



Correlation to the  
**SOUTH CAROLINA ACADEMIC STANDARDS AND  
PERFORMANCE INDICATORS FOR SCIENCE**

**Grade 2**  
**Delta Education**



# GRADE TWO

## SCIENCE AND ENGINEERING PRACTICES

*NOTE: Scientific investigations should always be done in the context of content knowledge expected at this grade level. The standard describes how students should learn and demonstrate knowledge of the content outlined in the other standards.*

**Standard 2.S.1: The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content.**

**2.S.1A. Conceptual Understanding:** The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers.

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<b>2.S.1A.1</b> Ask and answer questions about the natural world using explorations, observations, or structured investigations.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Next Generation, Insects and Plants</b> Investigation 1, Parts 1 - 3, Pages 78 - 109
<b>2.S.1A.2</b> Develop and use models to (1) understand or represent phenomena, processes, and relationships, (2) test devices or solutions, or (3) communicate ideas to others.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Next Generation, Solids and Liquids</b> Investigation 1, Part 4, Pages 106 - 115
<b>2.S.1A.3</b> With teacher guidance, conduct structured investigations to answer scientific questions, test predictions and develop explanations: (1) predict possible outcomes, (2) identify materials and follow procedures, (3) use appropriate tools or instruments to make qualitative observations and take nonstandard measurements, and (4) record and represent data in an appropriate form. Use appropriate safety procedures.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Next Generation, Solids and Liquids</b> Investigation 4, Part 3, Pages 251 - 256
<b>2.S.1A.4</b> Analyze and interpret data from observations, measurements, or investigations to understand patterns and meanings.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Third Edition, Balance and Motion</b> Investigation 4, Parts 1 - 3, Pages 168 - 188
<b>2.S.1A.5</b> Use mathematical and computational thinking to (1) express quantitative observations using appropriate English or metric units, (2) collect and analyze data, or (3) understand patterns, trends and relationships.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Next Edition, Insects and Plants</b> Investigation 2, Part 2, Pages 137 - 147  FOSS modules also provide opportunities to develop this science and engineering practice in the Math Extension activities at the end of each Investigation.
<b>2.S.1A.6</b> Construct explanations of phenomena using (1) student-generated observations and measurements, (2) results of investigations, or (3) data communicated in graphs, tables, or diagrams.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Next Generation, Insects and Plants</b> Investigation 3, Part 3, Pages 195 - 201
<b>2.S.1A.7</b> Construct scientific arguments to support claims using evidence from observations or data collected.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Next Generation, Solids and Liquids</b> Investigation 4, Part 3, Pages 251 - 256
<b>2.S.1A.8</b> Obtain and evaluate informational texts, observations, data collected, or discussions to (1) generate and answer questions about the natural world, (2) understand phenomena, (3) develop models, or (4) support explanations. Communicate observations and explanations using oral and written language.	FOSS modules provide opportunities to develop this science and engineering practice. Example: <b>FOSS Third Edition, Insects and Plants</b> Investigation 3, Parts 1 - 4, Pages 180 - 212  <b>FOSS Next Generation, Insects and Plant</b> – Science Resource Book “So Many Kinds, So Many Places”, Pages 35 - 40

**2.S.1B. Conceptual Understanding:** Technology is any modification to the natural world created to fulfill the wants and needs of humans. The engineering design process involves a series of iterative steps used to solve a problem and often leads to the development of a new or improved technology.

**Performance Indicators:**

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<p><b>2.S.1B.1</b> Construct devices or design solutions to solve specific problems or needs: (1) ask questions to identify problems or needs, (2) ask questions about the criteria and constraints of the devices or solutions, (3) generate and communicate ideas for possible devices or solutions, (4) build and test devices or solutions, (5) determine if the devices or solutions solved the problem, and (6) communicate the results.</p>	<p>FOSS modules provide opportunities to develop this science and engineering practice. Example:  <b>FOSS Next Generation, Solids and Liquids</b>            Investigation 1, Part 4, Pages 101 - 115            Extensions: Provide for ongoing construction, Build a paper bridge , page 125</p>

# GRADE TWO

## EARTH SCIENCE: WEATHER

**Standard 2.E.2: The student will demonstrate an understanding of the daily and seasonal weather patterns.**

**2.E.2A. Conceptual Understanding:** Weather is the combination of sunlight, wind, precipitation (rain, sleet, snow, and hail), and temperature in a particular region at a particular time. Scientists measure and record these conditions to describe the weather and to identify patterns over time. Weather scientists (meteorologists) forecast severe weather so that communities can prepare for and respond to these events.

