED PROBE WARE, SCIENTIFIC INSTRUMENTATION, AND PROFESSIONAL SOFTWARE;
- USE OF A VARIETY OF INSTRUCTIONAL MATERIALS AND RESOURCES INCLUDING ELECTRONIC MEDIA, HANDBOOKS, PROFESSIONAL JOURNALS, REFERENCE MATERIALS, AND TEXTBOOKS;
- SELF-DIRECTED, COOPERATIVE, AND COLLABORATIVE LEARNING OPPORTUNITIES TO INCREASE RESPONSIBILITY OF STUDENTS FOR THEIR OWN LEARNING;
- USE OF STUDENT PRESENTATIONS, EXHIBITS, AND COMPETITIONS;
- EMBEDDED ASSESSMENTS AS A LEARNING TOOL;
- DIFFERENTIATED INSTRUCTION FOR STUDENTS' NEEDS; AND
- ACTIVITIES WHICH PROMOTE SCIENTIFIC KNOWLEDGE AND ADAPTATION OF TECHNOLOGY

5. Assessment Including Methods and/or Tools:

THE EVALUATION OF STUDENT PROGRESS AND EVALUATION WILL BE BASED ON THE FOLLOWING CRITERIA OUTLINED IN BOARD POLICY:

- ASSESSMENTS: 60-75% OF THE FINAL GRADE
- ASSIGNMENTS AND CLASS DISCUSSIONS: 25-40% OF THE FINAL GRADE

ASSESSMENT OPPORTUNITIES THAT ALLOW CONTINUOUS EVALUATION OF STUDENT PROGRESS WILL BE EMBEDDED THROUGHOUT THE COURSE AND WILL BE A PART OF THE LEARNING EXPERIENCE. ALL STUDENTS WILL BE EXPECTED TO ACHIEVE MASTERY OF ALL TOPICS, OFTEN WITH DEMONSTRATION OF MASTERY OCCURRING DURING A PUBLIC FORUM. THE FOLLOWING STRATEGIES, WHICH INCLUDE BOTH FORMAL AND INFORMAL ASSESSMENT TECHNIQUES, MAY INCLUDE BUT ARE NOT LIMITED TO:

- WRITTEN TESTS WITH A VARIETY OF SHORT ANSWER, ESSAY QUESTIONS, AND PROBLEMS;
- PERFORMANCE-BASED ASSESSMENTS SUCH AS EXPERIMENTS, DEMONSTRATIONS, DISCUSSIONS, DEBATES, SIMULATIONS, AND PROJECTS;
- PRESENTATIONS, BOTH TEAM AND INDIVIDUAL:
- A CUMULATIVE PORTFOLIO OF INVESTIGATIVE ACCOMPLISHMENTS; AND WRITTEN ASSIGNMENTS (SUCH AS JUSTIFICATION, INVESTIGATIONS, PRIMARY AND SECONDARY RESEARCH, EVALUATIVE, OR TECHNICAL)

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Grace Park, Ed.D., Assistant Superintendent, Curriculum, Instruction, Innovation, and Support
Julian Rodriguez, Ed.D, Director, Secondary Curriculum and Instruction

SUBJECT: **COURSE MODIFICATION: PUBLIC SPEAKING**

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BACKGROUND

The Chino Valley Unified School District routinely revises curriculum guides and develops new courses in accordance with State Content Standards, State Frameworks, and student need. Accordingly, the revision and development of curriculum guides are the results of a collaborative effort of teachers in the related academic areas.

Public Speaking is an introductory course in speech communication designed to develop and enhance the communication skills necessary to be successful in preparation for the rigors of college and the demands of professional careers. The course provides a forum for students to learn communication techniques and improve speaking skills in a comfortable classroom environment. The course focuses on research, writing, and delivery of a variety of individual speeches and group presentations. This course is being modified to meet UC/CSU 'g' elective requirements.

New language is provided in UPPER CASE while old language to be deleted is ~~lined through~~.

This course was presented to the Curriculum Council and A.C.T. has been consulted.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended the Board of Education receive for information the course modification for Public Speaking.

FISCAL IMPACT

None.

WMJ:GP:JR:lar

Chino Valley Unified School District
High School Course Description

A. CONTACTS	
1. School/District Information:	School/District: Chino Valley Unified School District Street Address: 5130 Riverside Dr. Phone: (909) 628-1201 Web Site: chino.k12.ca.us
2. Course Contact:	Teacher Contact: Office of Secondary Curriculum Position/Title: Director of Secondary Curriculum Site: District Office Phone: (909) 628-1201 X1630
B. COVER PAGE - COURSE ID	
1. Course Title:	Public Speaking
2. Transcript Title/Abbreviation:	Public Speaking
3. Transcript Course Code/Number:	5801
4. Seeking Honors Distinction:	No
5. Subject Area/Category:	Meets the UC/CSU "g" General Elective requirement
6. Grade Level(s):	~~9~~ ~~12~~ 11-12
7. Unit Value:	5 credits per semester/10 credits total
8. Course Previously Approved by UC:	No
9. Classified as a Career Technical Education Course:	No
10. Modeled after an UC-approved course:	Yes
11. Repeatable for Credit:	No
12. Date of Board Approval:	June 27, 2013
Date of Revision Approval:	

13. Brief Course Description:
Public Speaking is an introductory course in speech communication. The course provides a forum for students to learn communication techniques and improve speaking skills in a comfortable classroom environment. The course focuses on RESEARCHING, writing, and delivering a variety of individual speeches and group presentations.

