

# Unit Summary

## Cluster 1: The Human Habitat (Lessons 1 and 16)

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| <b>Overview</b>                     | <p>Children identify the difference between wants and needs. They evaluate their habitat by drawing or describing how their immediate needs are met. They reevaluate their habitat at the end of the unit and discover that, depending on the sources they use to meet their needs, their habitat may be global. They discuss how human needs have caused changes in other organisms' habitats.</p>  |
| <b>Science Content</b>              | <ul style="list-style-type: none"> <li>• A habitat is a place where an organism meets all of its needs.</li> <li>• A human's habitat can extend much farther than his or her home.</li> </ul>  |
| <b>Science Center</b>               | <ul style="list-style-type: none"> <li>• Care for the organisms in the mini-habitat.</li> <li>• Identify how organisms in the mini-habitat meet their survival needs.</li> <li>• Reflect on what the class discovered during the unit.</li> </ul>  |
| <b>Family Links</b>                 | <ul style="list-style-type: none"> <li>• Describe how an organism that shares the child's home meets its survival needs.</li> </ul>  |
| <b>Further Science Explorations</b> |  |
| <b>Cross-Curricular Extensions</b>  | <p><b>Art:</b> Create a collage that shows the difference between wants and needs.</p> <p><b>Language Arts:</b> Write a letter to someone in the future describing the environmental stewardship project.</p> <p><b>Social Studies:</b> Read the book <i>Material World</i> and compare how different people meet their needs. Discuss how Native Americans or early settlers met their survival needs. Discover how humans' habitat can extend to other parts of the planet by looking at the tags on clothing to identify where they were manufactured. Make a map of the children's extended habitat. Discuss how the human habitat has changed due to improved technology.</p> |

| Cluster 2: Animals and Their Habitats<br>(Lessons 2-6)   | Cluster 3: Plants and Their Habitats<br>(Lessons 7-9)  |  |
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| <p>Children discuss the many organisms that use an oak tree in different ways. After an introduction to the specialized bills of woodpeckers and owls, they experiment with using tools to retrieve various model foods. They associate birds' bills and feet with the foods available in their habitats. They dissect owl pellets and try to identify the owl's habitat from what they know about the organisms in the owl's diet. Finally, the children learn about birds in their local habitat through a Habitat Walk outside, or a Habitat Talk by a local bird expert.</p>                   | <p>Children listen to a book about a saguaro cactus and compare it to an oak tree. They compare models of how cactus stems and other plants' stems retain water. Finally, they learn about local plants through a Habitat Walk outside, or a Habitat Talk by a native plant expert.</p>  | <p><b>Overview</b></p>                     |
| <ul style="list-style-type: none"> <li>• Organisms share an environment and interact because their habitats overlap.</li> <li>• Organisms have characteristics that make it possible for them to survive in their habitat.</li> <li>• Birds' behavioral and physical characteristics help them survive in a local habitat.</li> </ul>  | <ul style="list-style-type: none"> <li>• Many animals use the saguaro cactus as part of their habitat.</li> <li>• A cactus plant's thick shape and waxy outer coating help keep moisture in and allow it to survive in a desert habitat.</li> <li>• Careful observations of the physical characteristics of local plants in one's habitat can explain how they survive.</li> <li>• Many animals are dependent on plants for their survival.</li> </ul> | <p><b>Science Content</b></p>              |
| <ul style="list-style-type: none"> <li>• Draw pictures of organisms to put on an oak tree mural.</li> <li>• Try using model bird "bills" to get "foods"</li> <li>• Observe plant and animal interactions in the mini-habitat. Focus on animals' feeding and locomotion.</li> <li>• Make bird feature card sets.</li> <li>• Continue dissecting owl pellets.</li> <li>• Practice identifying bones found in owl pellets.</li> <li>• Identify birds from the local environment in a field guide.</li> </ul>  | <ul style="list-style-type: none"> <li>• Peruse books about desert habitats.</li> <li>• Make careful observations of the plants in the mini-habitat.</li> <li>• View photographs from the plant Habitat Walk.</li> </ul>   | <p><b>Science Center</b></p>               |
| <ul style="list-style-type: none"> <li>• Find ideas for environmental stewardship projects the class might undertake.</li> <li>• Find a special spot outside to study and observe.</li> <li>• Read background information on owl pellet dissection.</li> <li>• Take home an owl pellet for continued dissection and bone identification.</li> </ul>  | <ul style="list-style-type: none"> <li>• Continue weekly visits to the special spot the student selected.</li> </ul>   | <p><b>Family Links</b></p>                 |
| <ul style="list-style-type: none"> <li>• Compare different bird bills by using "bird bill" tools to collect as much food as possible within a certain time frame.</li> </ul>   | <ul style="list-style-type: none"> <li>• Grow cactus plants from seeds.</li> <li>• Compare the water needs between a cactus and a houseplant.</li> </ul>   | <p><b>Further Science Explorations</b></p> |
| <p><b>Language Arts:</b> Read about how different animals survive in their habitat and environmental stewardship projects other children have undertaken. Read about different kinds of bird bills. Write a story about an owl whose habitat is changing due to a new human neighborhood being built. Read a field guide about birds.</p> <p><b>Mathematics:</b> Graph the number of organisms found in the owl pellets. Calculate the number of organisms an owl eats each year.</p> <p><b>Social Studies:</b> Discuss how prehistoric Native Americans used an oak tree to meet their needs.</p> | <p><b>Art:</b> Make a wall mural of a saguaro cactus. Draw pictures of different types of potted cactus plants. Make crayon rubbings of collected leaves.</p> <p><b>Language Arts:</b> Write a cinquain poem.</p> <p><b>Mathematics:</b> Consider different ways of measuring how much water a plant stem absorbs.</p>   | <p><b>Cross-Curricular Extensions</b></p>  |