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<b>2.E.2A.1</b> Analyze and interpret data from observations and measurements to describe local weather conditions (including temperature, wind, and forms of precipitation)	<p><b>FOSS Next Generation, Air and Weather</b> Investigation 2, Parts 1 - 4, Pages 140 - 178 Investigation 3, Parts 1 - 5, Pages 194 - 224</p> <p><b>FOSS Next Generation, Air and Weather</b> – Science Resource Book “What is the Weather Today”, Pages 9 - 17 “Understanding the Weather”, Pages 38 - 43</p>
<b>2.E.2A.2</b> Analyze local weather data to predict daily and seasonal patterns over time.	<p><b>FOSS Next Generation, Air and Weather</b> Investigation 4, Part 3, Pages 250 - 259</p>
<b>2.E.2A.3</b> Develop and use models to describe and compare the effects of wind (moving air) on objects.	<p><b>FOSS Next Generation, Air and Weather</b> Investigation 3, Parts 3 - 4, Pages 205 - 217 “Art and Science Extensions”, Page 226</p>
<b>2.E.2A.4</b> Obtain and communicate information about severe weather conditions to explain why certain safety precautions are necessary.	<p><b>FOSS Next Generation, Air and Weather</b> – Science Resource Book “Understanding the Weather”, Pages 38 - 43</p> <p>This performance indicator is also addressed in the Weather on Earth module, Grades 4-6.</p>

# GRADE TWO

## PHYSICAL SCIENCE: PROPERTIES OF SOLIDS AND LIQUIDS

**Standard 2.P.3: The student will demonstrate an understanding of the observable properties of solids and liquids and the special properties of magnets.**

**2.P.3A. Conceptual Understanding:** Solids and liquids are two forms of matter that have distinct observable properties. Some matter can be mixed together and then separated again. Solids and liquids can be changed from one form to another when heat is added or removed.

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<p><b>2.P.3A.1</b> Analyze and interpret data from observations and measurements to describe the properties used to classify matter as a solid or a liquid.</p>	<p><b>FOSS Next Generation, Solids and Liquids</b>            Investigation 1, Parts 1 - 5, Pages 76 - 122            Investigation 2, Parts 1 - 4, Pages 140 - 169            Investigation 3, Parts 1, 3, 5, Pages 184 - 190, 197 - 203, 210 - 215</p> <p><b>FOSS Next Generation, Solids and Liquids</b> – Science Resource Book            “Solid Objects and Materials”, Pages 12 - 21            “Liquids”, Pages 31 - 37            “Comparing Solids and Liquids”, Pages 44 - 53</p>
<p><b>2.P.3A.2</b> Develop and use models to exemplify how matter can be mixed together and separated again based on the properties of the mixture.</p>	<p><b>FOSS Next Generation, Solids and Liquids</b>            Investigation 3, Parts 2 and 4, Pages 191 - 196, 204 - 209</p>
<p><b>2.P.3A.4</b> Construct scientific arguments using evidence from investigations to support claims that some changes in solids or liquids are reversible and some are not when heat is added or removed.</p>	<p><b>FOSS Next Generation, Solids and Liquids</b>            Investigation 4, Part 4, Pages 257 - 265</p> <p><b>FOSS Next Generation, Solids and Liquids</b> – Science Resource Book            “Heating and Cooling”, Pages 53 - 58            “Is Change Reversible?”, Pages 68 - 76</p> <p><b>FOSS Next Generation, Solids and Liquids</b> – FOSSWEB, Streaming Video            Investigation 4, Solids and Liquids</p>

**2.P.3B. Conceptual Understanding:** Magnets are a specific type of solid that can attract and repel certain other kinds of materials, including other magnets. There are some materials that are neither attracted to nor repelled by magnets. Because of their special properties, magnets are used in various ways.

