

# PROJECT FOOD, LAND AND PEOPLE

## OHIO ACADEMIC SCIENCE CONTENT STANDARDS CORRELATIONS 2010

### KINDERGARTEN

**NATURE OF SCIENCE-These scientific process skills should be integrated into the following grade level content units.**

**Science and Technology Standard (ST)**

**Scientific Inquiry Standard (SI)**

**Scientific Ways of Knowing Standard (SK)**

| K-2 Benchmarks  | Grade Level Indicators  | Teaching Strategies/Resources   |
|---|---|---|
| <p>By the end of the K-2 program, the student will:</p> <p><b><u>Science and Technology</u></b></p> <ul style="list-style-type: none"> <li>★ Explain why people, when building or making something, need to determine what it will be made of and how it will affect other people and the environment. (ST-A)</li> <li>★ Explain that to construct something requires planning, communication, problem solving and tools. (ST-B)</li> </ul> <p><b><u>Scientific Inquiry</u></b></p> <ul style="list-style-type: none"> <li>★ Ask a testable question. (SI-A)</li> <li>★ Design and conduct a simple investigation to explore a question. (SI-B)</li> <li>★ Gather and communicate information from careful</li> </ul> | <p>By the end of Kindergarten, the student will:</p> <p><b><u>Understanding Technology</u></b></p> <ul style="list-style-type: none"> <li>★ Explore that objects can be sorted as “natural” or “man-made.” (ST-A-K-1)</li> <li>★ Explore that some materials can be used over and over again (e.g., plastic or glass containers, cardboard boxes and tubes). (ST-A-K-2)</li> </ul> <p><b><u>Abilities To Do Technological Design</u></b></p> <ul style="list-style-type: none"> <li>★ Explore that each kind of tool has an intended use, which can be helpful or harmful (e.g., scissors can be used to cut paper but they can also hurt you). (ST-B-K-3)</li> </ul> <p><b><u>Doing Scientific Inquiry</u></b></p> <ul style="list-style-type: none"> <li>★ Ask “what if” questions. (SI-A-K-1)</li> <li>★ Explore and pursue student-generated “what if” questions. (SI-A-K-2)</li> <li>★ Use appropriate safety procedures when completing scientific investigations. (SI-B-K-3)</li> <li>★ Use the five senses to make observations about the natural world. (SI-B-K-4)</li> <li>★ Draw pictures that correctly portray features</li> </ul> | <p><b><u>FLP Science Lessons</u></b></p> <ul style="list-style-type: none"> <li>• <b>Important Note-</b>All of the lessons contained within Project Food, Land and People will meet the Science and Technology, Scientific Inquiry, and Scientific Ways of Knowing Standards of the Ohio Academic Content Standards.</li> </ul> |

Note: Ohio Academic Content Standards, Benchmarks and Indicators, are typed in bold print and designated by a “★”.

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| <p>observations and simple investigation through a variety of methods. (SI-C)</p> <p><b><u>Scientific Ways of Knowing</u></b></p> <p>★ Recognize that there are different ways to carry out scientific investigations. Realize that investigations can be repeated under the same conditions with similar results and may have different explanations. (SK-A)</p> <p>★ Recognize the importance of respect for all living things. (SK-B)</p> <p>★ Recognize that diverse groups of people contribute to our understanding of the natural world. (SK-C)</p> | <p>of the item being described. (SI-C-K-5)</p> <p>★ Recognize that numbers can be used to count a collection of things. (SI-C-K-6)</p> <p>★ Use appropriate tools and simple equipment/instruments to safely gather scientific data (e.g., magnifiers and other appropriate tools). (SI-B-K-7)</p> <p>★ Measure the lengths of objects using non-standard methods of measurement (e.g., teddy bear counters and pennies). (SI-C-K-8)</p> <p>★ Make pictographs and use them to describe observations and draw conclusions. (SI-C-K-9)</p> <p>★ Make new observations when people give different descriptions for the same thing. (SI-B-K-10)</p> <p><b><u>Nature of Science</u></b></p> <p>★ Recognize that scientific investigations involve asking open-ended questions. (How? What if?) (SK-A-K-1)</p> <p>★ Recognize that people are more likely to accept your ideas if you can give good reasons for them. (SK-A-K-2)</p> <p><b><u>Ethical Practices</u></b></p> <p>★ Interact with living things and the environment in ways that promote respect. (SK-B-K-3)</p> <p><b><u>Science and Society</u></b></p> <p>★ Demonstrate ways science is practiced by people everyday (children and adults). (SK-C-K-4)</p> |  |
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**KINDERGARTEN  
DAILY OBSERVATIONS**

