

Grade 1

Forces and Motion

Standards	FOSS Alignment	Assessment
1.P.1 Understand how forces (pushes or pulls) affect the motion of an object.		
1.P.1.1. Explain the importance of a push or pull to changing the motion of an object.	FOSS Third Edition Balance and Motion Investigation 2: Spinners Part 1: Tops pp. 90-97	FQA: Students identify push or pull as two ways a force can make things move, and describe the force to move a ball, spin a pinwheel, and the pull force of gravity.
	FOSS Third Edition Balance and Motion Investigation 2: Spinners Part 2: Zoomers, pp. 98-104	FQA: Students plan, construct, and test a way to use string to keep a disk in motion. They analyze and explain the outcome.
	FOSS Third Edition Balance and Motion Investigation 2: Spinners Part 3: Twirlers pp. 105-114 <i>FOSS Science Resource Book:</i> "Push and Pull" "Things that Spin"	Investigation 2 I-Check
	FOSS Third Edition Balance and Motion Investigation 5: Magnets and Tools Part 1: Magnets pp. 200-208	FQA: To demonstrate that magnets can both push and pull, students plan and carry out several investigations and explain from their evidence that magnets can only push other magnets, and pull magnets and some metals.
	FOSS Third Edition Balance and Motion Investigation 5: Magnets and Tools Part 2: Tools and Machines pp. 209-215 <i>FOSS Science Resource Book:</i> "Move It But Don't Touch It "	Investigation 5 I-Check
1.P.1.2. Explain how some forces (pushes and pulls) can be used to make things move without touching them, such as magnets.	FOSS Third Edition Balance and Motion Investigation 5: Magnets and Tools Part 1: Magnets pp. 200-208	FQA: To demonstrate that magnets can both push and pull, students plan and carry out several investigations and explain from their evidence that magnets can only push other magnets, and pull magnets and some metals.
	FOSS Third Edition Balance and Motion Investigation 5: Magnets and Tools Part 2: Tools and Machines pp. 209-215 <i>FOSS Science Resource Book:</i> "Move It But Don't Touch It "	Investigation 5 I-Check



Grade 1

Forces and Motion (cont.)

Standards	FOSS Alignment	Assessment
1.P.1 Understand how forces (pushes or pulls) affect the motion of an object.		
<p>1.P.1.3. Predict the effect of a given force on the motion of an object, including balanced forces.</p>	<p>FOSS Third Edition Balance and Motion Investigation 1: Balance Part 1: Balancing a Crayfish pp. 50-59 Part 2: Triangle and Arch pp. 60-64</p>	<p>FQA: Students predict which figures in drawings will be stable positions after balancing a cardboard crayfish on its nose using clothespins as counter weights.</p>
	<p>FOSS Third Edition Balance and Motion Investigation 1: Balance Part 3: Pencils Challenge pp. 65-72 Part 4: Mobiles pp. 73-81</p> <p><i>FOSS Science Resource Book:</i> "Make It Balance" "Mirette on the High Wire"</p>	<p>Investigation 1 I-Check</p>
	<p>FOSS Third Edition Balance and Motion Investigation 2: Spinners Part 1: Tops pp. 90-97</p>	<p>FQA: Students identify push or pull as two ways a force can make things move, and describe the force to move a ball, spin a pinwheel, and the pull force of gravity.</p>
	<p>FOSS Third Edition Balance and Motion Investigation 2: Spinners Part 2: Zoomers pp. 98-104</p>	<p>FQA: Students plan, construct, and test a way to use string to keep a disk in motion. They analyze and explain the outcome.</p>
	<p>FOSS Third Edition Balance and Motion Investigation 2: Spinners Part 3: Twirlers pp. 105-114</p> <p><i>FOSS Science Resource Book:</i> "Push and Pull" "Things that Spin"</p>	<p>Investigation 2 I-Check</p>
	<p>FOSS Third Edition Balance and Motion Investigation 5: Magnets and Tools Part 1: Magnets pp. 200-208</p>	<p>FQA: To demonstrate that magnets can both push and pull, students plan and carry out several investigations and explain from their evidence that magnets can only push other magnets, and pull magnets and some metals.</p>
	<p>FOSS Third Edition Balance and Motion Investigation 5: Magnets and Tools Part 2: Tools and Machines pp. 209-215</p> <p><i>FOSS Science Resource Book:</i> "Move It But Don't Touch It " "Things that Spin"</p>	<p>Investigation 5 I-Check</p>



