WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

TO: Kellie Noe, Board President

FROM: Karen Lamb, Executive Secretary

DATE: March 2, 2016

ITEM: **CONSIDERATION OF APPROVAL OF THE FEBRUARY 17, 2016 BOARD MEETING MINUTES**

The Board is requested to approve the Board meeting minutes from the February 17, 2016 Board Meeting.

RECOMMENDATION:
It is respectfully requested that the Board accept the minutes as submitted.

ATTACHMENTS:
Yes

In compliance with Government Code § 54954.2(a), The West Sonoma County Union High School District, will, on request, make this agenda available in appropriate alternative formats to persons with a disability, as required by Section 202 of the American with Disabilities Acts of 1990 (42 U.S.C. § 12132), and the federal rules and regulations adopted in implementation thereof. Individuals who need this agenda in an alternative format or who need a disability-related modification or accommodation in order to participate in the meeting should contact Karen Lamb, Executive Secretary to the Superintendent, West Sonoma County Union High School District, 462 Johnson Street, Sebastopol, CA 95472, (707) 824-6412.

"THE MISSION OF THE WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT IS TO PROVIDE HIGH QUALITY INSTRUCTION, AS STUDENT ACHIEVEMENT IS OUR TOP PRIORITY."

MINUTES

of a regular meeting of the Board of Trustees of the
West Sonoma County Union High School District

Wednesday, February 17, 2016
Analy High School Library
6950 Analy Avenue
Sebastopol, CA 95472

5:00 p.m. Open Session
5:05 p.m. Closed Session
6:00 p.m. Open Session

I. PRELIMINARY

A. CALL TO ORDER – The meeting was called to order at 5:00 p.m.

B. ROLL CALL

Present	Absent
Kellie Noe, President	
Ted Walker, Vice-President	
David Stecher, Clerk	
Lori Bruhner, Trustee	
	Diane Landry, Trustee
Dr. Steven Kellner, Superintendent	
Koa Lua, Analy Student Representative	
	Arlo David, El Molino Student Representative
Isella Schroff, Laguna Student Representative	

C. COMMENTS FROM THE PUBLIC REGARDING ITEMS ON THE CLOSED SESSION AGENDA – None

D. RECESS TO CLOSED SESSION TO CONSIDER AND/OR TAKE ACTION UPON THE FOLLOWING ITEMS: Recessed to Closed Session at 5:05 p.m.

1. PUBLIC EMPLOYMENT
   a. Certificated
   b. Classified
   c. Coaches
2. OTHER PUBLIC EMPLOYMENT
3. PUBLIC EMPLOYEE - DISCIPLINE/DISMISSAL/RELEASE
4. CONFERENCE WITH LABOR NEGOTIATOR - (Government Code Section 54957.6)

EMPLOYEE ORGANIZATION:	AGENCY NEGOTIATORS:
Represented Employees:	

WSCTA	Dr. Steven Kellner
CSEA	Dr. Steven Kellner

Unrepresented Employees:

Confidential/Supervisory	Dr. Steven Kellner
Management	Dr. Steven Kellner
Superintendent	Kellie Noe

5. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION (Government Code Section 54956.9)

E. RECONVENE TO OPEN SESSION – Reconvened to Open Session at 6:14 pm

F. PLEDGE OF ALLEGIANCE - Hailey Rosatti led the Pledge of Allegiance.

G. APPROVAL OF THE AGENDA – Trustee Stecher moved to approve the Agenda. Trustee Walker seconded the motion. Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent. Student Advisory Vote: 3 yes, 0 no.

Note: Student Board Representatives votes shall be unofficial, but shall normally be noted and recorded in the minutes except for personnel items and contracts (BB 9110)

H. INPUT FROM THE PUBLIC REGARDING ITEMS NOT ON THE OPEN SESSION AGENDA – Denny Rosatti addressed the board to commend, daughter Hailey Rosatti in leading the Pledge of Allegiance.

I. CONSENT CALENDAR: Trustee Walker moved to approve the Consent Calendar. Trustee Stecher seconded the motion. Trustee Bruhner requested more information on consent items #11 and #12. Trustee Walker moved to amend the motion to approved Consent Calendar items #1-#10. Trustee Stecher seconded the motion. The following discussion took place regarding:

- Summer School course for social studies, credit make up and concerns for course not meeting A-G requirements
- Service Agreement, it is the first time using the service, position very hard to fill and have heard good things about the service so the District is going to give it a try.

Trustee Bruhner moved to amend the motion to approve item #12 on the Consent Calendar and to bring back #11 to the Consent Calendar in March. Trustee Stecher seconded the motion. Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent. Student Advisory Vote: 3 yes, 0 no.

1. CONSIDERATION OF APPROVAL OF THE JANUARY 20, 2016 BOARD MEETING MINUTES
2. CONSIDERATION OF APPROVAL OF OVERNIGHT FIELD TRIP REQUEST
3. CONSIDERATION OF APPROVAL OF SUPERINTENDENT'S RATIFICATION OF OVERNIGHT FIELD TRIP REQUESTS
4. CONSIDERATION OF APPROVAL OF DONATION
5. CONSIDERATION OF APPROVAL OF WARRANT REGISTERS JANUARY 14, 2016 THROUGH FEBRUARY 10, 2016
6. CONSIDERATION OF APPROVAL OF REVISIONS TO BOARD POLICY 4152 AUXILIARY SALARY SCHEDULE
7. CONSIDERATION OF APPROVAL OF REVISIONS TO ADMINISTRATIVE REGULATION 1312.1 COMPLAINTS CONCERNING DISTRICT EMPLOYEES
8. CONSIDERATION OF APPROVAL OF CONSOLIDATED APPLICATION WINTER DATA COLLECTION
9. CONSIDERATION OF APPROVAL OF SCHOOL ACCOUNTABILITY REPORT CARDS PUBLISHED IN 2015-2016
10. CONSIDERATION OF APPOINTMENTS TO CITIZENS' BOND OVERSIGHT COMMITTEE

11. CONSIDERATION OF APPROVAL OF COURSE LIST FOR 2016 SUMMER SCHOOL SESSION
12. CONSIDERATION OF APPROVAL OF SERVICE AGREEMENT BETWEEN PRESENCE LEARNING PILOT CONSULTING AND WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

J. CLOSED SESSION REPORT

1. ACTION TAKEN – Trustee Stecher moved to approve the Closed Session Report. Trustee Bruhner seconded the motion. Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent.

Coaches – The Board of Education approved the following 2016 Spring Coaches

	AHS	Still Need	EMHS	Still Need
Baseball				
Varsity Head	Jeff Ogston		Tony Franceschi	
J.V. Head	Mike Woodbury		Mike Serrano	
Freshman Head	Shannon Hash		Clint Yeager	
Volunteers	Bob Peterson		Monty Barnard	
	Dion Noonan		Justin Lewis	#**
	Jackson Stogner	#**		
	Keneth Cook	#**		
Softball				
Varsity Head	Nick Houtz		Connie Benavides	
J.V. Head	Jolene Coon		Danica Morin	#**
Volunteers	Cindy Evangelisti		Keith Nordby	
	Lance Phillips			
	Lee John Soldati			
	Eulalia (Lia) Wilson			
	Haley Psomas-Sheridan			
	Ashley Himan			
Track				
Varsity Head-Boys	Mark Grismer		Ryan Hopkins	
Assistant			Jaime Shaw	
Varsity Head-Girls			Mike Fye	
Volunteer	James Colemann		Justin Brown	
			Hal Schultz	
Boys Tennis - Head	Rick Passero		Monty Delozier	
Boys Golf - Head	Jason Carpenter		Bill Olzman	
Volunteer			John Thomas	
Swimming - Head	Lehla Irwin		Patty Sullivan	
Assistant			Harry North	
Volleyball – Boys			Bob Geissinger	

The Board approved to move Bruce Myers, LHS Math/Special Education Teacher from Temporary to Probationary 1 status, effective 8/17/2015

The Board of Education accepted a letter of resignation from Silvia Medrano, Special Education Consortium Behavior Assistant, effective February 26, 2016

II. COMMUNICATION

A. VERBAL - None

B. WRITTEN – Dr. Kellner reported receiving correspondence from the Sonoma County Office of Education, an acceptance for the first interim financial report from Judy Thompson. Dr. Kellner reported receiving notification from Roger Blake of CIF that the El Molino High School, Boosters was nominated for California's Spirit of Sport award, for their contribution to the Valley fire victims. The national winner will be announced in April.

III. REPORTS

A. STUDENT BOARD REPRESENTATIVES

Koa Lua, Analy Student Representative reported on the upcoming events; Bob Burkes Charity event hosted by Analy and El Molino Leadership is Saturday, March 5. Analy will hold a blood drive on February 25th. Movie night for students is February 26 and the movie will be either Grease or Inside Out. The student convention for leadership to elect new ASB Officers will be held in March. The SCL playoffs for basketball are coming up. The Battle of the Fans update, Analy was among 3 finalists in SCL. Congratulations to El Molino for winning this year's Battle of the Fans. Mr. Lua addressed the board regarding recent articles about racism.

Isella Schroff, Laguna Student Representative reported Project Success coordinated a Spirit Week, held around Valentine's Day, Valentines were passed out to all Laguna students. The spring garden is taking shape, Laguna is grateful for all the donations and time that has helped bring the garden along. The Literary Magazine is looking for a title from the students. The art class is working on clothing and activities.

Arlo David, El Molino Student Representative - Absent

B. ASSOCIATION REPRESENTATIVES

Mark Ballard, CSEA President – No report

Bill Olzman, WSCTA President reported the need for board leadership in regards to racism and sexism. Mr. Olzman reported on the collaboration in our district. El Molino teachers had a wonderful time at 8th Grade Parent Night.