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<p><b>2.P.3B.1</b> Conduct structured investigations to answer questions about how the poles of magnets attract and repel each other.</p>	<p><b>FOSS Third Edition, Balance and Motion</b> Investigation 5, Part 1, Pages 199 - 208</p> <p>This performance indicator is also addressed in the Energy and Electromagnetism module, Grades 4-6.</p>
<p><b>2.P.3B.2</b> Analyze and interpret data from observations to compare the effects of magnets on various materials.</p>	<p><b>FOSS Third Edition, Balance and Motion</b> Investigation 5, Part 1, Pages 200 - 208</p> <p><b>FOSS Third Edition, Balance and Motion</b> – Science Resource Book “Move It, But Don’t Touch It”, Pages 36 - 40</p> <p>This performance indicator is also addressed in the Energy and Electromagnetism module, Grade 3.</p>
<p><b>2.P.3B.3</b> Obtain and communicate information to exemplify the uses of magnets in everyday life.</p>	<p><b>FOSS Third Edition, Balance and Motion</b> – Science Resource Book “Move It, But Don’t Touch It”, Pages 36 - 40</p> <p>This performance indicator is also addressed in the Energy and Electromagnetism module, Grades 4-6.</p>

# GRADE TWO

## PHYSICAL SCIENCE: EXPLORING PUSHES AND PULLS

**Standard 2.P.4: The student will demonstrate an understanding of the effects of pushes, pulls, and friction on the motion of objects.**

**2.P.4A. Conceptual Understanding:** An object that is not moving will only move if it is pushed or pulled. Pushes and pulls can vary in strength and direction and can affect the motion of an object. Gravity is a pull that makes objects fall to the ground. Friction is produced when two objects come in contact with each other and can be reduced if needed.

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<p><b>2.P.4A.1</b> Analyze and interpret data from observations and measurements to compare the effects of different strengths and directions of pushing and pulling on the motion of an object.</p>	<p><b>FOSS Third Edition, Balance and Motion</b> Investigation 2, Parts 1 - 2, Pages 90 - 103</p> <p><b>FOSS Third Edition, Balance and Motion</b> – Science Resource Book “Push or Pull?”, Pages 13 - 17 “Move It, or Don’t Touch It”, Pages 36 - 40</p> <p><b>FOSS Next Generation, Air and Weather</b> Investigation 1, Parts 3 and 5, Pages 104 - 111, 121 - 126</p>
<p><b>2.P.4B.2</b> Develop and use models to exemplify the effects of pushing and pulling on an object.</p>	<p><b>FOSS Third Edition, Balance and Motion</b> Investigation 2, Parts 1 - 2, Pages 90 - 104</p>
<p><b>2.P.4B.3</b> Construct explanations of the relationship between the motion of an object and the pull of gravity using observations and data collected.</p>	<p><b>FOSS Next Generation, Air and Weather</b> Investigation 1, Part 2, Pages 91 - 99</p> <p><b>FOSS Third Edition, Balance and Motion</b> Investigation 2, Parts 1 and 3, Pages 90 - 97, 105 - 113 Investigation 3, Parts 1 - 4, Pages 125 - 153</p> <p><b>FOSS Third Edition, Balance and Motion</b> – Science Resource Book “Rolling, Rolling, Rolling”, Pages 23 - 29 “Push or Pull”, Pages 13 - 17</p>
<p><b>2.P.4B.4</b> Conduct structured investigations to answer questions about the relationship between friction and the motion of objects.</p>	
<p><b>2.P.4B.5</b> Define problems related to the effects of friction and design possible solutions to reduce the effects on the motion of an object.</p>	

# GRADE TWO

## LIFE SCIENCE: ANIMALS AND THEIR ENVIRONMENTS

**Standard 2.L.5: The student will demonstrate an understanding of how the structures of animals help them survive and grow in their environments.**

**2.L.5A. Conceptual Understanding:** There are many different groups of animals. One way to group animals is by using their physical characteristics. Animals have basic needs that provide for energy, growth, reproduction, and protection. Animals have predictable characteristics at different stages of development.