14. Prerequisites:	TENTH GRADE ENGLISH LANGUAGE ARTS (RECOMMENDED) WORLD HISTORY OR ADVANCED PLACEMENT EUROPEAN HISTORY (RECOMMENDED)

15. Context for Course:
PUBLIC SPEAKING IS A COURSE TO DEVELOP AND ENHANCE THE COMMUNICATION SKILLS NECESSARY TO BE SUCCESSFUL IN PREPARATION FOR THE RIGORS OF COLLEGE AND THE DEMANDS OF A PROFESSIONAL CAREER. THE COURSEWORK SUPPORTS THE COMMON CORE ENGLISH LANGUAGE ARTS/LITERACY STANDARDS. IN ADDITION TO FURTHER DEVELOPING ORGANIZATION AND SPEAKING SKILLS, STUDENTS WILL INCORPORATE EVIDENCE BASED RESEARCH TO SUPPORT CLAIMS MADE IN PRESENTATIONS. NO MATTER THE MAJOR OR CAREER CHOICE, INDIVIDUALS ARE ALMOST CERTAIN TO BE ASKED TO GIVE AN ORAL PRESENTATION. PUBLIC SPEAKING PROVIDES THE CRITICAL TOOLS TO MAKE YOU MORE CONFIDENT AND EFFECTIVE IN SHARING YOUR MESSAGE TO THOSE AROUND YOU.

16. History of Course Development:
THE CURRENT REVISION OF THE COURSE REFLECTS THE NEW MATERIALS, SCOPE AND SEQUENCE, AND GRADE LEVEL RECOMMENDATION.

17. Textbooks:	Glencoe Speech: McCutcheon, Schaffer, Wycoff Speech - Exploring Communication: J. Regis O'Connor, National Textbook Company

18. Supplemental Instructional Materials:	• ONLINE PUBLISHED JOURNALS AVAILABLE ON DATABASES SUCH AS JSTOR AND LEXISNEXIS ACADEMIC THAT ADDRESS CURRENT EVENTS, HISTORICAL, SOCIOLOGICAL AND POLITICAL OCCURRENCES AND ISSUES • CREDIBLE NEWSPAPER AND PERIODICAL PUBLICATIONS TO INCLUDE THE BBC, THE ECONOMIST, THE FINANCIAL TIMES, AND NOVA THAT ADDRESS CURRENT EVENTS, THEORIES, AND INVESTIGATIONS • PUBLICATIONS BY NON-PARTISAN THINK TANKS AND STATISTICIANS SUCH AS THE RAND CORPORATION AND THE PEW RESEARCH CENTER • ONLINE ENCYCLOPEDIAS SUCH AS WORLD BOOK ONLINE

C. COURSE CONTENT

1. Course Purpose:

Public Speaking provides students with information to better understand how to speak with purpose and to listen for understanding. In addition, the Public Speaking course will give students insight into the importance of being an active participant in the communication process. Students will gain a variety of writing and speaking skills that will help to develop self-confidence, promote cognitive development, and reinforce research skills.

2. Course Outline:

~~Students will:~~

~~1. Learn to develop a speech from topic choice to delivery.~~

~~2. Differentiate from literary writing and speech writing.~~

~~3. Understand and practice the communication process: sender, receiver, idea, encoding, message, decoding, interference, and feedback, verbal and nonverbal symbols.~~

~~4. Identify and understand the differences between verbal and non-verbal communication.~~

~~5. Gain an understanding of the evaluation process, as speakers and listeners, through rubrics, written comments, and oral critiques.~~

~~6. Develop research skills by utilizing the library and internet to investigate selected topics.~~

~~7. Research, write, and deliver a three to five-minute demonstration speech on a given topic.~~

~~8. Research, write, and deliver a five to seven-minute informative speech on a given topic.~~

~~9. Research, write, and deliver a seven to ten-minute persuasive speech on a given topic.~~

~~10. Research, write, and deliver several three to five minute presentations for speeches in the category of special occasions.~~

~~11. Implement the writing process in developing outlines for a variety of speech presentations. (Pre-write, rough draft, and typed final draft.)~~

~~12. Deliver a well-organized impromptu speech of two to three minutes in length, with only one minute preparation, after choosing from among three randomly selected topics.~~

~~13. Research, organize ideas, and prepare written briefs for a forty-minute debate with a partner and a set of opponents on a relevant, controversial topic.~~

~~14. Demonstrate the ability to interpret literature through the recitation of poetry, prose, or dramatic pieces.~~

~~15. Learn how to enhance their presentations with visual aids through the use of technology and multimedia.~~

~~16. Create a resume, write a job description, and develop probing interview questions to be used in a mock job interview.~~

~~17. Develop problem solving skills in a small group setting by exploring and addressing conflict resolution through a series of hypothetical vignettes.~~

