

Kindergarten

Forces and Motion

Standards	FOSS Alignment	Assessment
K.P.1 Understand the positions and motions of objects and organisms observed in the environment.		
<p>K.P.1.1. Compare the relative position of various objects observed in the classroom and outside using position words such as: in front of, behind, between, on top of, under, above, below and beside.</p>	<p>FOSS Next Generation Animals Two by Two Investigation 1: Goldfish and Guppies Part 2: Caring for Goldfish pp. 84-88 See procedures 3, 5, 6, and 7 Part 3: Goldfish Behavior pp. 89-93 See procedures 2, 4, 5, 6, and 8 Part 5: Comparing Schoolyard Birds pp. 102-112 See procedure 14</p>	<p>PA: During procedure 4, students model fish behavior by acting out what they observe with the model aquarium and paper fish. They use language to describe the position and motions of the goldfish in relationship to the features of the aquarium.</p>
<p>K.P.1.2. Give examples of different ways objects and organisms move (to include falling to the ground when dropped):</p> <ul style="list-style-type: none"> • Straight • Zigzag • Round and round • Back and forth • Fast and slow 	<p>FOSS Next Generation Animals Two by Two Investigation 1: Goldfish and Guppies Part 2: Caring for Goldfish pp. 84-88 See procedure 6</p>	
	<p>FOSS Next Generation Animals Two by Two Investigation 2: Water and Land Snails Part 3: Land Snails pp. 140-150</p> <p>As students observe the land snail they should describe how it moves. See procedure 8 for discussion questions.</p>	<p>FQA: Students describe how land snails move.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 3: Big and Little Worms Part 2: Redworm Behavior pp. 172-179</p> <p>As students observe the redworms they should describe how it moves. See procedure 4 for discussion questions.</p>	<p>FQA: Students describe how redworms move.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 4: Pill bugs and Sow Bugs Part 3: Isopod Movement pp. 213-221</p> <p>As students observe the isopods they should describe how it moves. See procedure 7 for discussion questions.</p>	<p>FQA: Students describe how isopods move.</p>
	<p>FOSS Next Generation Materials and Motion Investigation 4: Getting Things to Move Part 1: Pushes and Pulls pp. 270-278</p> <p><i>FOSS Science Resources:</i> "Pushes and Pulls" pp. 47-59</p>	<p>FQA: Students describe what causes objects to move.</p>



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Forces and Motion (cont.)

Standards	FOSS Alignment	Assessment
K.P.1 Understand the positions and motions of objects and organisms observed in the environment.		
K.P.1.2. Give examples of different ways objects and organisms move (to include falling to the ground when dropped): <ul style="list-style-type: none"> • Straight • Zigzag • Round and round • Back and forth • Fast and slow 	FOSS Next Generation Materials and Motion Investigation 4: Getting Things to Move Part 2: Colliding Objects pp. 279-288 <i>FOSS Science Resources:</i> <i>"Collisions" pp. 60-68</i>	FQA: Students describe what happens when objects collide.
	FOSS Next Generation Materials and Motion Investigation 4: Getting Things to Move Part 3: Rolling Outdoors pp. 289-295 <i>FOSSWEB Multimedia:</i> <i>"Build a Roller Coaster"</i>	FQA: Students describe where and how balls roll in the schoolyard.
	FOSS Next Generation Materials and Motion Investigation 4: Getting Things to Move Part 4: Balloon Rockets pp. 296-301	FQA: Students describe ways to change the distance a balloon rocket travels.

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Matter: Properties and Change

