

PHILOSOPHY OF INSTRUCTION:

The Eugene School District recognizes the importance of science as an essential part of each student’s educational experience. 4j science engages K-12 students’ curiosity to think critically about relevant and authentic science and engineering practices in the evolving global community.

If our students are to live successfully in the future, they must become scientifically literate. Scientific literacy enables people to use scientific principles and processes in making personal and public decisions and to participate in discussions of scientific issues that affect society. A sound grounding in science strengthens many of the skills that people use every day such as solving problems creatively, thinking critically, working cooperatively in teams, using technology effectively, and valuing lifelong learning. To accomplish scientific literacy in every course offered, instruction will reflect the following:

- Develop inquiry-based, scientific reasoning, and critical thinking skills.
- Extend problem-solving skills using scientific methods.
- Include lab-based experiences.
- Strengthen positive attitudes about science.
- Follow a logical progression between grade levels.
- Provide relevant connections to personal and societal issues and events.
- Design and evaluate engineering solutions to real-world problems

SCOPE AND SEQUENCE

TRIMESTER 1 September - December	TRIMESTER 2 January - March	TRIMESTER 3 April - June
Earth Science <ul style="list-style-type: none"> ● Soils and Weathering ● Landforms ● Mapping Earth’s Surface ● Natural Resources 	Physical Science <ul style="list-style-type: none"> ● Energy and Circuits ● The Force of Magnetism ● Electromagnets ● Energy Transfer ● Waves 	Life Science <ul style="list-style-type: none"> ● Environmental Factors ● Ecosystems ● Brine Shrimp Hatching ● Range of Tolerance

KEY CONCEPTS

Earth Science (Soils, Rocks and Landforms) - Geology is the study of our planet’s earth materials and natural resources. Because they are so ubiquitous and abundant, they are often taken for granted. The **Soils, Rocks, and Landforms Module** provides students with firsthand experiences with soils and rocks and modeling experiences using tools such as topographic maps and stream tables to engage with the anchor phenomenon of the surface of Earth’s landscape—the shape and the composition of landforms. The driving questions for the module are What are Earth’s land surface made of? and Why are landforms not the same everywhere?

Physical Science (Energy) - This module provides first-hand experiences in physical science dealing with the anchor phenomenon of energy. The five investigations focus on the concepts that energy is present whenever there is motion, electric current, sound, light, or heat, and that energy can transfer from one place to other. The guiding question for the module is how does energy transfer between systems?

Life Science (Environments) - The study of the structures and behaviors of organisms and the relationships between one organism and its environment builds knowledge of all organisms. With this knowledge comes an awareness of limits. Such knowledge is important because humans can change environments. The driving question for the module deals with structure and function—How do the structures of an organism allow it to survive in its environment?

Eugene School District 4J - 4th Grade Science Standards

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