C. PRINCIPALS

Chris Heller, Analy Principal reported on staff development activities, the sixth installment of grading and assessment was reviewed this past month. Speaker, Calvin Terrell will be here on campus March 2 and looking forward to the March 3 community meeting with Calvin. Analy has partnered with KOWS Radio and El Molino High School. Sunday's at 5 pm they will have a broadcast with local high school events and opportunities for students at entry level broadcasting. The Boosters are hosting a fundraising Mardi Gras event at the Holy Ghost Hall on February 20. Walt Hays, Analy Teacher was nominated this year by the Rotary as Teacher of the Year. Mr. Heller shared that student; Ariel Merhav holds a world record for rock cod spear fishing.

Kent Cromwell, Laguna Principal reported the WASC visiting team is going to be here next week. Mr. Cromwell commended his staff and students for their efforts towards the WASC process. The January Student of the Month for Laguna is Hector Gullien. Laguna will also host Calvin Terrell for two sessions. There will be two sessions in order to have room for all students. The Sonoma West will come for the meetings and write an article of Calvin's visit. The athletic program has been revived. Laguna's basketball team won a game against Ridgeway and looking forward to more games. Softball will take place in April. The Keeping Kids in School program, which is piloted here at Laguna is a great idea and has provided ways to address truancy issues.

Matt Dunkle, El Molino Principal reported Lana McNamara, Special Education Teacher of English is doing a great job with the students. 8th grade Parent Night was last night with a good turnout. The Rotary Crab Feed raised $26 thousand dollars; it was a very successful event. El Molino art students provided painted wine glasses to the Russian River Vineyards event. The META class is providing a Monday guest speaker series, next guest speaker will be an alumni panel. Calvin Terrell will be at El Molino on March 3. Battle of the Fans was won by El Molino, very proud of our students and keeping the title in West County.

D. BOARD MEMBERS

Trustee Bruhner reported the Russian River Rotary Crab Feed was very successful and she is thankful for all work from El Molino students. This year the fundraiser raised more funds than ever before. Trustee Brunher reported seeing the nice Sunday's article in the Press Democrat on the Project Make Course at Analy.

Trustee Stecher – No report

Trustee Walker reported meeting with Dr. Kellner, Trustee Landry and the Forestville School Administrators regarding the middle school. Trustee Walker attended the Analy band meeting and boosters meeting. Trustee Walker reported that Safeway will no longer be continuing on the eScrip program which will affect the schools. Trustee Walker enjoyed attending athletic events at Analy and El Molino.

Trustee Noe thanked the Rotary for their support of our schools; she was able to attend the Russian River Rotary Crab Feed. Trustee Noe reported she is excited to be on county team going to the state wide Keeping Kids in School Conference.

Trustee Landry - Absent

E. SUPERINTENDENT

Dr. Steven Kellner attended a collaborative meeting with staff regarding the LCAP at the Sonoma County Office of Education. Dr. Kellner had the opportunity to be a part of Tomorrow Leaders Today event held last week. Dr. Kellner reported the California Department of Nutrition Services, held a review of the Food Services Department. Ry Warren led the review and we are very happy to report the department received very high marks. We will be recognizing the food service staff for their great work at the next board meeting.

IV. DISCUSSION /ACTION

A. CONSIDERATION OF APPROVAL OF MONTHLY BUDGET UPDATE FOR 2015-16 – Denise Calvert reported on the Monthly Budget Update for 2015-16. Trustee Walker moved to approve the Monthly Budget Update for 2015-16. Trustee Bruhner seconded the motion. Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent. Student Advisory Vote: 2 yes, 0 no, 1 absent.

B. CONSIDERATION OF APPROVAL OF ACTUARIAL STUDY FOR POST-EMPLOYMENT BENEFIT COSTS – Denise Calvert reported on the Actuarial Study for Post Employment Benefit Costs. Trustee Walker moved to approve the Actuarial Study for Post-Employment Benefit Costs. Trustee Stecher seconded the motion. A discussion took place regarding:

- Required to look at future expenses
- GASB board sets the standards
- Trustee Walker thanked Denise for spending time explaining this process

Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent. Student Advisory Vote: 2 yes, 0 no, 1 absent.

C. PRELIMINARY ENROLLMENT PROJECTION FOR DISTRICT SCHOOLS FOR FALL 2016-17 – Denise Calvert reviewed the Enrollment Projection for District Schools for Fall 2016-17.

D. RECEIVE REPORT FROM MEASURE I CITIZENS' BOND OVERSIGHT COMMITTEE – Dr. Steven Kellner introduced Jeanne Fernandes, Citizens' Bond Oversight Committee Vice-Chair. Ms. Fernandes presented the Annual Report and Annual Statement of Compliance for Fiscal Year 2014-2015. Trustee Stecher moved to receive the report from the Measure I Citizens' Bond Oversight Committee. Trustee Bruhner seconded the motion. Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent. Student Advisory Vote: 2 yes, 0 no, 1 absent.

E. CONSIDERATION OF APPROVAL FOR CONTRACT WITH AVID INC.- Dr. Steven Kellner reviewed the contract and the AVID program. Trustee Bruhner moved to approve the Contract with AVID Inc. Trustee Stecher seconded the motion. Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent. Student Advisory Vote: 2 yes, 0 no, 1 absent.

F. CONSIDERATION OF APPROVAL FOR TIMELINE OF WEST COUNTY CHARTER MIDDLE SCHOOL GRADES 7-8 – Dr. Steven Kellner reported the district has been meeting with Forestville and discussing the opening of a Charter Middle School since the beginning of the school year. The timeline for the opening would be the fall 2017 this allows enough time to create a destination middle school and allow time to meet financial and regulatory deadlines. The district would recommend the timeline, to bring the charter for approval in May and with the opening of August 2017. The following discussion took place regarding:

- Meeting with Forestville went very well and was very productive
- Impression that the Forestville District wanted an earlier opening
- Ad Hoc committee talked about and made collaborative plans for shared services and to let the community know this is a transition year
- Funding
- Forestville board proposed or enacted an MOU to go forward, pending this Districts action this evening, Forestville is holding a meeting tomorrow

Trustee Walker moved to approve the timeline of West County Charter Middle School Grades 7-8. Trustee Bruhner seconded the motion. Approved by 4 yes, 0 no, 1 absent. Trustee Bruhner, yes, Trustee Stecher, yes, Trustee Walker, yes, Trustee Noe, yes, Trustee Landry, absent. Student Advisory Vote: 2 yes, 0 no, 1 absent.

G. FIRST READING OF PROPOSED BOARD POLICY AND ADMINISTRATIVE REGULATION 1330 REGARDING USE OF SCHOOL FACILITIES AND ASSOCIATE FEE STRUCTURE - Jennie Bruneman reported reviewed the changes to the fee structure. The following was discussed:

- Kiwanis Club has been notified on specifics
- Increase fees for field
- Ed Code regarding alcohol on school property or at event
- Must have a liability insurance policy
- Bring back on discussion action in March

H. FIRST READING OF BOARD POLICY 4350 COMPENSATION AND RELATED BENEFITS – Mia Del Prete reported that with the resignation of the CBO the position was posted in January and closed February 5. A survey was conducted to compare our CBO salary to others in the county that are relatively the same size. It was determined that the salary was on the low end. In order to be competitive a 5% increase is requested. The Board requested this item be brought back to the Consent Calendar in March.

I. FIRST READING OF PROPOSED NEW COURSE OF STUDY SUSTAINABLE AGRICULTURE BIOLOGY DISTRICT WIDE – Dr. Steven Kellner reviewed the proposed new course of study. The Board requested this item to be brought back on the Consent Calendar. The following discussion took place regarding:

- New course district wide
- Part of a grant, first of a three course sequence
- Replace Ag 1, not an additional class but a replacement for next year

The Board requested this item be brought back on the Consent Calendar.

V. **FUTURE AGENDA ITEM**

A. ANALY HIGH SCHOOL BAND ROOM RIBBON CUTTING CEREMONY - APRIL

VI. **ADJOURNMENT** – The meeting was adjourned at 8:02 p.m.

WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

DISTRICT GOALS and SUCCESS INDICATORS FOR 2015-2016

Adopted by Board of Trustees on June 24, 2015

Enrollment
Increase District enrollment from 2014-2015

- Through a Community Outreach Coordinator, expand community connections and marketing at Analy and El Molino to increase enrollment; including outreach to
  - all middle schools within each attendance area and at least one outside the District
  - alumni, parents and community for each school
  - other outreach venues, as guided by the Board and Administration

- In collaboration with partner districts, examine, evaluate and determine the potential of improving grade 7-8 programs and transitions to high school through a West County Middle School to serve multiple districts

Student Achievement
Use the Local Control and Accountability Plan (LCAP) to improve student achievement and overall success of the District

- implement Naviance career and college exploration software at each school site

- offer District-paid SAT preparation classes at El Molino and Analy

- implement college-going support classes at El Molino and Analy

Community Engagement
Build involvement of students, parents and community stakeholders in WSCUHSD schools and activities to widely benefit all

- Create baseline measures of student and parent engagement in school and District activities (e.g. Site Council, ELAC, Leadership Class, after-school tutoring, athletics, extracurricular activities, etc.) including engagement of English Learners, low income, Foster youth, and hard-to-reach populations
  - Quantitative measures to assess if engagement is proportional to demographics
  - Qualitative measures to assess value and satisfaction

- Through outreach to area middle schools, provide information and support to potential WSCUHSD students and parents to boost maximize District enrollment

- Continue collaborating with agencies and organizations to increase community-school engagement; including, but not limited to,
  - SRJC for high school, college and adult education classes
  - Palm Drive Health Care District and West County Health Centers
  - Sonoma County businesses and community organizations
    - Social Advocates for Youth (SAY) – Tomorrow's Leaders Today (TLT)
    - Sebastopol Area Chamber of Commerce –Summer Algebra Academy
  - Sebastopol and Russian River Health Action Chapters for community health

