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Web resources at: www.seasidek12.org

SEASIDE HIGH SCHOOL

Physical Science









Textbook: Physical Science: Concepts in Action (P-H)

Background Information

Physical Science covers topics aligned with the Oregon Statewide Standards and focuses on basic Chemistry and Physics concepts.* There are also Earth and Space Science components to the class as well as mathematics application and measurement throughout.

Requirements

- Safe choices and behavior
- Completion of labs, assignments, and projects
- Participate cooperatively in class
- Demonstrate gains in scientific thinking, processes, and knowledge

Course Objectives and Outcomes

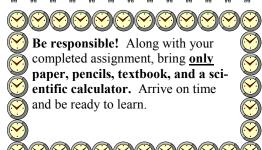
 While gaining background information and skills necessary for physics, chemistry and other upper level science classes, students will gain an understanding of fundamental physical science concepts.

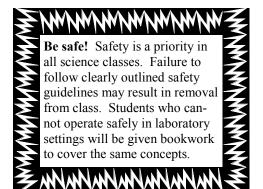
*Common Core Standards listed on Back

EXPECTATIONS

Be in class! You will miss important presentations, activities and labs if you are not present.

Many of these events will not be duplicable. If you are absent, then it is up to you to find out what you missed and take care of it before the next class. Participate and you'll find your class time more enjoyable!





<u>Grading</u>			
90-100 %	=	A	In-class activities,
80-89 %	=	В	labs, assignments, home-
70-79%	=	C	work checks, quizzes, and
60-69 %	=	D	exams will be used to as-
0—59 %	=	F	sess student progress.

Rules: All school rules apply in this class. No food or drink is allowed. Water, however, is acceptable on non-lab days. As we prepare students for college and career readiness, the importance of meeting deadlines is critical to their success. In order to meet that goal, students may not receive full credit for assignments that are not submitted on time as assigned.

I,	understand and agree to the above expectatio	ns, grading, and rules.
Print your first and last name here.		, C
Student signature	Parent/guardian signature	date

Subject Standards learned in Physical Science A and B include, but are not limited to:

H.1 Structure and Function

- H.1P.1 Explain how atomic structure is related to the properties of elements and their position in the Periodic Table. Explain how composition of the nucleus relates to isotopes and radioactivity.
- H.1P.2 Describe how different types and strengths of bonds affect the physical and chemical properties of compounds.

H.2 Interaction and Change

- H.2P.1 Explain how chemical reactions result from the making an breaking of bonds in a process that absorbs or releases energy. Explain how factors affect the rate of a chemical reaction.
- H.2P.2 Explain how physical and chemical changes demonstrate the law of conservation of mass.
- H.2P.3 Describe the interactions of energy and matter including the law of conservation of energy.
- H.2P.4 Apply the laws of motion and gravitation to describe the interaction of forces acting on an object and the resultant motion.

H.3 Scientific Inquiry

- H.3S.1 Based on observation and science principles, form a question or hypothesis that can be tested through the collection and analysis of data.
- H.3S.2 Design and conduct a controlled experiment, field study, or investigation to make systematic observations, including the collection of sufficient and appropriate data.
- H.3S3 Analyze data and identify uncertainties. Draw a valid conclusion, explain how it is supported by the data, and communicate the findings of a scientific investigation.
- H.3S4 Identify examples from science that illustrate modification of science knowledge in light of challenges to prevailing explanations.
- H.3S5 Explain how technological problems and advance create a demand for new scientific knowledge and how this new knowledge enables the creation of new technology.
- 9-10.RST.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
- 9-10.RST.2 Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept: provide an accurate summary of the text.
- 9-10.RST.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.
- 9-10.RST.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context.
- 9-10.RST.5 Analyze the structure of the relationships among concepts in the text, including relationships among the key terms.
- 9-10.RST.7 Translate quantitative information expressed in words in a text into visual form and translate a visual form back into words. (graph and interpret)
- 9-10.RST.9 Compare and contrast findings presented in a text to those from other sources, noting when the findings support or contradict previous explanations or accounts.
- 9-10.WHST.1 Write arguments focused on discipline-specific content.
- 9-10.WHST.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
- 9-10.WHST.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
- 9-10.WHST.6 Use technology to produce, publish, and update writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
- 9-10.WHST.7 Conduct short as well as more sustained research projects to answer a questions or solve a problem, narrow or broaden the inquiry when appropriate, synthesize multiple sources, demonstrating understanding of the subject under investigation.
- 9-10, WHST.9 Draw evidence from informational texts to support analysis, reflection, and research.
- 9-10.WHST.10 Write routinely over extended time frames and shorter times frames for a range of discipline-specific tasks, purposes, and audiences.