Grade 1

Earth in the Universe

Standards	FOSS Alignment	Assessment
1.E.1 Recognize the features and patterns of the earth/moon/sun system as observed from Earth.		
1.E.1.1. Recognize differences in the features of the day and night sky and apparent movement of objects across the sky as observed from Earth.	Delta Science First Reader "Sky"	
1.E.1.2. Recognize the patterns of observable changes in the Moon's appearance from day to day.	Delta Science First Reader "Sky"	



Grade 1

Earth Systems, Structures and Processes

Standards	FOSS Alignment	Assessment
1.E.2 Understand the physical properties of Earth materials that make them useful in different ways.		
1.E.2.1. Summarize the physical properties of Earth materials, including rocks, minerals, soils and water that make them useful in different ways.	FOSS Next Generation Pebbles, Sand, and Silt Investigation 1: First Rocks Part 1: Three Rocks pp. 78-87	FQA: Students rub rocks together and observe and compare the resulting rock dust/sand.
	FOSS Next Generation Pebbles, Sand, and Silt Investigation 1: First Rocks Part 2: Washing Three Rocks pp. 88-93	FQA: Students place a rock in water and compare it to a dry rock. Students draw the two rocks and add a word to describe each. They suggest what may happen to the sand particles that are washed off the rock.
	FOSS Next Generation Pebbles, Sand, and Silt Investigation 1: First Rocks Part 3: First Sorting pp. 94-99	FQA: Students sort river rocks by properties and explain why they grouped them the way they did and how they are different and the same.
	FOSS Next Generation Pebbles, Sand, and Silt Investigation 1: First Rocks Part 4: Start a Rock Collection pp. 100-107 Part 5: Sorting Activities pp. 108-117 <i>FOSS Digital Resources:</i> "All About Volcanos" "Rock Sorting" "Property Chain" <i>FOSS Science Resources:</i> "Exploring Rocks" "Colorful Rocks"	Investigation 1 I-Check
	FOSS Next Generation Pebbles, Sand, and Silt Investigation 2: River Rocks Part 1: Screening River Rocks pp. 128-135 Part 2: River Rocks by Size pp. 136-143	FQA: Students sort rocks by size with different size mesh screens. Students weigh rocks as a further method of sorting. After reading "The Story of Sand" students describe how boulders change to sand.
	FOSS Next Generation Pebbles, Sand, and Silt Investigation 2: River Rocks Part 3: Sand and Silt pp. 144-150 Part 4: Exploring Clay and Landforms pp. 151-162 <i>FOSS Digital Resources:</i> "All About Landforms" "Property Chain" <i>FOSS Science Resources:</i> "The Story of Sand" "Landforms" "Rocks Move"	FQA: Students learn about weathering and erosion, and demonstrate their knowledge of landforms created. Investigation 2 I-Check



Grade 1

Earth Systems, Structures and Processes (cont.)