~~Students learn:~~

~~1. To define communication: the communication model~~

~~2. To explain stage fright: tools to lessen communication apprehension~~

~~3. Listening skills~~
~~4. Nonverbal communication~~
~~5. Interpersonal communication~~
~~6. Interviewing: interpersonal interview/job interview~~
~~7. To participate in problem solving, conflict resolution, and group discussion~~
~~8. Research: plan, tools, library, internet, multimedia, and visual aids~~
~~9. Organization of speeches: introduction, body, and conclusion~~
~~10. Logic and reasoning: reliable sources and logical fallacies~~
~~11. Effective language: spoken word vs. written word~~
~~12. Delivery: verbal and nonverbal language.~~
~~13. Demonstration speech/informative speech/compare and contrast~~
~~14. Persuasive speech~~
~~15. Extemporaneous and impromptu speeches~~
~~16. Oral Interpretation: Historical Speeches and Dramatic Monologues~~
~~17. Dramatic presentations: script writing and performance~~
~~18. Speeches for special occasions: courtesy, ceremonial, and contest speeches~~
~~19. Debate: parliamentary, policy, and Lincoln Douglas~~

UNIT ONE: (BUILDING RESPONSIBILITY AND BUILDING CONFIDENCE)
STUDENTS WILL IDENTIFY AND ANALYZE THE ETHICAL AND SOCIAL RESPONSIBILITIES OF COMMUNICATORS. THEY WILL IDENTIFY THE COMPONENTS OF THE COMMUNICATION PROCESS AND THEIR FUNCTIONS. THEY WILL EXPLAIN THE IMPORTANCE OF EFFECTIVE COMMUNICATION SKILLS IN PERSONAL, PROFESSIONAL, AND SOCIAL CONTEXTS. THEY WILL LEARN TO IDENTIFY AND RECOGNIZE THEIR AUDIENCE AS AN IMPORTANT ELEMENT IN BUILDING RESPONSIBLE COMMUNICATION SKILLS. THEY WILL REALIZE THE IMPORTANCE OF BOTH VERBAL AND NONVERBAL COMMUNICATION. STUDENTS WILL DISCUSS WHAT CONFIDENCE MEANS AND HOW IT IS A VITAL ELEMENT IN EFFECTIVE SPEAKING. THEY WILL RECOGNIZE THE REALITIES OF STAGE FRIGHT AND HOW ONE CAN APPROPRIATELY DEAL WITH THE PROBLEM. THEY WILL REALIZE THE VALUE OF PERCEPTION AS IT APPLIES TO CONFIDENCE IN SPEAKING. FINALLY, THEY WILL LEARN TO IMPLEMENT THE PLANKS OF CONFIDENCE IN SPEAKING.

UNIT TWO: (LISTENING, NONVERBAL COMMUNICATION)
STUDENTS WILL EXPLAIN THE DIFFERENCE BETWEEN HEARING AND LISTENING. THEY WILL IDENTIFY THE COMPONENTS OF THE LISTENING PROCESS, DESCRIBE FOUR DIFFERENT KINDS OF LISTENING, AND EXPLAIN WHY GOOD LISTENING HABITS ARE IMPORTANT. STUDENTS WILL DISTINGUISH BETWEEN VERBAL AND NONVERBAL COMMUNICATION. THEY WILL USE BODY LANGUAGE TO REINFORCE A VERBAL MESSAGE, RECOGNIZE WHEN SOMEONE MAY NOT BE TELLING THE TRUTH, AND EXPLAIN HOW THE SAME GESTURE CAN HAVE DIFFERENT MEANINGS IN DIFFERENT CULTURES.

UNIT THREE: (INTERPERSONAL INTERVIEW)
STUDENTS WILL UNDERSTAND THE VALUE OF EFFECTIVE INTERPERSONAL COMMUNICATION. THEY WILL UNDERSTAND THE IMPORTANCE OF ASSERTIVENESS, COURTESY, AND TACT WHEN DEALING WITH PEOPLE, IMPLEMENT EFFECTIVE STRATEGIES FOR SUCCESSFUL ONE-TO-ONE COMMUNICATION, AND USE COMMUNICATION TO BUILD POSITIVE PROFESSIONAL AND SOCIAL INTERPERSONAL RELATIONSHIPS. STUDENTS WILL BE ASSIGNED A PARTNER. EACH PARTICIPANT WILL BE GIVEN TWENTY SUGGESTED QUESTIONS, STUDENTS WILL INTERVIEW EACH OTHER USING THE TWENTY QUESTIONS AND ANY OTHER PROBING, FOLLOW-UP QUESTIONS THAT THEY FIND NECESSARY OR INTERESTING. EACH PARTNER WILL CREATE A BIOGRAPHICAL SKETCH OF ONE ANOTHER. STUDENTS WILL PRESENT THE PARTNER TO THE CLASS FROM THE INFORMATION GATHERED IN THE INTERVIEW.

