

SC2020/ Physical Science 1 Syllabus

Course Title----- Physical Science 1
 Course Number----- SC2020
 Grades:----- 09-09
 High School Credit Value:----- 0.5
 Prerequisites:----- N/A

Course Length:----- Regular courses: 17 weeks
 CR: 9-17 weeks.

Course Time:----- Regular courses: 17 week schedule: 75 - 90
 minutes per school day (6-7.5 hours per
 week)
 Credit Retrieval: 75 - 90 minutes per
 school day (6-7.5 hours per week) until
 course completion.

{ Course Description }

Physical Science 1 is the first semester of a full year science course offering a broad introduction to the scientific method, performing scientific experiments, and analyzing data. A semester final will be required. This course helps meet the state minimum requirements of 2.0 science credits in addition to it meeting a lab requirement. Please check with your district for more specific requirements.

Course Materials:

Technical requirements include the ability to download and use freeware such as Adobe Acrobat and Flash. The required materials list is linked from the Course Description and Materials page located in this Orientation folder.

State Alignments

Washington State Standards guided the design of the course. Learning expectations are found within the course itself.

This course is designed to correspond to the FWSD Power Standards

PS1. Systems thinking can be especially useful in analyzing complex situations. To be useful, a system needs to be specified as clearly as possible.	Semester 2
PS2. Plan an appropriate scientific investigation to answer a research question.	Unit 1
PS3. Collect data to answer research questions.	Unit 5
PS4. Display and analyze data to answer research questions, using available technical devices.	Unit 2
PS5. Conclusions must be logical, based on evidence, and consistent with prior established knowledge.	Semester 2
PS6. Public communication among scientists is an essential aspect of research. Scientists evaluate the validity of one another's investigations, check the reliability of results, and explain inconsistencies in findings.	Unit 4
PS7. Scientists carefully evaluate sources of information for reliability before using that information. When referring to the ideas or findings of others, they cite their sources of information.	Unit 4

PS8. Perfect solutions do not exist. All technological solutions involve trade-offs in which decisions to include more of one quality means less of another. All solutions involve consequences, some intended, others not.	Semester 2
PS9. Changes in the motion of objects are caused by forces, and can be predicted using Newton's laws.	Semester 2
PS10. Although energy can be transferred from one object to another and can be transformed from one form of energy to another form, the total energy in a closed system remains the same. The concept of conservation of energy, applies to all physical and chemical changes.	Semester 2
PS11. Atoms are composed of protons, neutrons, and electrons. The nucleus of an atom takes up very little of the atom's volume but makes up almost all of the mass. The nucleus contains protons and neutrons, which are much more massive than the electrons surrounding the nucleus. Protons have a positive charge, electrons are negative in charge, and neutrons have no net charge.	Unit 3
PS12. Atoms of the same element have the same number of protons. The number and arrangement of electrons determines how the atom interacts with other atoms to form molecules and ionic crystals.	Unit 3

Course Outline

17 Week Session

Unit 1 Scientific Investigation, 3 weeks
 Unit 2 Displaying and Analyzing data, 3 weeks
 Unit 3 The Nature of Atoms, 3 week
 Unit 4 The Properties of Elements, 3 weeks
 Unit 5 Collecting Data to Answer Research Questions, 3 weeks
 Semester Review and Semester Final 2 weeks

Course Work

Students are expected to put in 6-8 hours per week to complete their lessons. Teacher may return assignments and ask student to make modifications if it does not meet minimum standards. Assignments that do not meet standard will earn one point in the online grade book. Revised work that students resubmit will be worth up to full credit, and revised scores will replace the one point score in the grade book.

Assignments are submitted online, with rare exception. Students may contact their teacher through email, by phone, in live chat session, or during live online study sessions. Weekly academic contact is strongly recommended for students to be successful in this class.

Units and lessons should *always be done in the order presented on the Learning Plan Contract*. **Many of the tests in this course are timed.** Students should study all unit instruction and lessons prior to taking tests to prepare themselves.

Grading

Lesson assignments will be graded using the following criteria:

- Proper spelling and grammar should be used at all times.
- Lab write-ups should follow standard format provided in the course.
- All lesson answers should be written in the student's own words. Copying and pasting from sources will not be tolerated.

Projects will be graded using the following criteria:

- All prescribed formats will be followed.

- Bibliographic citation of all web resources must accompany the project, including the URL, name of the web site, and author or editor if available.
- Copying or plagiarism will not be tolerated. Plagiarism may result in no credit given for the lesson or project. Copying work from another student will result in no credit for the affected items.

Revision Policy:

- Students may be either given a score for submitted work or work may be returned for revision.
- Students have one opportunity to revise and return work for credit.
- Revised work should be returned to the teacher in a timely manner.
- Revised work will still be worth up to full credit.
- Work submitted in bulk either during the semester or especially at the end of the semester will not be available for revision and will be scored as submitted.

Occupational Credit:

This course may qualify for *occupational credit. Please consult your school counselor for further clarification.

*Please note that FLA901 (Sign Language) does not qualify for occupational credit.

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