Standards	FOSS Alignment	Assessment
K.P.2 Understand how objects are described based on their physical properties and how they are used.		
K.P.2.1. Classify objects by observable physical properties (including size, color, shape, texture, weight and flexibility).	FOSS Next Generation Animals Two by Two Investigation 2: Water and Land Snails Part 2: Shells pp. 135-139 See procedures 5-9, 11	PA: Students describe how they sorted shells in procedures 6 and 7. FQA: Students describe with pictures and words how shells can be sorted.
	FOSS Next Generation Materials and Motion Investigation 1: Getting to Know Wood Part 1: Observing Wood pp. 86-101 <i>FOSS Science Resources:</i> "The Story of a Chair" pp. 3-8	FQA: Students describe where wood comes from. Students can compare wood samples based properties.
	FOSS Next Generation Materials and Motion Investigation 2: Getting to Know Paper Part 1: Paper Hunt pp. 162-171 <i>FOSS Science Resources:</i> "The Story of a Box" pp. 13-18	FQA: Students describe objects made of paper.
	FOSS Next Generation Materials and Motion Investigation 2: Getting to Know Paper Part 2: Using Paper pp. 172-178	FQA: Students describe what properties make paper easy to fold.
	FOSS Next Generation Materials and Motion Investigation 3: Getting to Know Fabric Part 1: Feely Boxes and Fabric Hunt pp. 218-224	FQA: Students describe how fabrics are different using property words.
K.P.2.2 Compare the observable physical properties of different kinds of materials (clay, wood, cloth, paper, etc.) from which objects are made and how they are used.	FOSS Next Generation Materials and Motion Investigation 1: Getting to Know Wood Part 1: Observing Wood pp. 86-101 Part 6: Making Particleboard pp. 133-139 Part 7: Making Plywood pp. 140-145 <i>FOSS Science Resources:</i> "The Story of a Chair" pp. 3-8	FQA: Students describe where wood comes from.
	FOSS Next Generation Materials and Motion Investigation 2: Getting to Know Paper Part 1: Paper Hunt pp. 162-171 <i>FOSSWEB Multimedia:</i> "Where Is Wood?"	FQA: Students describe objects made of paper.
	FOSS Next Generation Materials and Motion Investigation 2: Getting to Know Paper Part 2: Using Paper pp. 172-178	FQA: Students describe what properties make paper good for writing.
	FOSS Next Generation Materials and Motion Investigation 2: Getting to Know Paper Part 4: Paper Recycling pp. 186-193	FQA: Students describe how new paper can be made from old paper.



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Matter: Properties and Change (cont.)

Standards	FOSS Alignment	Assessment
K.P.2 Understand how objects are described based on their physical properties and how they are used.		
<p>K.P.2.2 Compare the observable physical properties of different kinds of materials (clay, wood, cloth, paper, etc.) from which objects are made and how they are used.</p>	<p>FOSS Next Generation Materials and Motion Investigation 2: Getting to Know Paper Part 5: Paper Mache pp. 194-200</p>	<p>FQA: Students describe how paper can be made strong to form a bowl.</p>
	<p>FOSS Next Generation Materials and Motion Investigation 3: Getting to Know Fabric Part 1: Feely Boxes and Fabric Hunt pp. 218-224</p>	<p>FQA: Students describe items that are made of fabric.</p>
	<p>FOSS Next Generation Materials and Motion Investigation 3: Getting to Know Fabric Part 2: Taking Fabric Apart pp. 225-231</p> <p><i>FOSS Science Resources:</i> "What Is Fabric Made From?" pp. 19-31</p> <p><i>FOSSWEB Streaming Video:</i> "What Is Agriculture?"</p> <p><i>FOSSWEB Multimedia:</i> "Weave a Pattern"</p>	<p>FQA: Students describe how fabric is made.</p>
	<p>FOSS Next Generation Materials and Motion Investigation 3: Getting to Know Fabric Part 3: Water and Fabric pp. 232-235</p>	<p>FQA: Students describe how water interacts with fabric.</p>
	<p>FOSS Next Generation Materials and Motion Investigation 3: Getting to Know Fabric Part 4: Graphing Fabric Uses pp. 236-241</p> <p><i>FOSS Science Resources:</i> "How Are Fabrics Used?" pp. 32-40</p>	<p>FQA: Students describe how different fabrics are used.</p>



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Earth Systems, Structures and Processes