UNIT FOUR: (JOB INTERVIEW)

STUDENTS WILL CREATE A JOB DESCRIPTION AND RÉSUMÉ TO BE USED FOR A MOCK INTERVIEW. STUDENTS WILL WATCH DEMONSTRATION INTERVIEWS TO CRITIQUE EFFECTIVE AND INEFFECTIVE QUESTIONS AND ANSWERS. THEY WILL CREATE OPEN-ENDED QUESTIONS TO DRAW OUT THE BEST POSSIBLE ANSWERS, STUDENTS WILL ALSO LEARN TO EXPAND THEIR ANSWERS WHEN BEING PROBED BY AN INTERVIEWER. THEY WILL LEARN TO DRESS APPROPRIATELY AND PRESENT THEMSELVES IN A PROFESSIONAL MANNER. STUDENTS WILL BE ASSIGNED A PARTNER. THEY WILL LOOK OVER EACH OTHER'S JOB DESCRIPTION AND RÉSUMÉ TO FORMULATE TEN QUESTIONS TO BE USED IN AN INTERVIEW. THE QUESTIONS SHOULD BE PROBING IN NATURE, AND STUDENTS SHOULD BE PREPARED TO USE FOLLOW-UP AND PROBING QUESTIONS WHILE GUIDING THE INTERVIEW. AFTER PRACTICING, EACH PARTNER WILL PLAY THE ROLE OF THE INTERVIEWEE AND INTERVIEWER WHILE SIMULATING A JOB INTERVIEW.

UNIT FIVE: (GROUP DISCUSSION)
STUDENTS WILL EXPLAIN WHY COOPERATIVE ATTITUDES ARE NECESSARY FOR GROUP DISCUSSIONS. THEY WILL DESCRIBE THE MAJOR KINDS OF GROUP DISCUSSIONS, DISCUSS THE FACTORS THAT DETERMINE THE SUCCESS OF GROUP DISCUSSIONS, IDENTIFY THE STEPS OF THE PROBLEM-SOLVING PROCESS, AND DEVELOP A LIST OF QUESTIONS THAT COULD BE USED TO DIRECT A GROUP DISCUSSION. STUDENTS WILL READ FIVE MORAL DILEMMAS. THERE WILL BE A CLASS DISCUSSION TO DISCUSS THE IMPACT OF DECISIONS ON GROUPS AND INDIVIDUALS, THEN, STUDENTS WILL BE ASSIGNED THE TASK OF CREATING A SKIT TO DEMONSTRATE A MORAL DILEMMA. ANOTHER GROUP WILL BE ASSIGNED TO SUMMARIZE THE DILEMMA, BRAINSTORM THREE SOLUTIONS, AND CHOOSE THE BEST SOLUTION WITH EVIDENCE AND REASONING TO SUPPORT THEIR CHOICE.

UNIT SIX: (RESEARCH AND ORGANIZATION)
STUDENTS WILL DISCUSS THE IMPACT OF THE INFORMATION AGE, DEVELOP A PLAN TO HELP FOCUS RESEARCH EFFORTS, IDENTIFY FOUR SHORTCUTS THAT WILL REDUCE TIME SPENT RESEARCHING, USE ONLINE AND LIBRARY RESOURCES TO FIND MATERIAL FOR SPEECHES, AND LEARN HOW TO DISTINGUISH BETWEEN PLAGIARISM AND INTELLECTUAL HONESTY.

STUDENTS WILL USE EFFECTIVE STRATEGIES TO ORGANIZE AND TO OUTLINE PRESENTATIONS. THEY WILL USE EFFECTIVE VERBAL AND ORGANIZATIONAL STRATEGIES IN PRESENTATIONS. THEY WILL DEVELOP APPROPRIATE INTRODUCTIONS AND CONCLUSIONS THAT GIVE POSITIVE AND ENGAGING FIRST AND FINAL IMPRESSIONS. STUDENTS WILL DEVELOP A MEANINGFUL BODY THAT SHOWS CLARITY AND LOGICAL PROGRESSION.

STUDENTS WILL LEARN TO ORGANIZE THEIR PRESENTATIONS IN A VARIETY MANNERS. THEY WILL LEARN TO ONLY INCLUDE IDEAS THAT ARE ESSENTIAL TO THE SPEECH. STUDENTS WILL LEARN TO INCORPORATE THEIR STRONGEST IDEAS AT THE BEGINNING OR END OF THE SPEECH. STUDENTS WILL LEARN TO ORGANIZE AND DIFFERENTIATE ORGANIZING IDEAS CHRONOLOGICALLY, TOPICALLY, AND IN A CAUSE AND EFFECT FORMAT. STUDENTS WILL CULMINATE THIS LESSON BY PREPARING A DEMONSTRATION SPEECH IN WHICH THEY SHOW HOW TO MAKE AN ITEM, PERFORM A TASK, OR SHOW A PROCESS. THEY WILL PROVIDE A PRE-WRITE, ROUGH DRAFT, AND FINAL TYPED OUTLINE. STUDENTS MUST USE VISUAL AID DURING THE DEMONSTRATION PROCESS.

UNIT SEVEN: (LOGIC AND REASONING)
STUDENTS WILL DISTINGUISH AMONG SEVERAL DIFFERENT TYPES OF REASONING AND RECOGNIZE FAULTY OR MISLEADING TYPES. THEY WILL LEARN TO BETTER ADAPT THEIR USE OF LOGIC TO A SPECIFIC AUDIENCE, AND THEY WILL ANALYZE THEIR OWN LOGIC TO DETERMINE IF THEIR CONCLUSIONS ARE VALID. STUDENTS WILL LEARN TO IDENTIFY COMMON LOGICAL FALLACIES SUCH AS HASTY GENERALIZATION, FALSE PREMISE, CIRCUMSTANTIAL EVIDENCE, MISTAKEN CAUSALITY, PLAYING WITH THE NUMBERS, FALSE ANALOGY, IGNORING THE QUESTION, AND BEGGING THE QUESTION.