Curriculum, Instruction and Assessment

Implement curriculum, instruction and assessment aligned with the California Standards in grades K-12 across West Sonoma County

- Continue to lead and support professional development and other efforts to coordinate a West County Grade 6-12 California Standards math program
- With significant input from all stakeholders, evaluate and consider increasing District math graduation requirement to 3 years (30 credits) of math from 2 years (20 credits)
- Lead and support professional development and other efforts to coordinate a West County Grade 6-12 California Standards English Language Arts program
- Plan, provide, measure, and evaluate professional development and other resources to increase use of technology in the District to deliver effective instruction

Student Support

Using available resources, increase student engagement as measured by student attendance and California Healthy Kids Survey

- Through "Keeping Kids in School (KKIS)" case management at Laguna High School, decrease Laguna truancy as reported in KKIS annual evaluation
- Maintain or increase school and community protective factors (e.g. caring relationships, high expectations and opportunities for meaningful participation), as measured by the California Healthy Kids Survey "School Connectedness Scale"
- Provide at least three new additional opportunities for student leadership development and community involvement (for example, Tomorrow's Leaders Today, Project 1-4-1, Friday Night Live clubs, Health Action Councils)

Facilities

Continue to achieve Measure I Facility Improvement projects

- Complete Analy Band Room, Analy Stadium and El Molino Stadium projects
- Increase funding for District Deferred Maintenance plan

WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

TO: Kellie Noe, Board President

FROM: Karen Lamb, Executive Secretary

DATE: March 2, 2016

ITEM: **CONSIDERATION OF APPROVAL OF OVERNIGHT FIELD TRIP REQUESTS**

The Board is requested to approve the following field trip requests:

One Analy High School student will travel to Robobank Arena in Bakersfield to participate in the CIF Boys Wrestling State Championship on March 3-5, 2016. The student will travel by a private vehicle driven by Ryan Stevens, an approved volunteer driver. The student will be chaperoned by Ryan Stevens and James Stevens both are approved overnight chaperones. The student and chaperones will stay at the Days Inn.

Forty-five Analy High School students will travel to Sacramento to participate in a choir tour on March 3-4, 2016. The students will travel by school bus. The students will be chaperoned by Andy Del Monte, Laura Orth, Tanya Turneaure, Andrea Park, and Becky Lawrence, all are approved overnight chaperones. The students and chaperones will stay at the Larkspur Landing Hotel in Roseville.

Four El Molino High School students will travel to Logan High School in Union City to participate in a speech tournament on March 4-5, 2016. The students will travel by a private vehicle driven by Ginger Riley, an approved volunteer driver. The students will be chaperoned by Ginger Riley and Braedyn Youngberg, both are approved overnight chaperones. The students and chaperones will stay at the Aloft in Silicon Valley.

Fifty Analy High School students will travel to Disneyland in Anaheim to participate in the Analy Tiger Band Marching Main Street on March 18-21, 2016. The students will travel by charter bus. The students will be chaperoned by Cheryl Wills, Brian Wills, Dawn Salas, Kimberly Letizia, Emma Zavala, Hector Acosta, Claudia Acosta Garibay Gomez, Kelly Stewart and Dawn Johnson, all are approved overnight chaperones. The students and chaperones will stay at the Fairfield Inn & Marriott.

Seven El Molino High School students will travel to Santa Clara to participate in a dance competition on May 14-15, 2016. The students will travel by a private vehicle driven by Jolene Johnson, an approved volunteer driver. The students will be chaperoned by Jolene Johnson, an approved overnight chaperone. The students and chaperone will stay at the Hyatt House in Santa Clara.

It is respectfully requested that the Board approve these overnight field trip requests.

ATTACHMENTS:
No

WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

TO: Kellie Noe, Board President

FROM: Mia Del Prete, Human Resources Manager

DATE: March 2, 2016

ITEM: **CONSIDERATION OF APPROVAL OF COURSE LIST FOR 2016 SUMMER SCHOOL SESSION**

BACKGROUND INFORMATION:
Every year the West Sonoma County Union High School District (WSCUHSD) offers a summer school program. The program is designed for students who need remediation in certain core subjects in order to make up credits. WSCUHSD does not provide a program for students who wish to accelerate graduation requirements.

CURRENT CONSIDERATION:
The WSCUHSD Summer School Program will be held Monday, June 13, through Thursday, July 21, 2016. The program will offer courses in English, Social Studies, Math, Science, Physical Education and Art Studio.

At the February 2016 Board Meeting Trustee Bruhner asked if the English and Math courses were the only courses offered as college prep and why the Social Sciences and Sciences classes were not included as college prep. Summer School Co-Principal Lindsey Apkarian shared with Mia Del Prete, Human Resources Manager that all courses are college prep as long as the student is taking the class for a grade. If the student requests a pass/fail grade then it will not be recorded as a college prep course. Ms. Apkarian and Ms. Del Prete made the decision to remove the "college prep" from the summer school course list. When a student completes an application for summer school courses they will mark the box for college prep so they will receive a grade not a pass/fail.

RECOMMENDATION:
It is respectfully requested the Board of Education approve the Course List for the 2016 Summer School Session.

ATTACHMENTS:
Yes

2016 SUMMER SCHOOL
COURSE LIST

COURSE TITLE	OPEN TO STUDENTS ENTERING GRADES:	DESCRIPTION
ENGLISH		
English 9	10-12	A study of literature and composition.
English 10	11-12	Narrative and descriptive writing as well as emphasis on the expository essay. Literature will concentrate on various genres.
English 11	12	A survey of American Literature from 1620 to the present time. Composition focuses on expository writing and an intensive review of English usage.
English 12	Non-Grad	A survey of English Literature from the Anglo-Saxon period to the present time. Composition focuses on expository writing.
SOCIAL STUDIES		
Social Studies Survey/Geography	10-12	Physical and cultural geography and current issues. (First semester of 9th grade Social Studies course.)
Social Studies Survey/Health	10-12	Personal, community, and environmental health issues. Students will discuss teen mental and emotional health topics. (Second semester of 9th grade Social Studies course.)
World History	11-12	The study of civilization throughout the world with specific emphasis on cultural development, geographical influences, and current issues.
United States History	12	U.S. History with a focus on the 20th Century. Students will study the history of our nation in preparation for understanding the world around them.
American Government	Non-Grad	The organization and functions of the federal government.
Economics	Non-Grad	A survey course in micro and macro economics.
MATH		
Math 1 – 1st & 2nd Semester	10-12	Meets Algebra graduation requirement.
Math 2 – 1st & 2nd Semester		Meets Algebra graduation requirement.
Geometry	10-12	
SCIENCE		
Life Science	10-12	Life science topics, such as cell theory, evolution, genetics, the human body and ecology will be covered.
Physical Science	10-12	A survey of the elements of physics, chemistry, astronomy, oceanography, geology, and meteorology.
PHYSICAL EDUCATION		
Physical Education	10-12	May be taken through Credit by Individualized Program to make up an "F" grade only.
OTHER		
Art Studio	10-12	An introduction to basic drawing, painting, design, and printmaking through a variety of creative projects. (*Fine Art or Elective credits*)

WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

TO: Kellie Noe, Board President

FROM: Denise Calvert, Interim Chief Business Official

DATE: March 2, 2016

ITEM: **CONSIDERATION OF APPROVAL OF WARRANT REGISTERS FEBRUARY 11, 2016 THROUGH FEBRUARY 24, 2016**

BACKGROUND INFORMATION:
The Board is responsible for approving all warrants authorizing payments during a regularly scheduled School Board meeting.

CURRENT CONSIDERATION:
The School Board will receive warrants for the time period of February 11, 2016 through February 24, 2016 under separate cover for review.

RECOMMENDATION:
The administration respectfully requests that the School Board approve the payment of warrants from February 11, 2016 through February 24, 2016 separate cover for review.

ATTACHMENTS:
No

WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

TO: Kellie Noe, Board President

FROM: Mia Del Prete, Human Resources Manager

DATE: March 2, 2016

ITEM: **CONSIDERATION OF APPROVAL OF BOARD POLICY 4350 COMPENSATION AND RELATED BENEFITS**

BACKGROUND INFORMATION:

In December 2015, the District was notified by Shelley Stiles, then Chief Business Official (CBO) that she was resigning effective January 15, 2016, taking an accounting position at the Sonoma County Office of Education. The position was posted on January 8 and closed on February 5, 2016. The District only received one application. After the paper screening the Committee determined this was not a candidate we would like to interview. A survey was conducted to compare our CBO salary to others in the county that are relatively the same size district as West Sonoma County Union High School District (WSCUHSD). Steve Kellner, Superintendent and Mia Del Prete, Human Resources Manager discovered WSCUHSD is on the low end of the salary schedule.

CURRENT CONSIDERATION:

Dr. Kellner and Ms. Del Prete are recommending the Board approve a 5% increase to the CBO salary in order to be competitive as we re-open the position. We know that Petaluma Unified School District, Cotati-Rohnert Park Unified School District, Sebastopol Union School District and Forestville Union School District are also looking for a CBO. With a 5% salary increase WSCUHSD will be in the middle of the other CBO salary schedules in the county. With the combination of a 5% and our excellent benefit package we will be more competitive especially with the other districts posting for a CBO position. The 5% increase is noted in bold font under the current salary schedule. This item was brought before the Board of Education in February 2016 as a first reading.

RECOMMENDATION:

It is respectfully requested the Board of Education approve the revisions to Board Policy 4350 Compensation and Related Benefits.