# Unit Summary

|                                     | Cluster 4: Biomes<br>(Lessons 10-11)  | Cluster 5: Design Project<br>(Lessons 12-15)  |
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| <b>Overview</b>                     | Children discover the difference between a biome and a habitat. They learn about their local biome. They color the different biomes found in the United States on a map. They work with a partner to research one of Earth's major biomes.  | Children collaborate to design imaginary organisms that can survive in a habitat within the biome they researched. They develop a class assessment rubric to define what they need to include in their designs. They evaluate, refine, and make pictorial models of their designs. To culminate their project, the children present and explain their designs to the class.   |
| <b>Science Content</b>              | <ul style="list-style-type: none"> <li>• A biome is a large geographic area that contains many habitats.</li> </ul>   | <ul style="list-style-type: none"> <li>• Organisms have behavioral and physical characteristics that help them survive in their habitat.</li> <li>• Having criteria is useful when creating a design.</li> <li>• Design, evaluation and revision are all parts of product development.</li> <li>• Models can represent ideas.</li> </ul>  |
| <b>Science Center</b>               | <ul style="list-style-type: none"> <li>• Display nonfiction books about biomes.</li> </ul>  | <ul style="list-style-type: none"> <li>• Use books as references for organism designs.</li> <li>• Look through books and magazines to find interesting interactions between organisms.</li> <li>• Make three-dimensional models of imaginary organisms.</li> <li>• View classmates' pictorial models of imaginary organism designs.</li> </ul>  |
| <b>Family Links</b>                 | <ul style="list-style-type: none"> <li>• Continue weekly visits to special spot.</li> </ul>   | <ul style="list-style-type: none"> <li>• Continue weekly visits to a special spot.</li> <li>• Make three-dimensional models of imaginary organisms.</li> </ul>  |
| <b>Further Science Explorations</b> | <ul style="list-style-type: none"> <li>• Design a biome exhibit for a zoo.</li> <li>• Visit a local zoo.</li> </ul>   | <ul style="list-style-type: none"> <li>• Design an organism that could survive on a planet in our solar system.</li> <li>• Observe the behavior of a carnivorous plant.</li> <li>• Sort animal crackers according to the biome they would most likely belong to.</li> <li>• Select an unusual animal from each biome and challenge children to identify the biome it belongs to based on its physical characteristics.</li> </ul> |
| <b>Cross-Curricular Extensions</b>  | <p><b>Art:</b> Create a diorama, painting, drawing, or poster of a biome. Make a biome mural. Create a biome collage.</p> <p><b>Language Arts:</b> Write a short story detailing the experience of moving from one biome to another. Develop a travel brochure for a particular biome. Write a short story or poem about a biome as seen through the eyes of an organism that lives there. Write a riddle about an animal in a biome.</p> <p><b>Mathematics:</b> Graph the average rainfall and temperatures of different biomes.</p> | <p><b>Art:</b> Make physical models of imaginary organisms using modeling clay. Create a "Habitat Wanted" poster for their imaginary organisms.</p> <p><b>Language Arts:</b> Write a story about a day in the life of their imaginary organisms.</p>  |