**Earth and Space Sciences Standard (ES)**

| <b>K-2 Benchmarks</b>   | <b>Grade Level Indicators</b>   | <b>Teaching Strategies/Resources</b>  |
|---|---|---|
| <p>By the end of the K-2 program, the student will:</p> <p><b><u>Earth and Space Sciences</u></b></p> <ul style="list-style-type: none"> <li>★ Observe constant and changing patterns of objects in the day and night sky. (ES-A)</li> <li>★ Observe, describe and measure changes in the weather, both long term and short term. (ES-C)</li> </ul> | <p>By the end of Kindergarten, the student will:</p> <p><b><u>The Universe</u></b></p> <ul style="list-style-type: none"> <li>★ Observe that the Sun can be seen only in the daytime, but the Moon can be seen sometimes at night and sometimes during the day. (ES-A-K-1)</li> </ul> <p><b><u>Processes That Shape Earth</u></b></p> <ul style="list-style-type: none"> <li>★ Explore that sometimes change is too fast to see and sometimes change is too slow to see. (ES-C-K-3)</li> <li>★ Observe and describe day-to-day weather changes (e.g., today is hot, yesterday we had rain). (ES-C-K-4)</li> <li>★ Observe and describe seasonal changes in weather. (ES-C-K-5)</li> </ul> | <p><b><u>FLP Science Lessons</u></b></p> <ul style="list-style-type: none"> <li>• <b>Lesson 7-Seasons Through the Year (PreK-6; p. 53):</b> To build awareness of seasonal change, students use their own birth dates, a comparison of seasons in different settings, and self-made books.</li> </ul> |

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**KINDERGARTEN**  
**LIVING THINGS**

**Earth and Space Sciences Standard (ES)**

**Life Sciences Standard (LS)**

| K-2 Benchmarks  | Grade Level Indicators  | Teaching Strategies/Resources  |
|---|---|--|
| <p>By the end of the K-2 program, the student will:</p> <p><b><u>Earth and Space Sciences</u></b><br/>           ★ Explain that living things cause changes on Earth. (ES-B)</p> <p><b><u>Life Sciences</u></b><br/>           ★ Discover that there are living things, non-living things and pretend things, and describe the basic needs of living things (organisms). (LS-A)<br/>           ★ Explain how organisms function and interact with their physical environment. (LS-B)<br/>           ★ Describe similarities and differences that exist among individuals of the same kind of plants and animals. (LS-C)</p> | <p>By the end of Kindergarten, the student will:</p> <p><b><u>Processes That Shape Earth</u></b><br/>           ★ Explore that animals and plants cause changes to their surroundings. (ES-B-K-2)</p> <p><b><u>Characteristics and Structure of Life</u></b><br/>           ★ Explore differences between living and non-living things (e.g., plant-rock). (LS-A-K-1)<br/>           ★ Discover that stories (e.g., cartoons, movies, comics) sometimes give plants and animals characteristics they really do not have (e.g., talking flowers). (LS-A-K-2)</p> <p><b><u>Heredity</u></b><br/>           ★ Describe how plants and animals usually resemble their parents. (LS-C-K-3)<br/>           ★ Investigate variations that exist among individuals of the same kind of plant or animal. (LS-C-K-4)</p> <p><b><u>Diversity and Interdependence of Life</u></b><br/>           ★ Investigate observable features of plants and animals that help them live in different kinds of places. (LS-B-K-5)</p> | <p><b><u>FLP Science Lessons</u></b></p> <ul style="list-style-type: none"> <li>● <b>Lesson 1-The Plant and Me (PreK-3; p. 1):</b> By discussing, observing, and role playing, students learn that plants and people have similar needs for survival.</li> <li>● <b>Lesson 2-Seed Surprises (PreK-3; p. 5):</b> By sorting and planting seeds, students discover seeds come in a variety of sizes, shapes, and colors, as well as produce plants.</li> <li>● <b>Lesson 4-Fruits and Veggies (PreK-4; p. 27):</b> Students identify and compare fruits and other edible plant parts through a fast-paced game.</li> <li>● <b>Lesson 5-School Ground Caretakers (PreK-4; p. 35):</b> Students observe and collect items on the school ground, choose their own special place, and work with school groundskeepers to be respectful caretakers of their outdoor environment.</li> <li>● <b>Lesson 8-Tomatoes to Ketchup, Chickens to Omelettes (PreK-6; p. 61):</b> Students build connections between raw and processed food items by cutting out pictures, matching pictures, and making collages.</li> <li>● <b>Lesson 9-We're Into Pumpkins (PreK-6; p.71):</b> Through hands-on, interdisciplinary activities, students learn about pumpkins as fruits and as food sources.</li> <li>● <b>Lesson 12-Lunchtime Favorites (PreK-12; p. 103):</b> Students</li> </ul> |