ATTACHMENTS:

Yes

COMPENSATION AND RELATED BENEFITS

SUPERVISORY SALARY SCHEDULE – 2015-2016

Effective: 7/1/2015

	Work Yr.	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
DISTRICT OPERATIONS COORDINATOR	12 mos.	56,307	59,124	62,082	65,184	68,442	71,866	73,303
FOOD SERVICES COORDINATOR	12 mos.	38,732	40,669	42,701	44,836	47,081	49,434	50,422

CONFIDENTIAL SALARY SCHEDULE – 2015-2016

	Work Yr.	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
EXECUTIVE SECRETARY II	12 mos.	42,751	44,887	47,132	49,486	51,963	54,558	55,650
ACCOUNTANT/ANALYST	12 mos.	42,751	44,887	47,132	49,486	51,963	54,558	55,650
PAYROLL TECHNICIAN/HR ASSIST.	12 mos.	41,507	43,582	45,761	48,049	50,451	52,975	54,034

POSITIONS NOT CURRENTLY ALLOCATED

SUPERVISORY:

DIRECTOR OF MAINTENANCE & OPERATION	12 mos.	60,468	63,494	66,668	70,001	73,501	77,176	78,720
SUPERVISOR OF MAINTENANCE & OPERATIONS	12 mos.	52,147	54,753	57,496	60,367	63,384	66,555	67,886
SITE SUPERVISOR OF MAINTENANCE & OPERATIONS	12 mos.	43,819	45,981	48,311	50,727	53,264	55,929	57,047
TECHNOLOGY/SYSTEMS COORDINATOR	12 mos.	56,931	59,777	62,765	65,904	69,199	72,660	74,113
CAREER EDUC. SUPERVISOR	192 days	27,128	28,496	29,904	31,404	32,974	34,633	36,019
CONFIDENTIAL:								
ADMINISTRATIVE ASSISTANT	12 mos.	53,394	56,064	58,867	61,812	64,902	68,148	69,511
EXECUTIVE SECRETARY II/ ADMINISTRATIVE ASSISTANT	12 mos.	51,966	54,564	57,293	59,517	63,165	66,325	67,651
EXECUTIVE SECRETARY I	12 mos.	40,692	42,728	44,864	47,106	49,460	51,935	52,974
ADMINISTRATIVE SECRETARY	12 mos.	36,518	38,756	40,693	42,729	44,867	47,107	48,049
SUPPORT SERVICES SECRETARY	12 mos.	35,089	36,842	38,686	40,619	42,651	44,783	45,678
PERSONNEL CLERK	12 mos.	35,089	36,842	38,686	40,619	42,651	44,783	45,678
ACCOUNT CLERK (ACCT'S. PYBL)	12 mos.	35,089	36,842	38,686	40,619	42,651	44,783	45,678

LONGEVITY

After 10 years with district	$56/month	$672.
After 15 years with district	$111/month	$1,332.
After 20 years with district	$168/month	$2,016.
After 25 years with district	$224/month	$2,688.

Includes 2.% increase over 95-96; includes 2.4% increase and 7.2% increase over 96-97; includes 4% increase over 97-98; includes 5.6% increase over 1998-99; includes 8% increase over 1999-00; includes 6% increase over 2000-01; no increase over 2001-02; no increase over 2002-03; no increase over 03-04; no schedule increase over 04-05; increase longevity to match Classified Schedule eff. 7/1/05; 3% increase over 2004-05 effective 10/31/05; 3% + 1.09% increase over 2005-06 eff. 7/1/06; 4% increase over 06/07 eff 7/1/07. PERs employees' 3 day reduction will be calculated through the payroll system as a pay dock. Effective 7/1/2010 salary schedule reflects an 8 day reduction. Effective 7/1/2011 salary schedule reflects an 8 day reduction. Effective 7/1/2012 salary schedule reflects a 6 day reduction. Effective 7/1/2013 salary schedule reflects a 3 day reduction. Effective 7/1/2014 salary schedule reflects three (3) additional days. Effective 7/1/2014 a 2% retro to the 2014-2015 Salary Schedule. Effective 7/1/2015 a 4% increase to the 2015-2016 Salary Schedule as well as a Step 7 added to the 2015-2016 Salary Schedule.

MANAGEMENT SALARY SCHEDULE – 2015-2016

Effective: 7/1/2015

CURRENT POSITIONS	WORK DAYS	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
HIGH SCHOOL PRINCIPAL	220	104,682	108,135	111,702	115,391	119,197	120,986	122,800
CONTINUATION PRINCIPAL	217	98,586	101,839	105,202	108,672	112,259	113,943	115,652
VICE-PRINCIPAL II	210	90,583	93,570	96,658	99,847	103,144	104,691	106,261
HUMAN RESOURCES MANAGER	12 mos.	72,738	75,138	77,619	80,179	82,825	84,067	85,328
CHIEF BUSINESS OFFICIAL (CBO)	12 mos.	89,801	92,764	95,825	98,987	102,254	103,787	105,345
		94,291	**97,402**	**100,616**	**103,936**	**107,367**	**108,976**	**110,612**
DIRECTOR OF FACILITIES, MAINTENANCE & OPERATIONS	12 mos.	69,183	71,467	73,825	76,262	78,778	79,960	81,159
Positions not currently allocated								
ASSISTANT SUPERINTENDENT FOR ADMINISTRATIVE SERVICES	217	106,971	110,506	114,276	117,810	121,816	123,644	125,498
VICE-PRINCIPAL I	198	85,463	88,261	91,275	94,289	97,302	98,809	100,316
BUDGET MANAGER	12 mos.	61,049	64,105	67,309	70,674	74,207	75,320	76,450
STAFFING MANAGER	12 mos.	61,049	64,105	67,309	70,674	74,207	75,320	76,450
DIRECTOR, BUSINESS SERVICES	12 mos.	109,138	112,741	116,461	120,303	124,275	126,139	128,031
CO-PRINCIPAL	205	94,676	97,795	100,914	104,255	107,597	109,210	110,850

Additional $1,000 for Masters (limit of 1)Additional $1,000 for Doctorate (limit of 1)

LONGEVITY

After 16 years with District* $ 614.
After 20 years with District* $1,024.
After 24 years with District* $1,434.
After 28 years with District* $1,843.
After 32 years with District* $2,253.
After 36 years with District* $2,662.

*Movement from certificated to management salary schedule will not result in loss of longevity.

Includes 2.5% increase over 94-95; includes 2% increase over 95-96; includes 2.4% increase and 7.2% increase over 96-97; includes 4% increase over 97-98; includes 3% increase over 98-99; includes 8% increase over 1999-2000; includes 6% increase over 2000-01; no increase over 2001-02; no increase over 2002-03; no increase over 2003-04, eff. 7/1/04 increase Masters/ Doctorate from $700 to $1000; no increase over 03-04; no increase over 04-05; 3% increase over 2004-05 effective 10/31/05, 5.25% + 1.07% increase over 2005/06 effective 7/1/06; 4% increase over 06/07 eff 7/1/07. Assistant Superintendent's salary reflects 5 days in reduction. Site Administrators' salary reflects 3 days in reduction. PERs employees' 3 day reduction will be calculated through the payroll system as a pay dock. Effective 7/1/2010, site administrators' salary reflects 5 days in reduction. Assistant Superintendent reflects a 15 day reduction. Classified management (PERs employees) will receive an 8 day reduction which will be calculated through the payroll system as a pay dock. Effective 7/1/2011, site administrators' added two (2) days to the salary, reflecting a 6 day reduction. Assistant Superintendent added 4 days back to salary schedule, reflecting an 11 day reduction. Classified management (PERs employees) added two (2) days back to salary schedule, reflecting a 6 day reduction which will be calculated through the payroll system as a pay dock. Effective 7/1/2012 two steps were added to the administrative and management salary schedule, Step 6 and Step 7. Effective 7/1/2013 administrative and management salary schedule reflects a 3 day reduction. Effective July 1, 2014, administrative workdays to remain the same as the 2013-2014 school year with a salary increase equivalent of three (3) workdays. Effective 7/1/2014 a 2% retro to the 2014-2015 Salary Schedule. Effective July 1, 2015 a 5% increase to the 2015-2016 Salary Schedule.

SPECIAL EDUCATION CONSORTIUM SALARY SCHEDULE – 2015-2016

Effective: 7/1/15

MANAGEMENT:

CURRENT POSITIONS	WORK DAYS	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
DIRECTOR OF SPECIAL ED.	220	93,246	96,321	99,499	102,792	106,175	107,767	109,384

Additional $1,000 for Masters (limit of 1)

Additional $1,000 for Doctorate (limit of 1)

3% increase over 2004-05 effective 10/31/05 for Program Specialist; 5.25% increase to Program Specialist effective 7/1/06 and Director salary rebenched for 2006-07; 1.07% increase eff. 7/1/06 applied to both positions; 4% increase over 06/07 eff 7/1/07. Administrators' salary reflects 3 days in reduction. Effective 7/1/2010, administrators' salaries reflects 5 day reduction. Effective 7/1/2010, classified work days reduced for school year employees 7 days and 5 days for 10.5 and 11 month employees. Effective 7/1/11, administrators and classified added two (2) days back to salary schedule, reflecting a 6 day reduction for administrators and a three (3) day reduction for 10.5 and 11 month employees. Effective 7/1/2012 two steps were added to the administrative and management salary schedule, Step 6 and Step 7. Effective 7/1/2013 special education consortium salary schedule reflects a 3 day reduction. Effective July 1, 2014, administrative workdays to remain the same as 2013-2014 school year with a salary increase equivalent of three (3) workdays. Effective 7/1/2014 a 2% retro to the 2014-2015 Salary Schedule. Effective July 1, 2015 a 5% increase to the 2015-2016 Salary Schedule.

