

## Eugene School District 4J - 5th Grade Science Standards

### 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
<b>Earth Science</b> <ul style="list-style-type: none"><li>● The Sun</li><li>● Planetary Systems</li><li>● Earth's Atmosphere</li><li>● Heating Earth</li><li>● Water Planet</li></ul>	<b>Physical Science</b> <ul style="list-style-type: none"><li>● Separating Mixtures</li><li>● Developing Models</li><li>● Concentration</li><li>● Reaching Saturation</li><li>● Fizz Quiz</li></ul>	<b>Life Science</b> <ul style="list-style-type: none"><li>● Systems</li><li>● Nutrient Systems</li><li>● Transport Systems</li><li>● Sensory Systems</li></ul>

### KEY CONCEPTS

**Earth Science (Earth and Sun)** - The anchor phenomena students investigate in the **Earth and Sun Module** are the patterns observed in the sky over a day, a month, a year, and more, and their effect on Earth. The driving question for the module is how do Earth's geosphere, hydrosphere, atmosphere, and biosphere interact to create a sustainable environment for life?

**Physical Science (Mixtures and Solutions)** - Chemistry is the study of the structure of matter and the changes or transformations that take place within those structures. Learning about the properties and behaviors of substances and systems of substances gives us knowledge about how things go together and how they can be taken apart and gives us the opportunity to use and develop models that explain phenomena too small to see directly. Learning about changes in substances can lead to the development of new materials and new ways to produce energy and resources such as clean drinking water.

**Life Science (Living Systems)** - The idea of a system is one of the grand integrating (crosscutting) concepts that pervades all of science. In the **Living Systems Module**, students start by looking at Earth as the interaction of four Earth systems or subsystems—the geosphere, the atmosphere, the hydrosphere, and the biosphere. The focus of the module then turns to the biosphere as students explore the phenomenon of ecosystems and organisms in terms of their interacting parts. The driving question for the module is how can we describe Earth's biosphere as a system of interacting parts?

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<b>Physical Science</b> <ul style="list-style-type: none"><li>● Separating Mixtures</li><li>● Developing Models</li><li>● Concentration</li><li>● Reaching Saturation</li><li>● Fizz Quiz</li></ul>	<b>Earth Science</b> <ul style="list-style-type: none"><li>● The Sun</li><li>● Planetary Systems</li><li>● Earth's Atmosphere</li><li>● Heating Earth</li><li>● Water Planet</li></ul>	<b>Life Science</b> <ul style="list-style-type: none"><li>● Systems</li><li>● Nutrient Systems</li><li>● Transport Systems</li><li>● Sensory Systems</li></ul>

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