Standards	FOSS Alignment	Assessment
1.E.2 Understand the physical properties of Earth materials that make them useful in different ways.		
<p>1.E.2.1. Summarize the physical properties of Earth materials, including rocks, minerals, soils and water that make them useful in different ways.</p>	<p>FOSS Next Generation Pebbles, Sand, and Silt Investigation 3: Using Rocks Part 1: Rocks in Use pp. 178-184</p>	<p>FQA: After a classroom discussion of what may use earth materials in their construction, students read "<i>Making Things with Rocks</i>" and observe things around them, looking for what might be made of earth materials and how the materials are used. They support their responses with evidence from the text and their observations.</p>
	<p>FOSS Next Generation Pebbles, Sand, and Silt Investigation 3: Using Rocks Part 2: Observing Sandpaper pp. 185-189 Part 3: Sand Sculptures pp. 190-195 Part 4: Clay Beads pp. 196-201 Part 5: Making Bricks pp. 202 – 208</p> <p><i>FOSS Science Resources:</i> "<i>Making Things with Rocks</i>" "<i>What Are Natural Resources?</i>"</p> <p><i>FOSS Digital Resources:</i> "<i>All About Landforms</i>" "<i>Property Chain</i>"</p>	<p>Investigation 3 I-Check</p>
<p>1.E.2.2. Compare the properties of soil samples from different places relating their capacity to retain water, nourish and support the growth of certain plants.</p>	<p>FOSS Next Generation Pebbles, Sand, and Silt Investigation 4: Soil and Water Part 1: Homemade Soil pp. 224-230</p>	<p>FQA: Students make their own soil from sand, gravel, pebbles, and decaying plant materials and then separate soil using screens of various sizes. Students draw what they see in their vials of soil they made.</p>
	<p>FOSS Next Generation Pebbles, Sand, and Silt Investigation 4: Soil and Water Part 2: Local Soil pp. 231-241</p>	<p>FQA: Students compare their homemade soil to soil collected from the school yard. They receive three screens and a vial with water to help them separate their two soil samples and compare and contrast, then draw what they observe in the two vials and verbally or written make their comparisons.</p>
	<p>FOSS Next Generation Pebbles, Sand, and Silt Investigation 4: Soil and Water Part 3: Natural Sources of Water pp. 242-247 Part 4: Land and Water pp. 248-254</p>	<p>Investigation 4 I-Check</p>



Grade 1

Earth Systems, Structures and Processes (cont.)

Standards	FOSS Alignment	Assessment
1.E.2 Understand the physical properties of Earth materials that make them useful in different ways.		
<p>1.E.2.2. Compare the properties of soil samples from different places relating their capacity to retain water, nourish and support the growth of certain plants.</p>	<p>FOSS Next Generation Pebbles, Sand, and Silt <i>FOSS Science Resources:</i> "What is Soil?" "Testing Soil" "Where is Water Found?" "States of Water" "Erosion"</p> <p><i>FOSS Digital Resources:</i> "All About Soil"</p>	<p>FQA: Students plant seeds in soil and in sand to see if there is a difference in the resulting plant growth.</p>



Grade 1

Ecosystems

Standards	FOSS Alignment	Assessment
1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.		
<p>1.L.1.1. Recognize that plants and animals need air, water, light (plants only), space, food and shelter and that these may be found in their environment.</p>	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 1: Lawns pp. 76-83</p>	<p>FQA: Students plant seeds in moist soil and, after reading about what plants need to grow, predict what will happen to their seeds.</p>
	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 2: Mowing the Lawn pp. 92</p>	<p>FQA: Students cut the alfalfa and rye grass that they planted and observe what happens. They determine based on evidence that the alfalfa died because it cannot make food without leaves, and the rye grass produces leaves that make food when the plant has light.</p>
	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 3: Wheat pp. 79-112 Part 4: Variations in Plants and Animals pp. 113-128</p> <p><i>FOSS Science Resource Book:</i> "What do Plants Need?" "The Story of Wheat" "Variation" "What Do Animals Need?" "Plants and Animals Around the World" "Learning From Nature"</p> <p><i>FOSS Digital Resources:</i> "How Plants Grow" "Animal Growth" "Sorting Animals by Structures"</p>	<p>Investigation 1 I-Check</p>
	<p>FOSS Next Generation Plants and Animals Investigation 4: Growth and Change Part 3: Plant and Animal Growth pp. 242-250</p> <p><i>FOSS Science Resource Book:</i> "Animals and Their Young"</p> <p><i>FOSS Digital Resources:</i> "Animal Offspring and Caring for Animals"</p>	
<p>1.L.1.2. Give examples of how the needs of different plants and animals can be met by their environments in North Carolina or different places throughout the world.</p>	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 1: Lawns pp. 76-91</p>	<p>FQA: Students plant seeds in moist soil and, after reading about what plants need to grow, predict what will happen to their seeds.</p>



Grade 1

Ecosystems (cont.)

