

Grants Pass School District

Science Standards – Topics and Pacing Guide

5th Grade



Students are able to describe that matter is made of particles too small to be seen through the development of a model. Students develop an understanding of the idea that regardless of the type of change that matter undergoes, the total weight of matter is conserved. Students determine whether the mixing of two or more substances results in new substances. Through the development of a model using an example, students are able to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. They describe and graph data to provide evidence about the distribution of water on Earth. Students develop an understanding of the idea that plants get the materials they need for growth chiefly from air and water. Using models, students can describe the movement of matter among plants, animals, decomposers, and the environment and that energy in animals' food was once energy from the sun. Students are expected to develop an understanding of patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

It is essential that these standards be addressed in contexts that promote scientific inquiry, use of evidence, critical thinking, making connections, and communication

5th Next Generation Science Standards

Alignment and integration has been made to the current science series, "Harcourt Science" and the NGSS Interactive Science Notebook Grade 5. Scientific inquiry and engineering activities have been suggested for the purpose of addressing the skills in the context of the standards. Teachers have the flexibility to adjust within a trimester as they determine appropriate but should keep with the identified topics and standards that have been specified within that trimester. This alignment ensures that skills are not missed and that all elementary schools are following the same path.

When	Content Standards	Topics	Key Concepts/ Vocabulary	Alignment and Integration	Suggested Scientific Inquiry Activities	Suggested Engineering Activities
1 st Trimester	<p>5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.</p> <p>5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p> <p>5-PS3-1 Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.</p>	Ecosystems	food chain producers consumers decomposers energy web photosynthesis competition symbiosis	-Harcourt Science Unit B -NGSS 'Notebook' pp. 48-51, 54-68	Effects of fertilizer on pond water Salmon Science Owl Pellets	Design a water filtration device (On Share Drive)

	<p>5-PS1-1 Develop a model to describe that after is made of particles too small to be seen.</p> <p>5-PS1-2 Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, for mixing substances, the total weight of matter is conserved.</p> <p>5-PS1-3 Make observations and measurements to identify materials based on their properties.</p>	<p>Structure and Properties of Matter</p>	<p>particles properties solubility matter mixtures solid liquid gas</p>	<p>-Harcourt Science Unit E, Ch. 1, Lessons 1, 2, 3 -NGSS 'Notebook' pp.10-44</p>	<p>5-PS1-4 Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</p>	
--	--	---	---	---	--	--

When	Content Standards	Topics	Key Concepts/ Vocabulary	Alignment and Integration	Suggested Scientific Inquiry Activities	Suggested Engineering Activities
2 nd Trimester	<p>5-ESS1-1 Support an argument that the apparent brightness of the sun and stars is due to their relative distances from Earth.</p> <p>5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of sou stars in the night sky.</p> <p>5-ESS2-1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</p>	<p>Space Earth systems Stars Seasons</p>	<p>orbit axis rotate geosphere biosphere hydrosphere atmosphere</p>	<p>-Harcourt Science Unit D. Chapter 1, Lessons 1 and 2 -Chapter 2, Lessons 1 and 2 -NGSS 'Notebook' pp.69-94</p>	<p>NGSS 'Notebook' Shadows p.73</p> <p>Craters (Harcourt/Science Works)</p>	<p>M&M's in Space (Teacher's Pay Teachers)</p>

	<p>5-ESS2-2 Describe and graph the amounts and percentages of water and fish water in various reservoirs to provide evidence about the distribution of water on Earth.</p> <p>5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p>	<p>Bodies of Water Water Conservation Human Impact</p>	<p>reservoirs conservation resources</p>	<p>-Harcourt Science Unit C, Ch.4, Lesson 1 and 3 -NGSS 'Notebook' 95-97, 98-111</p>	<p>Student choice in preparation for Science Fair</p>
--	---	--	--	--	---

When	Content Standards	Topics	Key Concepts/ Vocabulary	Alignment and Integration	Suggested Scientific Inquiry Activities	Suggested Engineering Activities
3 rd Trimester	5-PS2-1 Support an argument that the gravitational force entered by the Earth on objects is directed down.	Gravity	gravity	-Harcourt Science Unit F, Ch.1, Lesson 1 -NGSS 'Notebook' 45-47	Design Paper Airplanes (Science Works) Parachutes (OMSI)	What Floats Your Boat? (Teacher's Pay Teachers) Rocket Launch