Standards	FOSS Alignment	Assessment
K.E.1 Understand change and observable patterns of weather that occur from day to day and throughout the year.		
<p>K.E.1.1 Infer that change is something that happens to many things in the environment based on observations made using one or more of their senses.</p>	<p>FOSS Next Generation Trees and Weather Investigation 1: Observing Trees Part 1: Observing School Yard Trees pp. 78-88 Part 5: Adopt School Year Trees pp. 103-111</p> <p><i>FOSSWEB Multimedia:</i> "Leaf Sorting Game"</p> <p><i>FOSSWEB Streaming Video:</i> "Once There Was a Tree"</p>	<p>FQA: Students describe through words and drawings what they observed about different schoolyard trees.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather Part 1: Weather Calendar pp. 174-180</p>	<p>FQA: Students close their eyes and feel the wind, look up in the sky and watch clouds move. They describe the weather with words discussed in class. Students agree on an appropriate picture that describes the day's weather and tape it on the weather calendar in the appropriate date. They predict tomorrow's weather.</p>
	<p>FOSS Next Generation Trees and Weather <i>FOSS Science Resources:</i> "Up in the Sky"</p>	<p>FQA: Students look in the sky for the sun, and in the sky at night for the moon. They feel temperature change from day to night. They learn that water and land get warm in the sunshine and infer what happens to the land and water at night.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather Part 2: Recording Temperature pp. 181-187</p>	<p>FQA: Students explain how a thermometer measures air temperature and record changes in temperature over a period of time with drawings and words. Prior, they have been experimenting with a thermometer by recognizing room temperature, putting the thermometer in cold water, and experiencing outdoor temperature and explaining if an outdoor area is sunny or shady, warm or cold, using the thermometer readings as evidence.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather Part 3: Wind Direction pp. 188-198</p>	<p>FQA: Students build a wind sock, observe the effect of wind on the wind sock, and explain through words and pictures how it can help tell what way the wind is blowing.</p>
	<p>FOSS Next Generation Trees and Weather <i>FOSS Science Resources:</i> "Weather"</p>	<p>ELA Connections: Students answer questions about how they may feel when the weather changes, and identify tools used to predict weather.</p>



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Earth Systems, Structures and Processes (cont.)

Standards	FOSS Alignment	Assessment
K.E.1 Understand change and observable patterns of weather that occur from day to day and throughout the year.		
<p>K.E.1.1 Infer that change is something that happens to many things in the environment based on observations made using one or more of their senses.</p>	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 1: Fall: What Comes from Trees? pp. 212-214</p>	
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 2: Fall: Food from Trees pp. 215-219</p> <p><i>FOSS Science Resources:</i> "My Apple Tree"</p>	<p>FQA/ELA Connections: Students identify the seasons and identify the current season. They identify the fruit that apple trees produce in the fall and discuss other fruit that grows on trees. They discuss how winter weather will be different from fall weather and what an apple tree will look like during the winter. They talk about winter ice melting in Spring.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 3: Fall: Visiting Adopted Trees pp. 220-224</p>	<p>FQA: Students make observations to collect data about how the adopted tree(s) look.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 4: Winter: Evergreen Hunt pp. 225-230</p> <p><i>FOSS Science Resources:</i> "Orange Trees"</p>	<p>FQA: Students read about orange trees and how they change over seasons. They look at Evergreen trees among their adopted trees and talk about changes they observe in winter trees.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 6: Winter: Visiting Adopted Trees pp. 235-239</p> <p><i>FOSSWEB Streaming Video:</i> "Once There Was a Tree"</p>	<p>FQA: Students observe how their adopted trees appear in winter compared to the information they collected when they initially observed the tree, and the data they collected during their winter observation. They continue to log the weather in their weather calendar and compare temperatures, etc. to current conditions and observe the correlations (e.g. In the coldest weather, trees are bare (no leaves)). Evergreen trees still have their needles.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 9: Spring: Visiting Adopted Trees pp. 248-253</p> <p><i>FOSS Science Resources:</i> "Maple Trees"</p>	<p>FQA: Students have collected data through the seasons and use this to describe changes in writing and labelling pictures, and sharing their notebook entries with others.</p>



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Earth Systems, Structures and Processes (cont.)

Standards	FOSS Alignment	Assessment
K.E.1 Understand change and observable patterns of weather that occur from day to day and throughout the year.		
<p>K.E.1.1 Infer that change is something that happens to many things in the environment based on observations made using one or more of their senses.</p>	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons <i>FOSSWEB Streaming Video:</i> "Summer"</p>	<p>FQA: Students explain the repeating patterns of changing seasons. They provide evidence from what they have observed in their adopted trees, what they have read about seasonal changes in trees, and what they have viewed in videos about seasons.</p>
<p>K.E.1.2 Summarize daily weather conditions noting changes that occur from day to day and throughout the year.</p>	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather Part 1: Weather Calendar pp. 174 - 180</p>	<p>FQA: Students close their eyes and feel the wind, look up in the sky and watch clouds move. They describe the weather with words discussed in class. Students agree on an appropriate picture that describes the day's weather and tape it on the weather calendar in the appropriate date. They predict tomorrow's weather.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather <i>FOSS Science Resources:</i> "Up in the Sky"</p>	<p>FQA: Students look in the sky for the sun, and in the sky at night for the moon. They feel temperature change from day to night. They learn that water and land get warm in the sunshine and infer what happens to the land and water at nights.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather Part 2: Recording Temperature pp. 181-187</p>	<p>FQA: Students explain how a thermometer measures air temperature and record changes in temperature over a period of time with drawings and words. Prior, they have been experimenting with a thermometer by recognizing room temperature, putting the thermometer in cold water, and experiencing outdoor temperature and explaining if an outdoor area is sunny or shady, warm or cold, using the thermometer readings as evidence.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather Part 3: Wind Direction pp. 188-198</p>	<p>FQA: Students build a wind sock, observe the effect of wind on the wind sock, and explain through words and pictures how it can help tell what way the wind is blowing.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 3: Observing Weather <i>FOSS Science Resources:</i> "Weather"</p>	<p>ELA Connections: Students answer questions about how they may feel when the weather changes, and identify tools used to predict weather.</p>