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|  | <p><b>★ Investigate the habitats of many different kinds of local plants and animals and some of the ways in which animals depend on plants and each other in our community. (LS-B-K-6)</b></p> | <p>trace the sources of their food from lunch to learn the interdependence of plants, animals, and people. They explore the importance of eating a variety of foods from plants and animals and discover how culture influences food choices.</p> <ul style="list-style-type: none"> <li>● <b>Lesson 14-Root, Root for Life (2-6; p. 125):</b> Students discover the importance of roots to plants, soil and people during hands-on learning-station activities.</li> <li>● <b>Lesson 15-Buzzy, Buzzy Bee (2-7; p. 139):</b> Students play a game in which they pretend to be honeybees and apple trees. In the process, they learn about plant pollination.</li> <li>● <b>Lesson 16-From Apple Cores to Healthy Soil (2-8; p. 149):</b> A composting experiment reveals to students how soil organisms, temperature, air, and water are able to decompose organic waste and enrich soil.</li> </ul> <p><b><u>FLP Cross-Curricular Connection: Health Lessons</u></b></p> <ul style="list-style-type: none"> <li>● <b>Lesson 3-Chewsy Choices (PreK-4; p. 9):</b> Students learn about the five food groups through the use of puppets and their participation in a play about dinner at Rachel and Brian’s house.</li> <li>● <b>Lesson 11-Germ Busters (PreK-12; p. 91):</b> Through a controlled experiment, students learn one way bacteria can be spread and the importance of hand washing for personal hygiene and food safety.</li> </ul> <p><b><u>FLP Cross-Curricular Connection: Social Studies Lessons</u></b></p> <ul style="list-style-type: none"> <li>● <b>Lesson 6-Let’s Celebrate (PreK-6; p. 43):</b> Students explore in their own lives and in the lives of others the role of celebrations and important foods involved, with a focus on corn.</li> </ul> |
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**KINDERGARTEN**

**FIVE SENSES: PHYSICAL PROPERTIES**

**Physical Sciences Standard (PS)**

| <b>K-2 Benchmarks</b>  | <b>Grade Level Indicators</b>  | <b>Teaching Strategies/Resources</b>  |
|--|--|---|
| <p><b>By the end of the K-2 program, the student will:</b></p> <p><b><u>Physical Sciences</u></b><br/> <b>★ Discover that many objects are made of parts that have different characteristics. Describe these characteristics and recognize ways an object may change. (PS-A)</b></p> | <p><b>By the end of Kindergarten, the student will:</b></p> <p><b><u>Nature of Matter</u></b><br/> <b>★ Demonstrate that objects are made of parts (e.g., toys, chairs). (PS-A-K-1)</b><br/> <b>★ Examine and describe objects according to the materials that make up the object (e.g., wood, metal, plastic and cloth). (PS-A-K-2)</b><br/> <b>★ Describe and sort objects by one or more properties (e.g., size, color and shape). (PS-A-K-3)</b></p> | <p><b><u>FLP Science Lessons</u></b></p> <ul style="list-style-type: none"> <li>• <b>Lesson 2-Seed Surprises (PreK-3; p. 5):</b> By sorting and planting seeds, students discover seeds come in a variety of sizes, shapes, and colors, as well as produce plants.</li> <li>• <b>Lesson 4-Fruits and Veggies (PreK-4; p. 27):</b> Students identify and compare fruits and other edible plant parts through a fast-paced game.</li> </ul> |

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**KINDERGARTEN  
THE WAY THINGS MOVE**

**Physical Sciences Standard (PS)**

| <b>K-2 Benchmarks</b>  | <b>Grade Level Indicators</b>  | <b>Teaching Strategies/Resources</b>   |
|--|--|--|
| <p><b>By the end of the K-2 program, the student will:</b></p> <p><u><b>Physical Sciences</b></u><br/> <b>★ Recognize that light, sound and objects move in different ways. (PS-B)</b></p> | <p><b>By the end of Kindergarten, the student will:</b></p> <p><u><b>Forces and Motion</b></u><br/> <b>★ Explore that things can be made to move in many different ways such as straight, zigzag, up and down, round and round, back and forth, or fast and slow. (PS-B-K-4)</b><br/> <b>★ Investigate ways to change how something is moving (e.g., push, pull). (PS-B-K-5)</b></p> | <p><u><b>FLP Science Lessons</b></u></p> <ul style="list-style-type: none"> <li>• <b>Important Note-</b>Project Food, Land and People primarily addresses standards found in the Life Sciences and Earth and Space Sciences Standards found in the Ohio Academic Content Standards. It does not address the Benchmarks and Indicators found in this content unit.</li> </ul> |

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