UNIT EIGHT: (EFFECTIVE LANGUAGE AND DELIVERY)

STUDENTS WILL LEARN TO COMBAT COMMUNICATION APPREHENSION BY UTILIZING FOUR STEPS TO ALLEVIATE FEAR IN FOUR STEPS: ACKNOWLEDGE YOUR FEARS, KNOW YOUR SPEECH SUBJECT, PROJECT CONFIDENCE, AND CREATE A STRONG INTRODUCTION. STUDENTS WILL LEARN HOW TO ORGANIZE THEIR SPEECHES WITH TWO TO FIVE MAIN IDEAS. THEY WILL LEARN TO UTILIZE STYLE IN THE LANGUAGE USED IN THEIR SPEECHES. STUDENTS WILL LEARN CLARITY TO TAILOR THEIR WORD CHOICE TO THE TARGET AUDIENCE. THEY WILL LEARN TO SPEAK IN THE ACTIVE VOICE. STUDENTS WILL LEARN RHYTHM IN REPEATING THE PURPOSE OF THE SPEECH. STUDENTS WILL LEARN ANTITHESIS AND PARALLEL WORDING WITH EXAMPLE SPEECHES LIKE KENNEDY'S INAUGURAL ADDRESS AND UTILIZE IT IN THEIR SPEECHES. THEY WILL LEARN AND INCORPORATE IMAGERY BY USING, METAPHORS, SIMILES, AND ONOMATOPOEIA. STUDENTS WILL PRACTICE AND IMPROVE THEIR DELIVERY WITH EACH NEW PRESENTATION. DELIVERY SHOULD BE NATURAL, CALL ACTION TO THE AUDIENCE, AND DEVELOP EMPATHY WITH THE AUDIENCE. STUDENTS WILL LEARN ABOUT THE PHYSICAL ASPECT OF DELIVERY IN DRESSING FOR THE OCCASION, BEING COGNIZANT OF POSTURE AND BREATHING IN A PRESENTATION. THEY WILL GIVE PRESENTATIONS WITHOUT BARRIERS LIKE PODIUMS. STUDENTS WILL PRACTICE AND INCORPORATE PURPOSEFUL HAND GESTURES AND APPROPRIATE FACIAL EXPRESSIONS IN DELIVERY. THEY WILL LEARN TO GAUGE AUDIENCE FEEDBACK TO ADJUST DELIVERY STYLE AND CONTENT. THEY WILL LEARN THE IMPORTANCE OF VOCAL VARIANCE IN DELIVERY BY PRACTICING AND UNITIZING VOICE PROJECTION, VOLUME, PITCH, RATE, AND PAUSING. THEY WILL PRACTICE CLARITY OF DELIVERY WITH ENUNCIATION AND PRONUNCIATION.

UNIT NINE: (SPEECHES TO INFORM AND SPEECHES TO PERSUADE)
STUDENTS WILL IDENTIFY THE MAJOR TYPES OF INFORMATIVE SPEECHES. THEY WILL FIND AN APPROPRIATE SUBJECT FOR AN INFORMATIVE SPEECH, NARROW THE SUBJECT TO A MANAGEABLE TOPIC, AND COMPOSE A SHARPLY FOCUSED THESIS. STUDENTS SHOULD ALSO ENGAGE THE AUDIENCE THROUGH USE OF ANECDOTES, QUOTATIONS, AND DEFINITIONS. STUDENTS WILL LEARN TO INTEGRATE AUDIO AND VISUAL AIDS INTO THEIR SPEECH. STUDENTS WILL GIVE A MULTIMEDIA INFORMATIVE PRESENTATION ON A TOPIC OF CHOICE USING APPROPRIATE TECHNOLOGY AND PROVEN STRATEGIES.

STUDENTS WILL RECOGNIZE THE SPECIFIC FEATURES OF THE PERSUASIVE SPEECH. THEY WILL APPLY WHAT THEY HAVE LEARNED ABOUT EFFECTIVE PERSUASIVE SPEAKING TO BOTH THEMSELVES AND THEIR TARGET AUDIENCE. STUDENTS WILL ANALYZE THE TYPE OF AUDIENCE TO WHOM THEY ARE SPEAKING, ADAPT THEIR PERSUASIVE APPROACH TO MATCH THE MAKEUP OF THE AUDIENCE, AND UNDERSTAND AND IMPLEMENT LOGICAL, EMOTIONAL, AND PERSONAL APPEALS. STUDENTS WILL SELECT A CONTROVERSIAL OR DEBATABLE TOPIC. THEY WILL CHOOSE A POSITION, RESEARCH SUPPORT FOR THEIR POSITION, PROVIDE MULTIPLE SOURCES OF EVIDENCE, INCLUDE SOURCE CITATIONS, AND PROVIDE A PRE-WRITE, ROUGH DRAFT, AND FINAL TYPED OUTLINE. STUDENTS WILL PRESENT THEIR EVIDENCE BASED PERSUASIVE SPEECH TO THE CLASS. THEY SHOULD BE PREPARED TO ANSWER QUESTIONS FROM THE AUDIENCE ABOUT THEIR POSITION.