Standards	FOSS Alignment	Assessment
1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.		
<p>1.L.1.2. Give examples of how the needs of different plants and animals can be met by their environments in North Carolina or different places throughout the world.</p>	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 2: Mowing the Lawn pp. 92</p>	<p>FQA: Students cut the alfalfa and rye grass that they planted and observe what happens. They determine based on evidence that the alfalfa died because it cannot make food without leaves, and the rye grass produces leaves that make food when the plant has light.</p>
	<p>FOSS Next Generation Plants and Animals Investigation 3: Terrariums Part 1: Setting Up Terrariums pp. 172-180 Part 2: Animals in the Terrarium pp. 181-192</p>	<p>FQA: Students share with the class what animals need to live in their terrarium.</p>
	<p>FOSS Next Generation Plants and Animals Investigation 3: Terrariums Part 3: Habitat Match pp. 193-200 Part 4: Squirrel Behavior pp. 201-211</p> <p><i>FOSS Science Resource Book:</i> "What Do Animals Need?" "Plants and Animals Around the World" "How Plants Live in Different Places" "Learning from Nature" "What do Plants Need?"</p>	<p>FQA: Students learn about habitats around the world, and answer the questions about what animals' structures and behaviors help them survive in specific habitats. They choose one animal and record one structure and how it helps them survive (e.g. ear, which helps them hear and avoid predators).</p>
<p>1.L.1.3. Summarize ways that humans protect their environment and/or improve conditions for the growth of the plants and animals that live there (e.g. reuse or recycle products to avoid littering).</p>	<p>FOSS Next Generation Pebbles, Sand, and Silt Investigation 4: Soil and Water Part 4: Land and Water pp. 248-254</p>	<p>FQA: Students draw or describe one way engineers prevent erosion.</p>



Grade 1

Molecular Biology

Standards	FOSS Alignment	Assessment
1.L.2 Summarize the needs of living organisms for energy and growth.		
<p>1.L.2.1. Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.</p>	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 1: Lawns pp. 76-83</p>	<p>FQA: Students plant seeds in moist soil and, after reading about what plants need to grow, predict what will happen to their seeds.</p>
	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 2: Mowing the Lawn pp. 92-98</p>	<p>FQA: Students cut the alfalfa and rye grass that they planted, and observe what happens. They determine based on evidence that the alfalfa died because it cannot make food without leaves, and the rye grass produces leaves that make food when the plant has light.</p>
	<p>FOSS Next Generation Plants and Animals Investigation 1: Grass and Grain Seeds Part 3: Wheat pp. 99-112 Part 4: Variations in Plants and Animals pp. 113-128</p> <p><i>FOSS Science Resource Book:</i> "What do Plants Need?" "The Story of Wheat" "Variation" "What Do Animals Need?" "Plants and Animals Around the World" "Learning From Nature"</p> <p><i>FOSS Digital Resources:</i> "How Plants Grow" "Animal Growth" "Sorting Animals by Structures"</p>	<p>Investigation 3 I-Check</p>
<p>1.L.2.2. Summarize the basic needs of a variety of different animals (including air, water, and food) for energy and growth.</p>	<p>FOSS Next Generation Plants and Animals Investigation 3: Terrariums Part 1: Setting Up Terrariums pp. 172-180 Part 2: Animals in the Terrarium pp. 181-192</p> <p><i>FOSS Science Resource Book:</i> "What do Plants Need?"</p>	<p>FQA: Students share with the class what animals need to live in their terrarium and share their description of one of the habitats they read about.</p>
	<p>FOSS Next Generation Plants and Animals Investigation 3: Terrariums Part 3: Habitat Match pp. 193-200</p>	<p>FQA: Students chose one animal and answer the question "What structures or behaviors do the animal have that helps them live in their habitat?"</p>



Grade 1

Molecular Biology (cont.)

Standards	FOSS Alignment	Assessment
1.L.2 Summarize the needs of living organisms for energy and growth.		
<p>1.L.2.1. Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.</p>	<p>FOSS Next Generation Plants and Animals Investigation 3: Terrariums Part 4: Squirrel Behavior pp. 201-211</p> <p><i>FOSS Science Resource Book:</i> "What Do Animals Need?" "Plants and Animals Around the World" "How Plants Live in Different Places" "Learning from Nature"</p>	<p>Investigation 3 I-Check</p>