



Name of Course: INTEGRATED SCIENCE	
Name of Teacher: Greg McBride	
E-mail Address: gmcbride@pvusd.net	
	Room # D-201
	Preparation Period: 6
I	<p>Course Description/Outline (<i>reflects needed skills</i>)</p> <p>Integrated Science is intended to satisfy the one year of physical science required for graduation from Aptos High School. <u>This is not a college preparatory course</u> that satisfies the University of California physical science core requirement. This class surveys important basic topics from both chemistry, physics, biology, ecology and applications of some of these topics to the fields of earth science, astronomy and environmental science.</p>
II	<p>Materials Provided (<i>name of textbook, other resources, video used, etc.</i>)</p> <p>Textbook: <i>Physical Science</i> (Copyright 2000, Glencoe); <i>Earth Science</i>, a companion to our main text may also be occasionally used.</p> <p>Videos: Selected films that introduce or reinforce concepts being covered in class will be used throughout the course.</p> <p>Other Resources: Internet (selected websites, research), computer tutorials and simulations</p>
III	<p>Materials Required</p> <ol style="list-style-type: none"> 1. Spiral-type notebook of about 150 pages. 2. Pens and pencils (colored pencils or pens would also be helpful) 3. Calculator with at least basic arithmetic functions (add, subtract, multiply and divide)
IV	<p>Goals (<i>knowledge to be acquired, technical skills, etc., specific reference to ESLRs and state standards</i>)</p> <p>1. Scientific progress is made by asking meaningful questions and conducting careful investigations. Students will be trained in various aspects of the scientific method and experimental design. Students will be able to:</p> <ol style="list-style-type: none"> a. make objective, meaningful, clearly stated and appropriate observations b. select and use appropriate technology to perform tests, collect data, and analyze relationships c. identify sources of experimental error d. distinguish between hypotheses and theories, and distinguish between facts

and models

- e. recognize the limits of models to describe reality
- f. investigate science-based societal issues and communicate their findings
- g. present data collected from investigations in appropriate tables and graphs
- h. carry out laboratory investigations

(Expected School-wide Learning Results--ESLR's-- A,B, C, D)

Specific content areas to be investigated include portions of the following California State Content Standards in physics and chemistry (ESLR's A,B,C, and D are involved):

- 2. Newton's Laws predict the motion of most objects.
- 3. Energy cannot be created or destroyed, but may be transferred as heat.
 - 4. Waves carry energy and have properties that do not depend on the type of wave.
 - 5. Electric and magnetic phenomena are related and have many practical applications.
- 6. The periodic table of elements is a tool that relates to atomic structure.
- 7. The properties of matter result from the ability of atoms to form chemical bonds
 - 8. Acids, bases, and salts are three classes of compounds that form important solutions.
 - 9. Solutions are homogenous mixtures of two or more substances.
 - 10. Polymers are large molecules formed by repetitive combination of simpler subunits.
 - 11. Radioactive elements have unstable nuclei that disintegrate and release energy.

V

Units of Study (*activities*)

- 1. Introduction to scientific methods, safety, measurement, laboratory techniques
- 2. Energy and Motion, Work and energy, Machines
- 3. Nature and Classification of Matter
 - 1. Atomic Structure
 - 2. Chemical Compounds, Bonding and Chemical Reactions
 - 3. Organic Compounds, Polymers, and other Useful Materials
 - 4. Acids and Bases
 - 5. Electricity and Magnetism

Genetics

Biology

Ecology

VI	<p>Methods of Assessment (<i>may include tests, portfolios, projects, essays, etc.</i>)</p> <ol style="list-style-type: none"> 1. Homework (1-2 times per week) and other written assignments--20% 2. Lab activities (1-2 times per week) and lab write-ups--30% 3. Tests and Quizzes--20% 4. Notebook—20% 5. Participation (coming to class and following directions)--10% 6. Extra credit will occasionally be offered to the whole class, but proposals for other extra credit will not be accepted as "Band Aids" for a student not completing regular class work on time. <p>Students are required to read one book to fulfill the million word challenge and satisfy the district reading requirement.</p> <p>Each quarter's results count 45% toward the semester grade, and the semester final exam will count for 10% of that grade.</p>
VII	<p>Methods to accommodate language learners and other target populations</p> <ol style="list-style-type: none"> 1. Frequent use of visuals and hands-on activities to reinforce concepts. 2. Group and pair work on many activities. 3. Review sessions before tests. 4. Tests may be retaken for up to a "C" grade. 5. Instructor available for tutoring before school, after school, and during most lunches.
VIII	<p>Units or activities that address language and math standards needed for High School Exit Exam (for classes other than language arts and math)</p> <ol style="list-style-type: none"> 1. Elementary arithmetic and algebraic problem solving: laboratory measurement and unit conversions, graphing of data, speed and force problems, Ohm's Law problems. 2. Language Arts: reading of textbook and other material; comprehension and application questions will form part of the homework of this course; observation and report writing will be part of many of the laboratory activities.
IX	<p>Class Procedures (<i>missed assignments, make up work assignment format</i>)</p> <p>All homework assignments: due (complete) at the beginning of the class period of the day that they are due.</p> <p>Missed assignments: Students have one day plus however many days they are absent to make up missed work for full credit. Tests and quizzes should be made up as soon as</p>

possible during tutorial, lunch or after school. See teacher's web site for a list of all assignments made each day. See the teacher for lab make-up forms or assignment sheets or other handouts.

Students are responsible for all material covered in class whether they are present in class or not.

X

Behavioral Expectations (*and consequences*)

I sincerely want each of my students to succeed in my class. I want you to feel free to seek help from me in person, by e-mail, or by phone when you feel you need it. I want our class to be a place and time where learning takes place for everyone. I expect each student to help create a class atmosphere which promotes learning by having responsible and appropriate behavior, which includes:

1. Being seated and ready to work when the bell rings.
2. Being respectful and courteous to everyone else in the class.
3. Following directions and doing all work with honesty and integrity.
4. Participating fully in all class activities.
5. Following all laboratory safety guidelines and treating all equipment with respect.

The rewards of following these guidelines will be a more pleasant classroom experience for everyone, increased learning and greater academic success. The consequences of choosing not to follow these rules are as follows:

Tardies Behavioral Infractions

School-wide policy will 1st.....warning

Be followed 2nd....possible separation & student-teacher conference

3rd....detention & parent contact

4th....referral to administration

Severe infractions (outrageous or unsafe behavior, fighting, vandalism, refusal to follow directions)--immediate referral to administration.

XI

Grading policy:

Points are assigned for all graded assignments and the points are weighted according to the distribution described above, under "assessment". Quarter and semester grades will be assigned using the typical 90%, 80%, 70%, 60% scale for grades of A-, B-, C-, and D-, respectively.

Each quarter will count 45% and the final exam will count 10% toward the semester grade.

In order to receive full credit on a written assignment, an assignment must show sincere effort, the assignment must be complete in all aspects of the assignment requirements, it must be neat and legible and it must be on time.

Written homework assignments are due at the beginning of class on the day they are due. You can lose 80% of the credit on an assignment if it is late and we went over it in class! With other assignments the maximum points possible decreases the later the assignment is turned in.

No assignments will be accepted more than 2 weeks late.

Copying others' work may result in zero points on the assignment for both parties

I have read & understand the "*Course Syllabus*" for...

.....Mr. McBride 's INTEGRATED SCIENCE CLASS....

Parent/Guardian

Signature.....Email:.....

Student Signature.....Date:_____