CERTIFICATED:

CURRENT POSITIONS	WORK DAYS	STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7
PROGRAM SPECIALIST	207	70,857	73,197	75,612	78,108	80,685	81,896	83,125

	WORK DAYS	SALARY PLACEMENT
BEHAVIORAL SPECIALIST	Certificated Calendar	Certificated Salary Schedule, Certificated work year calendar

CLASSIFIED:

	WORK DAYS	HRS./ DAY	SALARY PLACEMENT
FAMILY PARTNER/PARENT CONSULTANT	182	VARIES	Range 33, Classified Salary Schedule
BEHAVIORAL ASSISTANT	182	VARIES	Range 24, Classified Salary Schedule
SPECIAL NEEDS CUSTODIAL ASSIST.	182	VARIES	Range 20, Classified Salary Schedule
SECRETARY I - SPECIAL EDUCATION	230	6 & 8	Range 26, Classified Salary Schedule
SPECIAL ED. DATA TECHNICIAN	240	3 & 4	Range 29, Classified Salary Schedule

Adopted: June 4, 1998
Revised: 9/10/98; 5/27/99; 8/12/99; 5/8/00; 11/16/00; 3/22/01; 6/28/01; 9/27/01.
12/12/02; 6/24/03; 3/17/04; 5/17/06; 8/16/06; 4/25/07; 8/22/07; 4/23/08; 6/25/08, 3/11/09, 6/24/09,
6/23/10, 6/22/11, 6/27/12, 8/8/2012, 1/16/2013; 8/14/2013; 1/22/2013; 6/25/2014; 6/24/2015

WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

TO: Kellie Noe, Board President

FROM: Steven Kellner, Superintendent

DATE: March 2, 2016

ITEM: CONSIDERATION OF APPROVAL OF PROPOSED NEW COURSE OF STUDY SUSTAINABLE AGRICULTURE (DISTRICT-WIDE)

BACKGROUND INFORMATION:

The District must add, delete and adapt courses in the district curriculum as student needs and demands for career and college preparation change, as curriculum that is appropriate to high school changes, and as teaching approaches change. It is in the best interest of our students and communities to keep the district curriculum current with the available information, societal norms, career and college preparation trends, technology, student interests, and teaching approaches.

Board Policy 6143 defines the process to be followed in order to add new courses to the district curriculum. This policy requires that the courses of study stay consistent with the philosophy and goals of the district, and that they meet legal requirements. BP 6143 specifies that the course of study for each course taught in the district shall contain the following:

- Course title
- Brief statement of purpose of the course
- Standards of Expected Student Performance
- Course outline
- General estimate of time allocation for major course elements

In addition, BP 6143 specifies that, for new courses, the proposed course of study should also contain:

- Course justification statement
- Description of course development process
- Types and numbers of students to be served
- Number of sections to be offered
- Description of any instructor inservice needed
- Costs involved in implementing the new course
- Description of any courses and sections to be dropped and resulting cost savings

Sadie DeMarta and Sarah McMaster, our agriculture teachers at Analy and El Molino, are proposing "Sustainable Agriculture- A Biological Approach to Industry Practices" as a new course to be taught on both campuses starting fall 2016. This course would replace Intro to Agriculture/Agriculture Science 1 at each campus. The course is designed for 9th or 10th grade students and will be the first in a three course sequence to be implemented over the next three

years. The curriculum was designed by a collaborative coordinated by UC Davis. As a result, Sustainable Agriculture Biology would be approved by the University of California as college prep.

Because the proposed course in replacing an existing course there will be no increase in staffing cost. Additionally the professional development and instructional materials for both teachers will be provided for by the North Coast Agriculture Partners grant that WSCUHSD is participating in along with 13 other districts from Petaluma to Fortuna.

CURRENT CONSIDERATION:

At this time, the Board will consider approving the proposed new Sustainable Agriculture Biology course to the District course of study. If approved, both Analy and El Molino plan to offer the course in fall 2016.

RECOMMENDATIONS:

The administration respectfully request that the Board approve Sustainable Agriculture Biology for the 2016-17 school year as presented.

ATTACHMENTS:

Yes

West Sonoma County Union High School District
Request for New Course Approval

School(s) Where Course Will Be Taught: Analy High School & El Molino High School

Course Title: Sustainable Agriculture - A Biological Approach to Industry Practices.

Grade Level: 9th and or 10th grade.

Department: Agriculture

Credits: 1 year life science

Types of Students (e.g. College preparatory, career technical education, special education, etc.): Career tech and College preparatory.

Numbers of Students to be Served: 1 section to be offered at each site, (approximately 35 students per section, per site)

Number of Teaching Sections to be offered: 1 Section at Analy and El Molino High School.

Other Courses and Sections Impacted (including any courses or sections to be dropped and resulting cost savings): Ag Biology would replace Intro to Ag or Ag Science 1

Purpose of the Course: Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our environment. Sustainability creates and maintains the conditions under which humans and the biotic world can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment.

Standards of Expected Student Performance: See attached course description.

Course Outline and Time Allocation: See attached course description.

Methods of Student Evaluation: See attached course description

Justification, Course Development Process and Funding Support: The course has been developed by a team of Agriculture teachers, State Education Staff and other professional industry partners to align common core standards from NGSS and Agriculture state standards. The NCAP grant will be the main source of funding to support the Sustainable Ag Biology class. Ag Incentive Grant will fund and maintain the class for future years.

UC Course Submission Form

Course Title: Sustainable Agriculture - A Biological Approach to Industry Practices.

Academic Subject: Lab Science

Select One: Life Science (Biology)

CTE Sector and Pathway: Agriculture and Natural Resources | Agriscience

Course Content:

For each unit please provide the following information:

1) Description of topics: describe the topics and skills students learn in the unit. Focus on describing the actual work of the course and not the content standards the course aligns with.

2) Assignment summaries: Describe each major assignment that makes up the "identity" of the unit: What do students produce to demonstrate learning? What are the major parameters of that work and what purpose does it serve?

Course Overview:

Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our environment. Sustainability creates and maintains the conditions under which humans and the biotic world can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment. (adapted from http://www.epa.gov/sustainability/basicinfo.htm)

Sustainable Agriculture is a one year course designed to integrate biological science practices and knowledge into the practice of sustainable agriculture. The course is organized into four major sections, or units, each with a guiding question. Unit one addresses the question, What is sustainable agriculture? Unit two,sustainable agriculture fit into our environment? Unit three, What molecular biology principles guide sustainable agriculture? Unit four, How do we make decisions to maximize sustainable agricultural practices within a functioning ecosystem? Within each unit specific life science principles will be identified with agricultural principles and practices guiding the acquisition of this knowledge, culminating in the development of a sustainable farm model and portfolio of supporting student research.

Unit One

Driving Question: What is sustainable agriculture?
This introductory unit will focus on the biological classifications of agriculture and their associated industry sectors, what sustainability is, and how the scientific method is the driving force behind advancements and developments in sustainable biological practices within agriculture. Students develop an overview of agricultural industries and biologic practices through research projects on facets of California agriculture, and identify what sustainability and sustainable practices are through individualized lab experiments relating to current practices. Ultimately, students will be able to use the scientific method to complete an extensive laboratory experiment that is designed to evaluate potential feed source varieties for sustainable success within their local community.

Assignment Summaries:
"What is sustainable agriculture?"
Students groups will research the various biological divisions of what constitutes agriculture. (plant science, animal science, forestry, horticulture, etc.) Within their research they will identify the sub categories of industry that fall within their topic, what career paths are available within each, what are currently identified as "best practices" (such as the three E's of sustainability -- economics, ecology and equity) and what are some of the sustainability issues and biologic concerns within each of these divisions. Students will then develop a multimedia presentation to introduce their particular area of agriculture to the class and identify the most prevalent issues facing their particular field of interest.

"That's Ag - The Science Behind Agriculture"
Categorical Based Mini-Labs:
Student groups will design and complete an inquiry based mini-lab experiment to expand on their knowledge of the particular industry sector they researched from the previous activity. Choosing a focus from one of the areas of concern or issues within their sector, students will then design and implement an experiment that tests factors contributing to the issue and potential impacts they have on the population using scientific method learned in class. Examples might include a lab on animal production and energy flow, a lab on soil degradation and plant germination, a lab on food processing practices, a lab on post-harvest preservation, etc. The labs will introduce the application of inquiry within the agriculture sectors and the importance of the implementation of research in the industry. Design protocols, data, and analysis will be submitted in lab report format. As part of their analysis, students must use their data to make suggestions on how to improve efficiency or yield, or lessen the impact of processing, relevant to their finding of their particular experiment.

Scientific Method and Sustainability Lab - "Work Like a Scientist"
In this lab students are introduced to the scientific method, the basis for all scientific decision making. The native grasses research will provide students with the foundation of scientific investigation application as well providing key research that will be used in the final unit project as well as the end of course project. Students will research the difference between native grasses versus invasive

grasses including specific species. Using this knowledge they will hypothesize germination rates between these two variable groups. Students will then design and implement an experiment incorporating quantitative data collection, analysis, and draw conclusions reflective to their hypothesis, and evaluate the grasses for potential sustainability within their communities.

As a continuation of the germination experiment, given that the two variables have differing germination rates, students can identify other measures of "success" of a potential feed crop. They will then sample the community environment for the potential factors affecting the continued growth and development of grasses. Samples would include soil testing, (pH, nutrient composition, structure and texture, and water capacity), water availability, and ambient temperatures. Combining this information with the initial background research regarding natives versus invasive, students will hypothesize on the continued success of their germinating grasses, then transplant their seeds into test plots or fodder trays, and allow for continued growth. After a pre-determined amount of time, sample plots will be analyzed for percent coverage and measurements of species biomass will be completed. Using this information students will determine the most biologically suitable grass species to plant that would be the most sustainable within the local community through a written lab completed in their lab notebook and a powerpoint presentation of their hypothesis, design, data and conclusion.