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<p><b>2.L.5A.1</b> Obtain and communicate information to classify animals (such as mammals, birds, amphibians, reptiles, fish, or insects) based on their physical characteristics.</p>	<p><b>FOSS Next Generation, Insects and Plants</b>            Investigation 1, Parts 1 - 2, Pages 78 - 103            Investigation 3, Parts 1, 3 - 4, Pages 180 - 184, 195 - 212            Investigation 4, Parts 1 - 3, Pages 228 - 252            Investigation 5, Parts 1 - 3, Pages 278 - 293</p> <p><b>FOSS Next Generation, Insects and Plants</b> – Science Resource Book            “So Many Kinds, So Many Places”, Pages 35 - 40            “Insect Shapes and Colors”, Pages 41 - 45            “Insect Life Cycles”, Pages 46 - 54            “Life Goes Around”, Pages 55 - 68</p>
<p><b>2.L.5A.2</b> Construct explanations for how structures (including structures for seeing, hearing, grasping, protection, locomotion, and obtaining and using resources) of different animals help them survive.</p>	<p><b>FOSS Next Generation, Insects and Plants</b>            Investigation 1, Parts 1 - 2, Pages 78 - 103            Investigation 3, Parts 1 - 3, Pages 180 - 201            Investigation 4, Parts 1 - 3, Pages 228 - 252            Investigation 5, Parts 1 - 3, Pages 275 - 293</p> <p><b>FOSS Next Generation, Insects and Plants</b> – Science Resource Book            “So Many Kinds, So Many Places”, Pages 35 - 40            “Insect Shapes and Colors”, Pages 41 - 45            “Insect Life Cycles”, Pages 46 - 54            “Life Goes Around”, Pages 55 - 68</p>
<p><b>2.L.5A.3</b> Construct explanations using observations and measurements of an animal as it grows and changes to describe the stages of development of the animal.</p>	<p><b>FOSS Next Generation, Insects and Plants</b>            Investigation 1, Parts 1 - 2, Pages 78 - 103            Investigation 3, Parts 1 - 3, Pages 180 - 201            Investigation 4, Parts 1 - 3, Pages 228 - 252            Investigation 5, Parts 1 - 3, Pages 275 - 293</p> <p><b>FOSS Next Generation, Insects and Plants</b> – Science Resource Book            “So Many Kinds, So Many Places”, Pages 35 - 40            “Insect Life Cycles”, Pages 46 - 54            “Life Goes Around”, Pages 55 - 68</p>



**2.L.5B. Conceptual Understanding:** Animals (including humans) require air, water, food, and shelter to survive in environments where these needs can be met. There are distinct environments in the world that support different types of animals. Environments can change slowly or quickly. Animals respond to these changes in different ways.

*Students who demonstrate this understanding can:*

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
<p><b>2.L.5B.1</b> Obtain and communicate information to describe and compare how animals interact with other animals and plants in the environment.</p>	<p><b>FOSS Next Generation, Insects and Plants</b>            Investigation 3, Parts 2 - 4, Pages 185 - 212            Investigation 4, Parts 3 - 4, Pages 235 - 245, 253 - 259            Investigation 5, Parts 1 - 2, 4, Pages 274 - 284, 284 - 301</p> <p><b>FOSS Next Generation, Insects and Plants</b> – Science Resource Book            “Animals and Plants in Their Habitats”, Pages 3 - 17            “Life Goes Around”, Pages 55 - 68</p> <p><b>FOSS Next Generation, Insects and Plants</b> – FOSSWEB, streaming video            Investigation 4, What Is Pollination?</p>
<p><b>2.L.5B.2</b> Develop and use models to exemplify characteristics of animals that help them survive in distinct environments (such as salt and freshwater, deserts, forests, wetlands, or polar lands).</p>	<p><b>FOSS Next Generation, Insects and Plants</b> – Science Resource Book            “Animals and Plants in Their Habitats”, Pages 3 - 17</p>
<p><b>2.L.5B.3</b> Analyze and interpret data from observations to describe how animals respond to changes in their environment (such as changes in food availability, water, or air).</p>	<p><b>FOSS Third Edition, Insects and Plants</b>            Investigation 3, Part 4, Pages 202 - 212</p> <p><b>FOSS Third Edition, Insects and Plants</b> – Science Resource Book            “Variations”, Pages 32 - 38</p>
<p><b>2.L.5B.4</b> Construct scientific arguments to explain how animals can change their environments (such as the shape of the land or the flow of water).</p>	