UNIT TEN: (EXTEMPORANEOUS AND IMPROMPTU SPEAKING)
STUDENTS WILL DEFINE BOTH EXTEMPORANEOUS SPEAKING AND IMPROMPTU SPEAKING. THEY WILL DESCRIBE THE DIFFERENCES BETWEEN EXTEMPORANEOUS SPEAKING AND IMPROMPTU SPEAKING. STUDENTS WILL WATCH A SERIES OF VIDEOTAPED SPEECHES GIVEN AT HIGH SCHOOL SPEECH COMPETITIONS TO DEMONSTRATE AND DIFFERENTIATE BETWEEN EXTEMPORANEOUS SPEECHES AND IMPROMPTU SPEECHES.

UNIT ELEVEN (ORAL INTERPRETATION AND SPEECHES FOR SPECIAL OCCASIONS)
STUDENTS WILL DEFINE ORAL INTERPRETATION. THEY WILL CHOOSE MATERIAL FROM A POEM, MONOLOGUE, OR SPEECH TO READ ALOUD. THEY WILL ANALYZE THE MEANING AND FEELING OF THE SELECTION. THEY WILL PRACTICE THE ORAL DELIVERY OF THE SELECTION. STUDENTS WILL ALSO DISCUSS THE ELEMENTS OF READERS THEATER. STUDENTS MAY USE THE TEACHER PROVIDED MONOLOGUE OR SELECT A MONOLOGUE OF THEIR OWN. AFTER CUTTING, EDITING, AND PRACTICING, THE STUDENTS WILL PRESENT THEIR COMPLETED MONOLOGUE TO THE CLASS.

STUDENTS WILL DEFINE THE SPECIFIC PURPOSES OF SEVERAL SPECIAL-OCCASION SPEECHES. THEY WILL DISCUSS THE CHARACTERISTICS OF THESE SPEECHES, AND THEY WILL UNDERSTAND AND DESCRIBE POPULAR KINDS OF CONTEST SPEECHES. STUDENTS WILL RANDOMLY BE ASSIGNED A SPECIAL-OCCASION SPEECH TO DEMONSTRATE FOR THE CLASS.

UNIT TWELVE (CONFLICT MANAGEMENT AND DEBATE)
STUDENTS WILL LIST THE FIVE COMMON STRATEGIES FOR RESOLVING CONFLICTS. THEY WILL PRACTICE THE FOUR TECHNIQUES FOR NEGOTIATION. THEY WILL GIVE EXAMPLES OF THE WAYS IN WHICH PEOPLE PARTICIPATE IN INFORMAL DEBATE. THEY WILL DEFINE BASIC DEBATE TERMS. STUDENTS WILL LEARN TERMINOLOGY SUCH AS PROPOSITION, RESOLUTION, AFFIRMATIVE AND NEGATIVE, STATUS QUO, BURDEN OF PROOF, ARGUMENT, EVIDENCE, CASE, BRIEF, CONSTRUCTIVE, REFUTATION, AND REBUTTAL. STUDENTS WILL ALSO LEARN ABOUT QUESTIONS OF FACT, VALUE, AND POLICY. THEY WILL PREPARE FOR AND PARTICIPATE IN AN INFORMAL CLASS DEBATE. THEN, THE STUDENTS WILL BE PLACED ON TEAMS, PREPARE AND PRESENT A PARLIAMENTARY STYLE DEBATE.