Unit Two:

Driving Question: How does sustainable agriculture fit into our environment?
While unit one examined whole systems, unit two takes a closer look at components within that system. Students will use evidence gathered from a series of laboratory exercises to be able to describe the transfer of energy from one trophic level to another as well as the cycling of nutrients and energy through ecosystems. Students will be able to draw conclusions about these biogeochemical cycles and how they apply to sustainability of production agriculture. Specifically, students will conduct primary research in the areas of photosynthesis and chemical energy creation, nutrient cycling, transpiration and water use, ecological relationships and global farming practices in order to draw biologically-sound conclusions regarding the effects of agriculture on the natural environment. The students learning will culminate in a synthesis of concepts applied to the development of a three year sustainable crop rotation plan.

Assignment Summaries:
"Bacteria at Work" - Nitrogen Fixation
Students will analyze the effects of nitrogen fixation on plants initially by examining prior studies as well as industry publications regarding the role of nitrogen in plant growth and the methods by which farmers enhance nitrogen levels in soil. This should include a thorough look at the microbiology of nitrogen-fixing bacteria, plant and root physiology, nutrient cycling and uptake in plants, chemical

processes and cellular respiration in plants and fertilization methods. After garnering that background information, students will conduct an experiment that compares the effects of added nitrogen fertilizer versus nitrogen fixing bacteria on the growth of clover. Students will grow clover plants in soil with no nitrogen added, in soil with nitrogen fertilizer added, and in soil containing nitrogen-fixing bacteria (in this case, a species of rhizobia called Rhizobium legominosarium, or R. legominosarium). Students will monitor the nitrogen levels in each type of soil using a nitrogen testing kit. The students will observe the effects of nitrogen on the health of the clover plants by measuring the increase in biomass of each plant during the experiment. Plants should be harvested, soil washed away, and weights taken on plant material produced. Students will use the data collected to create a graph showing the relationship between nitrogen availability in the soil and crop sustainability. This allows students to not only experience agriculture's role in the nitrogen cycle, but also provides necessary supporting data for decision making in the final end of course project.

"Morning Jolt!"- Photosynthesis Lab

Photosynthesis is the basis for the creation of chemical energy in the natural world. Plants require light in order to transform one type of energy into another, and the quantity and type of light determine the optimal photosynthesis rates. Students will conduct a laboratory exercise that examines the effects of shade on the growth of plants and the rates of photosynthesis and will develop a written memorandum to the International Coffee Growers Association regarding optimal shade levels for the growth of coffee trees, including information regarding ecological sustainability involved in the practice. The process will begin by using industry journals to examine coffee production methods; primarily comparing and contrasting industrial coffee production with shade-grown, sustainable coffee production. Students should come up with the following information: arabica coffee has the highest yields under 35 to 65% shade. In addition, growing coffee under shade also discourages weed growth, may reduce pathogen infection, protect the crop from frost, and helps to increase numbers of pollinators which results in better fruit set. However, in order to produce faster, higher yields and prevent the spread of coffee leaf rust (Hemileia vastatrix), many coffee plantations began to grow coffee under sunnier conditions. The fewer shade trees that are in coffee plantations, the less biodiversity there is in those plantations.
The laboratory exercise will use several small coffee plant starts (available for purchase online as seeds or a houseplant) and will grow them for a series of days under varying shade levels. Students will conduct visual assessments of plant health and growth, then conduct a traditional floating leaf disc assay protocol to assess photosynthesis levels under varying light conditions. Students will use both the previously gathered background information regarding industry practices, sustainability and plant growth as well results of the primary research to develop the memorandum regarding optimal shade levels for sustainable coffee growth.

"Move on Through" - Transpiration Lab
Students will initially conduct background research into water use in agriculture and the demands placed on farmers to be efficient and careful with this scarce natural resource. Students will then investigate transpiration as part of the hydrologic system, based on different genetic variations of

plant structure (leaf type and shape, for example). Students will conduct a research exercise by examining transpiration in plants with various leaf structures. This can occur using locally-grown crops or by using exotic crops and adding a component regarding appropriate plant selection. In this lab, students will use the plant weight protocol to measure the transpiration rates of individual plants. Students give plants a predetermined amount of water, reweigh the plants, and continue weighing the plants over time to contrast weight differentials and determine water loss through transpiration. Students will monitor observable physical changes in the different plants' condition as water is depleted, collecting qualitative data and measuring the diurnal transpiration rates. Students will apply the individual plant water usage data to larger scale acreage to analyze water usage. Students will create a written case study to justify plant selection within the context of the sustainability of the hydrologic system.

Optional extension: include in the case study how trends in daily transpiration rates change if water losses were replenished through different irrigation management techniques (drip, flood, etc.).

"From Trash to Gas" - Sustainable Waste Management

Students will use both primary and secondary research to discover that food scraps, dead plants, manure, and other decaying organic matter, called *biomass* are a rich source of energy. Energy can be procured from biomass by turning it into a gas called *biogas.* The process will begin by students examining agricultural examples of biogas production (small scale composting, dairy lagoon gas extraction, codigestion, etc.) as well as the microbiological basis for biogas production, including aerobic and anaerobic fermentation, cellular respiration, lignocellulosic breakdown, etc. As part of this analysis, students will compare the amounts of biogas produced by different types of biomass. In order to quantify their findings, students will conduct an experiment with three soda bottles filled to the same volume with various types of biomass commonly used in biogas production. Bottle one will contain cow manure, bottle two will contain cow manure and household kitchen scraps, and bottle three will contain cow manure and a biological waste product of the students choosing (teacher approved). Bottles will be topped with a small balloon. Students will record the circumference of each of the balloons at the same time of day over a period of 10 days as well as record observations of the biomass inside of the bottles. Students will create a graph representing the circumference of balloons and the number of days. Students will compare graphs to determine which biomass type produced the fastest inflation of the balloon. Upon completion of the experiment, the students will then need to develop a written plan for how this naturally occurring byproduct can be harnessed to benefit a farming situation. In addition to incorporating their data, this plan should include: research on how the gas is used, the scientific processes behind biogas creation (fermentation, anaerobic digestion, etc.), biomass feedstocks that can be used to create efficient quantities of biogas, potential uses of biogas, and potential economic and sustainable benefits of instituting a biomass digester.

"Composting, Do the Rot Thing"

Students will examine the principle of composting organic material, and the process of converting complex organic matter into the basic nutrients needed by living organisms. Prior to conducting the

experiment, students will use industry and extension publications to learn the processes of composting, as well as the benefits and challenges of compost production (available nutrient levels, community perceptions, hazardous materials, smell, storage, etc.). Following the background research, students will conduct a laboratory exercise that will examine the utilization of organic wastes (household) as nutrients for plants. It will allow students to investigate which waste products can be composted and best utilized by plants. Based off of prior knowledge of an ecosystem and how ecosystems regenerate as well as the interaction of food and fiber systems with natural cycles, students will justify specific nutrient requirements, as well as renewable and nonrenewable natural resources. Students will prepare three test plots, one plot with just soil, one with soil and household waste products collected by students, and one plot with animal waste products. Students will then monitor plant growth and development to graph their results. Students will create an informational, six paneled brochure that explains a waste management plan using compost. Included in the brochure should be information regarding the microbiology of compost production in addition to the practical household application of the research. Additionally, the brochure should outline the removal of organic matter to increase ecological sustainability while having the least environmental impact on the farm and community.

Unit Assessment
Plant, Grow, Rotate, Repeat Sustainable Crop Management Plan
Students will apply concepts of the biogeochemical cycles as well as waste management to create a 3 year sustainable crop rotation plan that produces the highest crop yields for any given location with the least environmental impact. Students must analyze current soil conditions as well as community needs when considering their crops for production. Student focus should be on nitrogen fixation of specified crops. Students will use previous knowledge of ecosystems, invasive species, and producer and consumer relationships as well as research current market prices and local demands, to assess the environmental contribution and the economical impact from each crop. When creating the 3 year crop rotations students will defend their selections and the ecological impacts of their decisions. The synthesis of the students research will culminate in written proposal to a local producer.

Unit Three:

Driving Question - What molecular biology principles guide sustainable agriculture?
In this unit, students will examine the science of agriculture and evaluate the efficiency and sustainability of current methods. Students will explore the concepts of taxonomy of plants and nomenclature of animals, cell structure, cellular division, DNA, and chromosomes. Students will apply this knowledge to evaluate desirable inheritable traits in each species to artificially select characteristics to breed more efficient and productive offspring as a part of their created breeding plan. Students will be introduced to genetic markers, genetically modified organisms, and biotechnology. With this knowledge students will examine and evaluate biotechnology, the ethics of genetic manipulation, and its implication on the sustainability of agriculture and our ability to feed a

growing population. As a culminating project for the first two units students will design, conduct, and interpret their own agricultural research project on a biological issue facing agriculture and present their findings with a visual, written, and oral report.

Assignment Summaries:

"Breed For The Need"- Sustainable Breeding Evaluation

Animal genetics play a role in sustainability. An animal that is genetically predicted to become heavier muscled in a shorter period of time will utilize less pasture and nutritive resources than one that takes longer to reach the same weight. A female who produces more milk to feed her offspring will utilize less resources for both her and her progeny. Therefore, summative phenotypic traits are important to evaluate in a sustainable ecosystem in order to efficiently utilize natural resources. By analyzing these traits students can determine the probability of the trait expression in an animal's offspring. After instruction on chromosomal physiology, multicellular organization, animal anatomy, basic heredity, and genetic expression, students will identify desirable characteristics from a group of four animals of the same species to create a sustainable breeding plan that will include: hybrid vigor, genetic efficiency and other genetic traits. Students will use three components to evaluate the group of four animals that include the farmer's sustainability scenario, expected progeny difference data and phenotypic evaluation of the animals. First students will read an agricultural producer's written scenario that describes the targeted phenotypic traits a farmer desires based on the environment that must sustain the health and nutrition of the specific animals while not depleting the natural resources within that biological system. The parameters of the traits the students will evaluate include milk production (the weight of the weaned offspring that was contributed to the amount of milk the mother produced), weaning weight (the weight of the offspring when removed from the mother), yearling weight (the weight of the offspring at eighteen months of age and birth weight (the weight of the offspring at birth). Next, the students will read and analyze Expected Progeny Difference (Summative phenotype expression) data. Finally, students will perform visual observations of the phenotypic traits in those four animals. Students will assess and prioritize the three analyzed components based on importance and collectively use them to place the four animals in phenotypic order from the most desirable for the environment to the least desirable according to the farmer's sustainability scenario. Students will give an oral defense with evidence to support reasoning.

