Correlation to the

SOUTH CAROLINA ACADEMIC STANDARDS AND PERFORMANCE INDICATORS FOR SCIENCE

Kindergarten

Delta Education

KINDERGARTEN

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 K.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.

K.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
K.S.1A.1 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. **FOSS Animals Two by Two Investigations Guide** Investigations 1, 2, 3, 4, All parts, pages 54 -193
K.S.1A.2 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 Trees and Weather Investigations Guide** Extension Activity – Investigation 3 "Create a Wind Catcher", pages 138 - 158
K.S.1A.3 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: **FOSS Materials in Our World Investigations Guide** Investigation 1, Part 5, pages 87 - 94
K.S.1A.4 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: **FOSS Trees and Weather Investigations Guide** Investigation 3, Parts 1-3, pages 138 - 158
K.S.1A.5 Use mathematical thinking to (1) recognize and express quantitative observations, (2) collect and analyze data, or (3) understand patterns and relationships.	FOSS modules provide opportunities to develop this science and engineering practice in the Math Extension activities at the end of each Investigation. **FOSS Trees and Weather Investigations Guide** Investigation 3, Part 2, pages 145 – 150 Investigation 3, Math Extension, Make a temperature bar graph, page 159
K.S.1A.6 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: **FOSS Materials in our World Investigations Guide** Investigation 1, Parts 4,5, pages 80 - 94
K.S.1A.7 Construct scientific arguments to support explanations using evidence from observations or data collected.	FOSS modules provide opportunities to develop this science and engineering practice. Example: **FOSS Animals Two by Two Investigations Guide** Investigation 4, Part 4, pages 189 - 195
K.S.1A.8 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: **FOSS Trees and Weather Investigations Guide** Investigations 1-4, All parts, pages 2 – 206 **FOSS Trees and Weather Science Resources Book** All stories

K.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.

Students who demonstrate this understanding can:

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
K.S.1B.1 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.	**FOSS Materials in Our World Investigations Guide** Investigation 1, Parts 3-5, pages 72 - 94 Investigation 3, Part 4, pages 160 - 167

KINDERGARTEN

LIFE SCIENCE: EXPLORING ORGANISMS AND THE ENVIRONMENT

Standard K.L.2: The student will demonstrate an understanding of organisms found in the environment and how these organisms depend on the environment to meet those needs.

K.L.2A. Conceptual Understanding: The environment consists of many types of organisms including plants, animals, and fungi. Organisms depend on the land, water, and air to live and grow. Plants need water and light to make their own food. Fungi and animals cannot make their own food and get energy from other sources. Animals (including humans) use different body parts to obtain food and other resources needed to grow and survive. Organisms live in areas where their needs for air, water, nutrients, and shelter are met.

Students who demonstrate this understanding can:

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
K.L.2A.1 Obtain information to answer questions about different organisms found in the environment (such as plants, animals, or fungi).	**FOSS Animals Two by Two Investigations Guide** Investigation 1, Parts 1-5, pages 54 - 90 Investigation 2, Parts 1-3, pages 104 - 123 Investigation 3, Parts 1-3, pages 138 - 157 Investigation 4, Parts 1-4, pages 168 - 195 **FOSS Animals Two by Two – Science Resource Book** All stories **FOSS Trees and Weather Investigations Guide** Investigation 1, Parts 1-6, pages 50 - 89 Investigation 2, Parts 1-4, pages 100 - 123 Investigation 3, Parts 1-5, pages 138 - 158 Investigation 4, Parts 1-9, pages 170 - 206 **FOSS Trees and Weather - Science Resource Book** "Where Do Trees Grow?" pages 3 - 13, "Up in the Sky" pages 14 - 23, " My Apple Tree" pages 36 - 39, "Orange Trees" pages 40 - 43, "Maple Trees" pages 44 - 46
K.L.2A. 2 Conduct structured investigations to determine what plants need to live and grow (including water and light).	**FOSS Animals Two by Two Investigations Guide** Investigation 4, Part 4, pages 189 - 195 **FOSS Trees and Weather Investigations Guide** Investigation 1, Part 1, 5, 6, pages 50 – 61, and pages 75 - 89 Investigation 4, Parts 1-9, pages 170 - 206
K.L.2A.3 Develop and use models to exemplify how animals use their body parts to (1) obtain food and other resources, (2) protect themselves, and (3) move from place to place.	**FOSS Animals Two by Two Investigations Guide** Investigation 4, Part 4, pages 189 - 195
K.L.2A.4 Analyze and interpret data to describe how humans use their senses to learn about the world around them.	**FOSS Trees and Weather_**- Science Resource Book "Where Do Trees Grow" pages 3 - 13 "Up in the Sky" pages 14 – 23 "Weather" pages 24 - 35
K.L.2A.5 Construct explanation from observations of what animals need to survive and grow (including air, water, nutrients, and shelter).	**FOSS Animals Two by Two Investigations Guide** Investigation 1, Parts 1 – 3, 5, pages 67 – 71 and pages 80 - 90 Investigation 2, Parts 1,3, pages 104 – 110 and pages 115 - 123 Investigation 3, Parts 1,2, pages 138 - 151 Investigation 4, Parts 1,3,4, pages 168 – 173, and pages 180 – 195