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Earth Systems, Structures and Processes (cont.)

Standards	FOSS Alignment	Assessment
K.E.1 Understand change and observable patterns of weather that occur from day to day and throughout the year.		
<p>K.E.1.3 Compare weather patterns that occur from season to season.</p>	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 2: Fall: Food from Trees pp. 215-219</p> <p><i>FOSS Science Resources:</i> "My Apple Tree"</p>	<p>FQA/ELA Connections: Students identify the seasons and identify the current season. They identify the fruit that apple trees produce in the fall and discuss other fruit that grow on trees. They discuss how winter weather will be different from fall weather and what an apple tree will look like during the winter. They talk about winter ice melting in Spring.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 3: Fall: Visiting Adopted Trees pp. 220-224</p>	<p>FQA: Students make observations to collect data about how the adopted tree(s) look.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 4: Winter: Evergreen Hunt pp. 225-230</p> <p><i>FOSS Science Resources:</i> "Orange Trees"</p>	<p>FQA: Students read about orange trees and how they change over seasons. They look at Evergreen trees among their adopted trees and talk about changes they observe in winter trees.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 6: Winter: Visiting Adopted Trees pp. 235-239</p> <p><i>FOSSWEB Streaming Video:</i> "Once There Was a Tree"</p>	<p>FQA: Students observe how their adopted trees appear in winter compared to the information they collected when they initially observed the tree, and the data they collected during their winter observation. They continue to log the weather in their weather calendar and compare temperatures, etc., to current conditions and observe the correlations (e.g. In the coldest weather, trees are bare (no leaves)). Evergreen trees still have their needles.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons Part 9: Spring: Visiting Adopted Trees pp. 248-253</p> <p><i>FOSS Science Resources:</i> "Maple Trees"</p>	<p>FQA: Students have collected data through the seasons and use this to describe changes in writing and labelling pictures, and sharing their notebook entries with others.</p>
	<p>FOSS Next Generation Trees and Weather Investigation 4: Trees Through the Seasons <i>FOSSWEB Streaming Video:</i> "Summer"</p>	<p>FQA: Students explain the repeating patterns of changing seasons. They provide evidence from what they have observed in their adopted trees, what they have read about seasonal changes in trees, and what they have viewed in videos about seasons.</p>



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Structures and Functions of Living Organisms