"Where Should I Make My Home ?"- Sustainable Production Plan

The students will be put into groups and collectively evaluate the same animals from the previous activity with summative phenotypic traits for each of the bio-geological growing zones in California which are desert and high desert, coastal, valley, foothills and mountains. Instruction should occur on plant taxonomy and livestock anatomical suitability (large animals in areas with poor biomass production, genetic hardiness factors, etc.) prior to the secondary research being done. Research done on each zone will provide information on the possible sustainability plans in which the four animals could be raised. Students will research the ecosystem of each area, analyzing what crops,

pasture and range can be grown and the effects of climate and rainfall on the availability of nutrients for the animals' sustainability. Based on the data accumulated from the research they will reevaluate the four animals from the previous lab including EPD data. For each zone they will place the animals in order from the one most suited and efficient to the least. Students construct a written defense for their decision in the placing of those animals in each zone based on their data and research. They will argue the merits of their placing based on the data from their zone research: native and nonnative grass and crop survivability in each zone that provides nutrition to the animals, biological merits and disadvantages of each zone on the animals. They will then use the zone information to reevaluate the EPD data and how it can be best utilized to meet the animal's biological needs. Using the research and accumulated data students can determine a class placing for each region of California.

"Battle of the Seeds" - Biotechnology Use in Agriculture
Crop decisions made by agricultural producers are often predicated on understanding the climate, rainfall and topography needs of their growing area. These decisions often prioritize crop yield, but also must take into account the biological health of each system. The previous lab focused on evaluating the efficiency of specific animals introduced into an ecosystem where the biological components were predetermined and consistent. In this activity, students explore the introduction of new plants into predetermined, consistent ecosystems by investigating how germination, growth and efficiency of plants (crops) can be affected by genetic and environmental changes. Prior to the experiment, students should be instructed in cell division and structure as functions of organism growth, genotypic traits and variable expression, traditional hybridization methods and modern genetic manipulation.

For the primary research exercise, students will set up three demonstration plots to compare growth and yield rates of plants. Half of the class will grow unweeded plots of plants, manually weed-controlled beds, and chemically controlled beds with plants that have been genetically modified to withstand the effects of a widely-used herbicide. The other half of the class will grow hybrid seed, non-hybrid seed, and genetically enhanced seed of the same plant. Upon analyzing data of plant growth and yield rates students will calculate the cost in time and money for the methods demonstrated. Students will formulate a written opinion/thesis and defend from evidence the most sustainable method of growing food based on their experiment. Students determine the statistical, economical and biological differences of genetically modified organisms as compared to natural organisms. Students will then research public concern of genetically modified organisms to prepare for a class debate. Utilizing their experimental results and research students debate the use of biotechnology and genetically modified organisms playing one of four following roles; a leader of a developing nation where hunger is a problem among their citizens, a biotechnology company specializing in producing genetically modified plants, a farmer, or a parent who primarily purchases organic produce. Students will reflect on their original opinion and write what they learned as a result of this experience.
Unit Assessment:
"Hypothesize, Analyze, Repeat" - Formal Research Project

Labs and activities have been done in this unit that represent the common applications of biological factors such as genetic potential and variability of plants and animals, the symbiosis of animals and plants within an ecosystem and the impact of new species introduced into an established environment. Students will utilize the science of nature they learned in unit three, how that science fits into the biological systems from unit two and how those systems contribute to sustainability in unit one to develop a comprehensive agriscience experimental research project. Students will identify a problem related to agriculture that is the result of completing the first three units of the course (plant science, animal science, natural resources). Students will utilize the empirical method to design an experiment that will test their own authentic hypothesis using the skills and processes learned throughout the course that include dissecting published research and studies, testing the hypothesis, collecting, synthesizing, analyzing and interpreting data, accepting or rejecting the hypothesis based upon the data, technical reading and writing, and scientific collaboration. Specific expectations for the written research project are outlined below:

1. Forming a Hypothesis

Students will use credible sources to conduct background research on the agricultural issue they are investigating, and they will use this research to generate a testable hypothesis related to the scientific problem they have identified. The hypothesis developed by the student will be constructed with the independent and dependent variables in mind.

2. Experimental design and conducting experimentation

Students will construct an experimental design to test their hypothesis. A written experimental design should be constructed consistent with scientific protocol using a systematic approach outlined in the previous units. Students will have their experimental designs reviewed by industry experts, agricultural instructors, local growers/producers, researchers or university representatives. After validating the design using the peer review process, students will move to the experimentation phase of their research. Experimental designs should include replicates, control groups, and determine the variables to be controlled and how. Additionally, a determination should be made as to the type of data that will be collected and in what ways, with the emphasis placed on quantitative data or quantifying data that is qualitative in nature. Students will use their experimental design to test their hypothesis. For example, in a study of primed versus non-treated seeds, seeds would be planted in identical environments, multiple test groups would be established and compared to a control group, and the number of germinated seeds would be counted and recorded to quantify the outcome. Raw data should be recorded using a field book or electronic device.

3. Analyzing data, interpreting data and forming conclusions.

Students will determine the best methods for organizing their data using tables. Students will use mathematical principles to synthesize their data, calculating a mean, for example. Furthermore, a statistical analysis of the data will help the student determine if the results are due to chance or the independent variable that was tested. Students will choose the best way to present their data using graphs they believe will most effectively demonstrate their findings, and will further summarize what each graph shows. Finally, students will interpret the data and formulate conclusions based on the results. In the written conclusion, students will use their data to either accept or reject the original hypothesis. Conclusions should be directly supported by the data and supported by previous

research. Students will also identify the limitations of their research, improvements that could be made to the experimental design, as well as future studies that may be conducted that relate the study at hand.

4. Evidence of Performing the AgriScience Research Project

Students will submit their research in a written paper, and it will include the following components: problem/purpose, background research, hypothesis, methodology, results/data, and discussion/ conclusion. The paper will be written using skills associated with technical and scientific writing, for example, refraining from the use of personal pronouns or keeping discussion limited to what the research and data suggest rather than personal opinion and bias. APA format will be utilized to reference and cite sources. Students will create a visual display board, using a digital format that mirrors the use of research posters in higher education, which will also include all of the components of the paper, but in a condensed form. The peer group that reviewed the original experimental design will review the final research paper. The project and its findings will be shared with the class in an oral presentation, with the research board on display to aid in communicating the results of the research.

Unit Four (Copy and paste for each additional unit you wish the course to include.)

Driving Question:How do we make decisions to maximize sustainable agricultural practices within a functioning ecosystem?

Description of Topic: Students will understand common practices in the agriculture industry that promote sustainability. They will evaluate and/or refine technological solutions that reduce impacts of human activities on natural systems by using practices that utilize cellular biology, genetics, energy cycles, biological systems, plant and animal nomenclature and how these units collectively create ecosystems that were covered in the previous units. Students will conduct production practices in the areas of animal science, horticulture, and natural resources. Students will experience how the biological systems can be changed at the cellular level, promoting the emergence of new energy cycles that produce useful, recyclable products that have a positive impact on the environment, thus decreasing the impact of agriculture on the environment and promoting sustainability. Students will investigate positive sustainable approaches to changing negative impacts agriculture has on the land by testing methods of efficiency in laboratory work. This experience will give students perspective on production costs and resource needs in relation to animal welfare, mechanization versus labor, and use of chemicals to non-use of chemicals. Students will utilize this hands-on production experience to develop their own sustainable farm as a culminating final project to illustrate the management of agricultural systems, management of natural resources , the sustainability of an ecosystem for the future while preserving biodiversity.

"Show Me You Care" - Practice in Animal Health Management

Common animal production practices are done to ensure multi-system homeostasis and to foster productive animal growth and general welfare. Prior to conducting a laboratory exercise, students will engage in secondary research that seeks to correlate common livestock production practices to

maintaining system health in animals. For example, castration, tail banding, hoof trimming and vaccinations prevent pathogen (viral, bacterial, fungal and parasitic) infections and thereby ensuring the health of the immune system, lymphatic system and respiratory system, among others. Shearing, clipping and dehorning are noninvasive procedures that provide recycling opportunities of animal byproducts but are also designed to maintain homeostasis and to protect vital organs throughout multiple systems (shearing reduces overall stress on the circulatory system, for example). Animal identification requires animals to have a traceable number like the scrapie tag that traces the animal to the breeder in case an animal tests positive for the genetic disease and ensure herd health (preventing disease outbreaks that can stress multiple systems).
After the conclusion of the background research, students will engage in a laboratory experience where they will conduct common livestock production procedures practiced in the United States through the application of: castration methods, dehorning practices, vaccination protocols, identification systems and shearing techniques. Students will divide into groups to demonstrate one or more of the common livestock production practices within several species of livestock and small animals. After the conclusion of each of these demonstrations, students will choose one method they demonstrated and write an explanatory position paper that correlates the production practice to physiological health in the animal, highlighting homeostatic mechanisms and system nomenclature.