3. Key Assignments:

- STUDENTS WILL CREATE A MODEL FOR THE COMMUNICATION PROCESS (SENDER – MESSAGE – RECEIVER – FEEDBACK) USING DIALOGUE FROM A CONVERSATION THEY HAVE WITH A FRIEND. STUDENTS WILL SHARE AND ENGAGE EACH OTHER WHILE EXAMINING ONE ANOTHER'S MODELS.
- STUDENTS WILL WATCH A VARIETY OF SPEECHES (I.E., JOHN F. KENNEDY, MARTIN LUTHER KING, JR., MAYA ANGELOU, AND OTHERS.) THEY WILL TAKE NOTES, ON THE STYLE AND SUBSTANCE OF THE SPEECHES. THEY WILL THEN BE ASKED TO PARAPHRASE AND SUMMARIZE THE MESSAGE OF THE SPEECH.
- STUDENTS WILL BE ASSIGNED A GROUP AND A LOGICAL FALLACY. STUDENTS WILL CREATE A COMMERCIAL TO DEMONSTRATE THE LOGICAL FALLACY ASSIGNED TO THEM. IN THE COMMERCIAL, THE STUDENTS MAY SELL A PRODUCT, CAMPAIGN FOR A CANDIDATE, OR PROMOTE A CAUSE. AFTER EACH PRESENTATION, THE AUDIENCE WILL BE ASKED TO IDENTIFY THE FALLACY.
- STUDENTS WILL BEGIN ALL INDIVIDUAL OR GROUP PRESENTATIONS WITH A PRE-WRITE OF IDEAS THEY ARE CONSIDERING. NEXT, THE STUDENTS WILL CREATE A ROUGH DRAFT IN OUTLINE FORM TO INCLUDE AN INTRODUCTION WITH A HOOK, BRIDGE, THESIS, AND FORECAST, TWO TO FIVE MAIN IDEAS WHICH UTILIZE THE CLAIM, EVIDENCE, AND REASONING FORMAT. STUDENTS SHOULD INCLUDE A CONCLUSION, WHICH RE-VISITS THE MAIN IDEAS AND CONCLUDES WITH A UNIVERSAL THOUGHT. FINALLY, STUDENTS WILL EDIT AND REVISE THEIR ROUGH DRAFTS TO CREATE A TYPED FINAL DRAFT OF THEIR PRESENTATION. THEY WILL DEMONSTRATE THE USE OF EFFECTIVE LANGUAGE AND DELIVERY BY PREPARING AND PRESENTING A "THANK-YOU" SPEECH TO A PERSON OF CHOICE. THEY WILL CONTINUE TO DEMONSTRATE IMPROVEMENT AND WORKING TOWARD MASTERY IN THE USE OF EFFECTIVE LANGUAGE AND DELIVERY WITH THE SPEECHES TO BE PRESENTED IN UNITS NINE THROUGH TWELVE.
- STUDENTS WILL BE GIVEN THIRTY MINUTES TO RESEARCH A TOPIC, PREPARE AN OUTLINE, AND REVIEW THEIR NOTES. THEN, THEY WILL GIVE AN EXTEMPORANEOUS SPEECH ON THE GIVEN TOPIC. AFTER EACH STUDENT HAS GIVEN AN EXTEMPORANEOUS SPEECH, STUDENTS WILL GIVE AN IMPROMPTU SPEECH. THE WILL BE GIVEN THREE WORDS OR TOPICS. THEY WILL CHOOSE ONE OF THE THREE GIVEN TOPICS. STUDENTS WILL SELECT APPROPRIATE SUPPORTING MATERIALS FROM MEMORY, ORGANIZE THEM INTO AN EASY-TO-FOLLOW PATTERN, AND DELIVER THE SPEECH WITH CONFIDENCE. THEY WILL HAVE TWO MINUTES TO PREPARE A SPEECH AND PRESENT TO THE CLASS ON THEIR SELECTED TOPIC.
- STUDENTS WILL DEMONSTRATE ONE OF THE FOLLOWING: INTRODUCTION, PRESENTATION, ACCEPTANCE, AFTER-DINNER, COMMENCEMENT, TESTIMONIAL, OR EULOGY. THE LENGTH AND PURPOSE OF THE SPEECH WILL BE SPECIFIC TO THE TYPE OF SPEECH ASSIGNED.
- STUDENTS WILL CHOOSE A PARTNER TO FORM A TEAM. ONE TEAM WILL DEBATE ANOTHER TEAM ON A GIVEN TOPIC. TEAMS MAY CHOOSE THEIR OPPONENTS, OR THEIR OPPONENTS WILL BE CHOSEN. THE TWO TEAMS WILL CHOOSE A TOPIC FROM A PROVIDED LIST OF DEBATABLE TOPICS. TEAMS MUST CHOOSE A POSITION TO

TAKE DURING THE DEBATE. TEAMS WILL RESEARCH THEIR TOPIC AND DEMONSTRATE THE CONTROVERSY. TEAMS WILL ESTABLISH THE FACTS SURROUNDING THE CONTROVERSY, GATHER EVIDENCE THROUGH FACTS, DATA, AND STATISTICS TO SUPPORT THEIR CLAIM, AND SOLIDIFY THEIR POSITION WITH REASONING AND ANALYSIS. THEY SHOULD ANTICIPATE WHAT THEIR OPPONENTS MIGHT SAY, AND BE PREPARED TO ANSWER THEM WITH COUNTERARGUMENTS. THE STUDENTS WILL BE TIMED AND WILL BE GIVEN A DEBATE FORMAT TO FOLLOW.

4. Instructional Methods and/or Strategies:

- Modeling various speech formats
- Textbook references
- Example videos
- Peer modeling
- Show exemplary outlines or scripts for each assignment

5. Assessment Including Methods and/or Tools:

- Outline Script Assessment: Prewrite, outline/script, and final draft
- Presentation Assessment: Speech delivery or group presentation with assessment rubric

THE EVALUATION OF STUDENT PROGRESS AND EVALUATION WILL BE BASED ON THE FOLLOWING CRITERIA OUTLINED IN BOARD POLICY:

- ASSESSMENTS: 60-75% OF THE FINAL GRADE
- ASSIGNMENTS AND CLASS DISCUSSIONS: 25-40% OF THE FINAL GRADE

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Gregory J. Stachura, Asst. Supt., Facilities, Planning, and Operations

SUBJECT: **USE OF FIRST ISSUANCE MEASURE G BOND FUNDS FOR RENOVATIONS AND UPGRADES TO FORMER EL RANCHO ES FACILITIES AND INFRASTRUCTURE**

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BACKGROUND

On November 8, 2016, voters within the Chino Valley Unified School District approved bond Measure G for the issuance and sale of general obligation bonds, the proceeds of which are to be used for school construction, renovations and improvements per the Board approved, 2016 District master plan.

On January 26, 2017, the Board designated and prioritized projects for the first issuance of bond funds including the modernization of eleven (11) schools (combined with 60% state modernization funds), furniture needs associated with modernization work, technology needs associated with modernization work, the reconstruction of Chino HS, the construction of Preserve school #2, and science classroom additions/renovations at all junior high schools and Ayala HS.

With the reopening of former El Rancho ES as Allegiance Steam Academy, and per the District master plan, there is an immediate need for renovations and upgrades to the school facilities and infrastructure to ensure the campus has safe and adequate teaching and learning facilities.

Consideration of this item supports the goals identified within the District's Strategic Plan.