Standards	FOSS Alignment	Assessment
K.L.1 Compare characteristics of animals that make them alike and different from other animals and nonliving things.		
<p>K.L.1.1 Compare different types of the same animal (i.e. different types of dogs, different types of cats, etc.) to determine individual differences within a particular type of animal.</p>	<p>FOSS Next Generation Animals Two by Two Investigation 3: Big and Little Worms Part 3: Comparing Redworms to Night Crawlers pp. 180-187</p> <p><i>FOSS Science Resources:</i> "Worms in Soil" pp. 47</p>	<p>FQA: Students describe with pictures and words how redworms and night crawlers are same and different. See procedures 7 and 13.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 4: Pill Bugs and Sow Bugs Part 2: Identifying Isopods pp. 206-212</p> <p><i>FOSS Science Resources:</i> "Isopods" pp. 54</p>	<p>FQA: Students describe with pictures and words how pill bugs and sow bugs are same and different. See procedures 6 and 12.</p>
<p>K.L.1.2 Compare characteristics of living and nonliving things in terms of their:</p> <ul style="list-style-type: none"> • Structure • Growth • Changes • Movement • Basic needs 	<p>FOSS Next Generation Animals Two by Two Investigation 1: Goldfish and Guppies Part 1: The Structure of Goldfish pp. 76-83 See procedures 2, 3, 4, and 6</p>	<p>FQA: On Teacher Master 4, students label the structures of the goldfish. See procedures 4 and 6.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 1: Goldfish and Guppies Part 2: Caring for Goldfish pp. 84-88</p>	<p>FQA: Students draw pictures and/or write about what goldfish need to live.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 1: Goldfish and Guppies Part 4: Comparing Guppies to Goldfish pp. 94-101</p> <p><i>FOSS Science Resources:</i> "Fish Live in Many Places" pp. 10-19</p>	
	<p>FOSS Next Generation Animals Two by Two Investigation 1: Goldfish and Guppies Part 5: Comparing Schoolyard Birds pp. 102-112</p> <p><i>Animals Two by Two Science Resources:</i> "Birds Outdoors" pp. 20-28</p>	<p>FQA: On Teacher Master 10, students draw pictures and/or write about birds in the schoolyard. Their answer includes structures and basic needs. See procedure 13.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 2: Water and Land Snails Part 1: Observing Water Snails pp. 128-134 See procedures 1, 3, 4, and 6</p>	<p>FQA: On Teacher Master 13, students label the structures of the water snail.</p>



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Structures and Functions of Living Organisms (cont.)

Standards	FOSS Alignment	Assessment
K.L.1 Compare characteristics of animals that make them alike and different from other animals and nonliving things.		
<p>K.L.1.2 Compare characteristics of living and nonliving things in terms of their:</p> <ul style="list-style-type: none"> • Structure • Growth • Changes • Movement • Basic needs 	<p>FOSS Next Generation Animals Two by Two Investigation 2: Water and Land Snails Part 3: Land Snails pp. 140-150 See procedures 8 and 10</p> <p><i>FOSS Science Resources:</i> "Water and Land Snails" pp. 29-36</p>	<p>FQA: On Teacher Master 16, students label the structures of the land snail. See procedure 13.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 3: Big and Little Worms Part 1: The Structure of Redworms pp. 166-171</p>	<p>FQA: On Teacher Master 20, students identify the structures of redworms. See procedure 8.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 3: Big and Little Worms Part 2: Redworm Behavior pp. 172-179</p>	<p>FQA: On Teacher Master 21, students identify the basic needs of redworms. See procedure 16. Weeks later, on Teacher Master 21, students record observations and identify changes in the redworm habitat that clarifies basic needs of redworms.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 3, Big and Little Worms Part 3: Comparing Redworms to Night Crawlers pp. 180-187</p> <p><i>FOSS Science Resources:</i> "Worms in Soil" pp. 37-47</p>	<p>FQA: Students draw pictures and/or write about how redworms and night crawlers are same and different.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 4: Pill Bugs and Sow Bugs Part 1: Isopod Observations pp. 200-205</p>	<p>FQA: Students draw pictures and/or write about structures of isopods.</p>
	<p>FOSS Next Generation Animals Two by Two Investigation 4: Pill Bugs and Sow Bugs Part 2: Identifying Isopods pp. 206-212</p> <p><i>FOSS Science Resources:</i> "Isopods" pp. 48-54</p>	
	<p>FOSS Next Generation Animals Two by Two Investigation 4: Pill Bugs and Sow Bugs Part 3: Movement pp. 213-221</p> <p><i>FOSS Science Resources:</i> "Animals All around Us" pp. 55-66</p>	<p>FQA: Students draw pictures and/or write about the movement of isopods.</p>



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Structures and Functions of Living Organisms (cont.)

Standards	FOSS Alignment	Assessment
K.L.1 Compare characteristics of animals that make them alike and different from other animals and nonliving things.		
<p>K.L.1.2 Compare characteristics of living and nonliving things in terms of their:</p> <ul style="list-style-type: none"> • Structure • Growth • Changes • Movement • Basic needs 	<p>FOSS Next Generation Animals Two by Two Investigation 4: Pill Bugs and Sow Bugs Part 4: Animals Living Together pp. 222-228</p> <p><i>FOSS Science Resources:</i> "Living and Nonliving" pp. 67-86</p> <p><i>FOSSWEB Multimedia:</i> "Find the Parent" See pp. 55 and 228 for guidance</p>	<p>FQA: Students draw pictures and/or write about what animals need to live. See procedure 8.</p>