"If You Root It, They Will Grow" - Sustainable Practices in Horticulture
The ability to graft, increase growth rates and clone species of plant, trees and crops is an option that can increase the number of organisms that can be planted in a shorter amount of time. Using one plant to create many or the ability to grow different varieties of fruit on one tree maximizes the efficiency of each organism within an ecosystem. The ability to utilize this technology increases species diversity while positively affecting land biomass. Students will experience a laboratory activity, conducting propagation techniques that make plants more efficient and in return contribute to the energy cycles within the ecosystem potentially maximizing sustainability of the plant and its production.This laboratory lets students use asexual propagation through the application of auxins directly onto plants used as a common practice in the horticultural industry. Students will also research the role of auxins and make predictions on its effectiveness on their assigned mother stock plant. Through teacher demonstration, students will learn the proper steps of asexual propagation and make cuttings of their plant. Each student will test the effectiveness of auxins (rooting growth hormone) with one row in a flat being a different concentration of hormone and one control. After two weeks students will collect data every three days and record the rate at which their plant cutting roots. Students will calculate the cost of hormone treatment versus the time for cuttings to root to recommend the use or non-use of auxins on their assigned plant in their lab report.

In the next step of the laboratory students will practice the proper steps of transplanting and fertilizer use as regular practice in the horticultural industry. Students will take their rooted cuttings and transplant them to a larger container. After direct instruction on types of fertilizers, students will make predictions on the most effective type of fertilizer for their rooted cuttings; liquid, slow release,

and organic. Students will be assigned a growing area (landscape plot, or one gallon-containers) to conduct their experiment. Students will test each type of fertilizer with four rows of plants. One row will be the control, without fertilizer application and the other three rows will have liquid, slow release, and organic fertilizer applications. Students will take daily measurements and make final conclusions of fertilizer effectiveness for their plant. Students will also compare cost of fertilizer to effectiveness to determine final recommendations in their lab report.

"It's Easy Being Green - Growing Green Communities" - Landscaping
Students will utilize the Horticulture report and experience to create a landscape plan in groups. Students will utilize the original cuttings from the previous activity which are now grown plants. Each group will use those plants in designing a landscape for a specific area designated by the teacher that could include areas around the school and/or community. Students must consider plant growth requirements, resources such as water, soil quality, and fertilization needs. Students must address the long term needs of their landscape and write a reflection on the positive and negative aspects with recommendations for more sustainable qualities. The students will submit their designs in a written proposal to the school and or community organizations for approval. Those approved will be planted and maintained by the group for the rest of the year.

"Use Me Responsibly or Lose Me Forever" - Using Nature's Natural Resources
Students will delve deeper into natural resources conducting research on bioprospecting. They will use the knowledge gained within this unit regarding the potential to change the future through bioprospecting and the need to prevent the exploitation of those resources to preserve the biospheres for future generations. Students will read articles about the use of plants and animals in nature like coral producing a natural sunscreen named, "Sunscreen 855". To prevent the harvest of coral in order to save the barrier reef they isolated the compound and produced it in a lab that will be the most naturally occurring sunscreen developed. Students will discuss the importance of bioprospecting, as well as how the prospect of products from plants and animals argues for the continued maintenance of biodiversity and sustainability as long as the resources are not exploited.(Biology,Prentice Hall) After the discussion students will research other types of bioprospecting happening in agriculture. They will choose one material (natural resource) being prospected and find the following information from their research: what research is being done on the material, how are they utilizing the material and how does the research and use of the material play a role in sustainability. The information accumulated on the material bioprospecting will be utilized in a flyer created by each student. The flyers will be set-up in a walking gallery where the students will use a bioprospecting rubric to score the importance of each natural resource presented as a valuable material for continued research. The students will have a class discussion about which three natural resources are the most valuable source of bioprospecting to contribute to sustainability of the human population.

Bioprospecting - "Motoring with Microbes" -

Discovering Cellulose Microbes for Biofuel Efficiency

The students will then conduct a research lab on Bioprospecting for Cellulose-Degrading Microbes: Filter Paper Assay Method where Students collect samples that they predict will contain communities of cellulose-degrading microbes and test for the ability of microorganisms in their samples to break down pure cellulose (filter paper). In the process, groups collect evidence to test predictions about which environmental microbial samples will be the most effective for degrading cellulose. By comparing results across groups, students can begin to uncover patterns and develop explanations about the types of environments that support cellulose-degrading microbes. This lab method is nearly identical to that used by researchers and student results could help scientists discover new enzymes for efficient biofuel production that is key in agriculture's ability to remain sustainable in the next century. https://www.glbrc.org/education/classroom-materials

Students will turn in a completed lab using scientific method and write an abstract of their research to send to the Great Lakes Bioenergy Research Center as part of their on going research on biofuel.

Unit Assessment and End of Course Project

"I Believe in the Future of Agriculture" - Sustainable Farming Project

Students will design a solution for developing, managing, and utilizing energy and resources through the development of a completely sustainable farm on 400 acres that must include a minimum of three crops and two species of animals. A comprehensive farming portfolio will be created. The portfolio will include data and research done from each unit within the course to be used to create their farm as well as provide evidence to defend the sustainability of that farm and thus, the best representative of sustainability. The students must research genetic varieties of crops and species of animals based on genetic efficiency and commensalism. Attention to how soil nutrients and deficiencies affect vegetative reproduction, germination, plant growth and crop adaptation within an environment must be utilized in the research. Based on the data the students will determine the crops to be produced. They will research and evaluate the species of animals that will have a symbiotic relationship with the crops they have chosen above. Phenotypic and genotypic traits, hybrid vigor, commensalism, and other variables should be used to determine the two species of animals that will be best suited for the designed environment while providing for the welfare of the animals' health and nutrition. Animal welfare must be addressed in the decisions made to create a farm that is positive and biodiverse in nature. Environmental impacts based on the crops and animals raised on the farm need to be identified dealing with biological magnification, depletion of soil /plant nutrients , use of natural resources , pollution issues dealing with waste and desertification. The students will use this information as well as the data and labs from the previous units to determine the carrying capacity of livestock and acres of crops to be grown on the farm . Biological methods of reducing the identified environmental impacts will then be designed by the student, which could include methane digesters, aquaculture, CO2 collectors and irrigation water recycling. Finally, students will address the management decisions made to reduce the farm's carbon footprint over a decade of production. The portfolio and presentations will be presented to the local farm bureau as well as other agriculture associations and businesses.

Course Materials

In the space below, list all course materials, including primary and secondary texts and supplemental materials.

Primary Textbook:
District Approved Biology Text
Example: Joe Levine and Ken Miller. *Biology*. Prentice Hall, New Jersey. 2008

Secondary Texts:
Herren, Ray V. *The Biological Approach to AgriScience*.4th edition.Delmar Thompson Learning. 2012.New York.
Herren, Ray V. Introduction to *Biotechnology:An Agricultural Revolution*.Delmar Thompson Learning. 2005. New York
Camp, William G. and Thomas B. Daugherty. *Managing our Natural Resources*. Del Mar Publishers. 1998. New York
Baker, MeeCee and Robert Mikesell. *Animal Science: Biology and Technology*. 3rd edition. Delmar Cengage Learning. 2011. New York
Bidlack, James and Shelley Jansky. *Stern's Introduction to Plant Biology*. 12th edition. McGraw Hill Publishing. 2010. New York.

Supplemental Materials:
Burton, Devere L. and Elmer L. Cooper. *Agriscience: Fundamentals and Application*. 3rd edition. Delmar Thompson Learning. 2002. New York.
International Food Information Council. *Biotechnology: A Communications Guide to* Understanding. 2003 edition. Washington D.C.
Great Lakes Bioenergy Research Center. 2007-2013. Bioprospecting Laboratories https://www.glbrc.org/education/classroom-materials. Wisconsin.
United States Environmental Protection Agency. 2000-2014. What is Sustainability? www. https://ipa.gov/sustainability/basicinfo.html Washington D.C.

WEST SONOMA COUNTY UNION HIGH SCHOOL DISTRICT

TO: Kellie Noe, Board President

FROM: Mia Del Prete, Human Resources Manager

DATE: March 2, 2016

ITEM: **CONSIDERATION OF APPROVAL OF QUARTERLY WILLIAMS UNIFORM COMPLAINT REPORT**

BACKGROUND INFORMATION:

In January of 2005 the Board approved new Administrative Regulation 1312.4 addressing the Williams Uniform Complaint Procedures. This regulation is a mandate of Education Code Section 35186 and addresses complaints regarding instructional materials, teacher vacancy and/or mis-assignment, and maintenance of facilities. Part of the regulation calls for a Quarterly Report of Complaints to be given to the Board of Education and then forwarded to the County Office of Education.

CURRENT CONSIDERATION:

The October 1 – December 31, 2015, Quarterly Report for West Sonoma County Union High School District is attached. There were no complaints filed during this time period in any of the areas of the regulation.

RECOMMENDATION:

It is respectfully requested the Board of Education approve the Quarterly Williams Uniform Complaint Report for the period of October 1 – December 31, 2015.

ATTACHMENTS:

Yes

West Sonoma County Union High School District

Williams Settlement

Quarterly Uniform Complaint Report Summary

Education Code §35186(d): A school district shall report summarized data on the nature and resolution of all complaints on a quarterly basis to the county superintendent of schools and the governing board of the school district. The summaries shall be publicly reported on a quarterly basis at a regularly scheduled meeting of the governing board of the school district. The report shall include the number of complaints by general subject area with the number of resolved and unresolved complaints. The complaints and written responses shall be available as public records.

Reporting Period:

☐ January 1 – March 31, 2015 ☐ April 1 – June 30, 2015
☐ July 1 – September 30, 2015 ☒ October 1 – December 31, 2015

No complaints were received during the above time period. ☒

If you received any complaints during the above time period, please complete the following table. Enter "0" in any cell that does not apply.

General Subject Area	Complaints Received	Complaints Resolved	Unresolved Complaints
Instructional Materials	0	0	0
Facilities	0	0	0
Teacher Vacancy and/or Mis-assignment	0	0	0
CAHSEE Intensive Instruction and Services	0	0	0
Total	**0**	**0**	**0**

Board meeting date: 3/2/2016
Date sent to County Superintendent of Schools: 3/3/2016
Sonoma County Office of Education
5340 Skylane Blvd.
Santa Rosa, CA 95403