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
K.L.2A. 6 Obtain and communicate information about the needs of organisms to explain why they live in particular areas.	**FOSS Animals Two by Two Investigations Guide** Investigation 1, Parts 1, 2,3,5, pages 54 – 71 and pages 80 - 90 Investigation 2, Parts 1,3, pages 104 – 110 and pages 115 - 123 Investigation 3, Parts 1,2, pages 138 - 151 Investigation 4, Parts 1,3,4, pages 168 – 173 and pages 180 - 195 **FOSS Animals Two by Two Science Resource Book** All stories **FOSS Trees and Weather Science Resource Book** "Orange Trees" pages 40 - 43

KINDERGARTEN

EARTH SCIENCE: EXPLORING WEATHER PATTERNS

Standard K.E.3: The student will demonstrate an understanding of daily and seasonal weather patterns.

K.E.3A. Conceptual Understanding: Weather is a combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. Scientists measure weather conditions to describe and record the weather and to notice patterns over time. Plants and animals (including humans) respond to different weather conditions in different ways.

Students who demonstrate this understanding can:

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
K.E.3A.1 Analyze and interpret local weather condition data (including precipitation, wind, temperature, and cloud cover) to describe weather patterns that occur from day to day, using simple graphs and pictorial weather symbols.	**FOSS Trees and Weather Investigations Guide** Investigation 3, Parts 1-3, pages 138 - 158
K.E.3A.2 Develop and use models to predict seasonal weather patterns and changes.	**FOSS Trees and Weather Investigations Guide** Investigation 4, Parts 1-5, pages 169 – 204 **FOSS Trees and Weather**, Science Resource Book "My Apple Tree" pages 36 - 39, "Orange Trees" pages 40 - 43, "Maple Trees" pages 44 - 46
K.E.3A.3 Obtain and communicate information to support claims about how changes in seasons affect plants and animals.	**FOSS Trees and Weather Investigations Guide** Investigation 4, Parts 1-9, pages 170 -0206 **FOSS Trees and Weather**- Science Resource Book "My Apple Tree" pages 36 - 39, "Orange Tree" pages 40 - 43, "Maple Tree" pages 44 – 46
K.E.3A.4 Define problems caused by the effects of weather on human activities and design solutions or devices to solve the problem.	**FOSS Trees and Weather Investigations Guide** Investigation 3 , Extension "Create a Wind Sock" page 159

KINDERGARTEN

PHYSICAL SCIENCE: PROPERTIES OF OBJECTS AND MATERIALS

Standard K.P.4: The student will demonstrate an understanding of the observable properties of matter.

K.P.4A. Conceptual Understanding: Objects can be described and classified by their observable properties, by their uses, and by whether they occur naturally or are manufactured (human-made). Different properties of objects are suited for different purposes.

Students who demonstrate this understanding can:

PERFORMANCE INDICATOR	DELTA EDUCATION WHERE TAUGHT
K.P.4A.1 Analyze and interpret data to compare the qualitative properties of objects (such as size, shape, color, texture, weight, flexibility, attraction to magnets, or ability to sink or float) and classify objects based on similar properties.	**FOSS Materials in Our World Investigations Guide** Investigation 1, Parts 1-5, pages 46 - 94 Investigation 2, Parts 1,2, pages 96 - 114 Investigation 3, Parts 1-3, pages 138 - 160 Investigation 4, Parts 1,3, pages 188 - 210 Investigation 5, Parts 1-3, pages 228 - 243 **FOSS Materials in Our World Science Resource Book** "What is Fabric Made From" pages 19 - 31 , "How Fabric is Used" pages 32 - 40, "How are Rocks Different" pages 41 – 46
K.P.4A.2 Develop and use models to describe and compare the properties of different materials (including wood, plastic, metal, cloth, and paper) and classify materials by their observable properties, by their uses, and by whether they are natural or human-made.	**FOSS Materials In Our World Investigations Guide** Investigation 5, Part 5, Pages 249 - 256
K.P.4A.3 Conduct structured investigations to answer questions about which materials have the properties that are best suited to solve a problem or need.	**FOSS Materials in Our World investigations Guide** Investigation 1, Parts 4,5, pages 81 - 94 Investigation 2, Parts 3,4, pages 115 - 127 Investigation 3, Parts 4,5, pages 160 - 174 Investigation 4, Parts 3,4,5, pages 200 - 215