RECOMMENDATION

It is recommended that the Board of Education receive for information the use of first issuance Measure G bond funds for renovations and upgrades to former El Rancho ES facilities and infrastructure.

FISCAL IMPACT

Estimated $1,500,000.00 to Fund 21.

WMJ:GJS:pw

CHINO VALLEY UNIFIED SCHOOL DISTRICT
Our Motto:
Student Achievement • Safe Schools • Positive School Climate
Humility • Civility • Service

DATE: May 3, 2018

TO: Members, Board of Education

FROM: Wayne M. Joseph, Superintendent

PREPARED BY: Lea Fellows, Assistant Superintendent, Human Resources

SUBJECT: **REVISION OF BOARD POLICY 4119.25, 4219.25, AND 4319.25 ALL PERSONNEL – POLITICAL ACTIVITIES OF EMPLOYEES**

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BACKGROUND

Board policies, administrative regulations, and bylaws of the Board are routinely developed and revised as a result of changes in law, mandates, federal regulations, and current practice. Board Policy 4119.25, 4219.25, and 4319.25 All Personnel – Political Activities of Employees is being revised to align with language that was updated in Administrative Regulation 4119.25, 4219.25, and 4319.25 All Personnel – Political Activities of Employees at the October 19, 2017 Board meeting. Inadvertently, the language was not updated in the board policy to include that no on-duty employee shall engage in political activities upon District property, unless during nonworking time. As well as, deleting language of political activities that takes place off District property outside of on-duty hours. The District has consulted with the Associated Chino Teachers.

New language is provided in UPPER CASE while old language to be deleted is ~~lined through.~~

Consideration of this item supports the goals identified within the District's Strategic Plan

RECOMMENDATION

It is recommended the Board of Education receive for information the revision of Board Policy 4119.25, 4219.25, and 4319.25 All Personnel – Political Activities of Employees.

FISCAL IMPACT

None.

WMJ:LF:mcm

BP 4119.25(a)
BP 4219.25(a)
BP 4319.25(a)

POLITICAL ACTIVITIES OF EMPLOYEES

The Board of Education respects the right of school employees to engage in political activities on their own time and at their own expense. On such occasions, employees shall make it clear that they are acting as individuals and not as representatives of the District.

(cf. 1160 - Political Processes)

The Board of Education also recognizes that state law generally prohibits the use of District property, funds, services, supplies, or equipment and District time for political purposes. It therefore enacts the following rules regarding political activity:

No on-duty employee shall engage in political activities upon property, UNLESS DURING NONWORKING TIME, under the jurisdiction of the Chino Valley Unified School District. "Property" as used herein, includes school premises, property owned by the District, and property in possession of the District, whether the possession be through lease or otherwise. However, outside of on-duty hours ~~and off District property~~, employees have the same right as all other persons to participate in political activities. Additionally, employee organizations are guaranteed certain rights of communication pursuant to the Educational Employment Relations Act, and this policy is not intended to infringe upon those rights.

Like other community members, employees may use school facilities for meetings under the Civic Center Act.

(cf. 1330 - Use of School Facilities)

Employees shall refrain from prohibited activities identified in law and administrative regulations. Employees who engage in these activities shall be subject to disciplinary action. Additionally, Education Code Section 7054 provides for criminal penalties in the event of a violation.

Employees who are contacted or solicited to distribute political material to students shall immediately report such contact to the principal, or other site administrator, who shall report the matter to the Superintendent or designee for resolution.

(cf. 1325 - Advertising and Promotion)
(cf. 4118 - Suspension/Disciplinary Action)
(cf. 4218 - Dismissal/Suspension/Disciplinary Action)

POLITICAL ACTIVITIES OF EMPLOYEES (cont.)

Legal Reference:
EDUCATION CODE
7050-7057 Political activities of school officers and employees 38130-38139 Civic Center Act
51520 Prohibited solicitations on school premises
GOVERNMENT CODE
3543.1 Rights of employee organizations
COURT DECISIONS
San Leandro Teachers Association v. Governing Board (2009) 46 Cal.4th 822
Downs v. Los Angeles Unified School District, (9th Cir. 2000) 228 F.3d 1003
California Teachers Association v. Governing Board of San Diego Unified School District, (1996) 45 Cal.App. 4th 1383
L.A. Teachers Union v. L.A. City Board of Education, (1969) 71 Cal.2d 551
ATTORNEY GENERAL OPINIONS
84 Ops.Cal.Atty.Gen. 106 (2001)
84 Ops.Cal.Atty.Gen. 52 (2001)
77 Ops.Cal.Atty.Gen. 56 (1994)
PUBLIC EMPLOYMENT RELATIONS BOARD RULINGS
California Federation of Teachers, Local 1931 v. San Diego Community College District (2001) PERB Order #1467 (26 PERC 33014)

Management Resources:
CALIFORNIA SCHOOL BOARDS ASSOCIATION PUBLICATIONS
Political Activities of School Districts: Legal Issues, 1998, revised 2001
WEBSITES
California School Board Association: www.csba.org
Office of the Attorney General, Dept. of Justice: www.caag.state.ca.us
Public Employment Relations Board: www.perb.ca.gov

Chino Valley Unified School District
Policy Adopted: November 16, 1995
Revised: April 1, 1999
Revised: October 18, 2012
Revised: November 16, 2017
REVISED: