

Big Idea: Humans can reduce their impact on the land, water, air, and other living things in the local environment.

Guiding Questions:

How can humans reduce their impact on the land, water, air, and other living things in the local environment?

21st Century Themes/Skills:

DCI (Disciplinary Core Ideas)	Science and Engineering Practices	Cross Cutting Concepts	Student Learning Objectives	Differentiated Activities (Consider the 5 Es)	Resources/Technology	Formative Assessment	Benchmark Assessment
Big Idea: Humans can reduce their impact on the land, water, air, and other living things in the local environment?  Guiding Questions: How can humans reduce their impact on the land, water, air, and other living things in the local environment	<p><u>Planning and Carrying Out Investigations</u> Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1)</p> <p><u>Obtaining, Evaluating, and Communicating Information</u> Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3)</p> <p><u>Asking Questions and Defining Problems</u> Ask questions based on observations to find more information about the natural and/or designed world(s). (K-2-ETS1-1) Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1)</p>	<p><b>Cause and Effect</b> Events have causes that generate observable patterns. (K-ESS3-3)</p> <p><b>Structure and Function</b> The shape and stability of structures of natural and designed objects are related to their function(s). (K-2-ETS1-2)</p>	<p>SWBAT identify, observe, and describe a number of ways in which animals help and harm humans.</p> <p>SWBAT suggest ways in which the impact of animals on humans can be reduced or enhanced.</p> <p>SWBAT identify, observe, and describe a number of ways in which people's actions help and harm animals and animals' environments.</p> <p>SWBAT explain why humans should protect animals and animals' homes.</p> <p>SWBAT present an opinion on a community issue related to animals and people.</p> <p>GUIDING LESSON QUESTIONS:</p> <p>How do animals affect people, communities, and the environment?</p> <p>How do people's actions affect animals and their environments?</p>	<p>Engage: Activate Prior Knowledge Engage students in a discussion about animals and people. Prompt the discussion by asking: What do you like about animals? (They are cute, they make good pets, they keep me company, etc.) What is your favorite animal? Why? Where do animals live? How might you describe an animal home? (a bird's nest, a bee's hive, a beaver's lodge, a fox's burrow, a lion's den, etc.) Do you think animals help people? If so, how? (They carry heavy loads for people, they clean up when something dies, they entertain us, they teach us about nature, they give us food, they help us grow food, etc.) What do people and animals need to live? (food, air, water, a place to live)</p> <p>Explain that animals live in many places, and so do people. Show students images of animals, such as the following: Squirrel eating acorn, Donkey carrying water bottles, Vultures feeding on dead deer, Elephant crossing track, Horses grazing, Geese in barnyard, Oxen plowing in Peru, Cat Show all of the photos, allowing students about 5 seconds to view each one. Then, show the photos again, one by one, while you ask: Do you think animals help people? If so, how? (Students will not likely answer this question fully at this point, but may suggest some of these ideas: Animals carry heavy loads for people, they clean up when something dies, they entertain us, they teach us about nature, they give us food, they help us grow food, etc.) Post the two Lesson Questions that constitute what students will be learning. Students may read them, or you may wish to read them aloud together.</p> <p>Explore 1: Present students with the Lesson Questions and have them complete the first section of the Scientific Explanation Student Sheet: Animals and People using these questions. Students may type their responses directly into the digital resource, or they may write or draw their responses on a printed copy of the resource. The digital resource includes a link to a PDF version of the Student Sheet. Guide students to think about what they already know about the Lesson Questions and record their prior knowledge in the Prior Knowledge section. Encourage students to think about and record how they know what they do (evidence and reasoning). Introduce the Evidence section, explaining to students that they will fill this in as they go through the rest of the lesson. Have students begin the Evidence section with information gathered during Engage.</p> <p>Explore 2: View the video segment Animals and People Are Different. When the video segment is over, allow students to work in small groups, sharing their ideas about how animals and people are different. Ask them to record, with words or pictures, some of the characteristics of animals (e.g., sharp teeth, fur, feathers, wings, tails, claws, beaks). Ask what animals' specialized body parts help them do (regulate temperature, move, defend themselves, find food). When students are finished, groups should share their labeled sketches with the class. Show students images of a monarch butterfly, two albatrosses, a bullfrog, and some sea lions, saying the names as you show the photos. Ask students to describe each animal's habitat. For example, the monarch butterfly likes fields and warm weather. It likes to eat nectar from flowers and makes its home in milkweed plants. You may wish to walk students through this example again when they start the Fun-damental. Assist students in writing the terms "environment" and "habitat" in their notes. Ask them to think about these terms as they play the Fun-damental: Animals in small groups. Guide students to click the right-hand box labeled "Home Sweet Home." Students will select a habitat (sand, cliff, field, pond), a location (land, water), and a temperature (cool, warm) that they think will support the life of one of four animals: butterfly, albatross, bullfrog, and sea lion. Then, they click "Next" and choose food and shelter for the animal. Explain that every kind of animal is suited to a particular habitat and climate, or environment. Ask students to think about the importance of habitats to animals. Discuss briefly what might happen if an animal's habitat changes. Give students a few minutes to record their ideas in their notebook. Students continue their exploration of animals and people by completing the Hands-On Activity: Count Them All. As students complete the activity, guide them to make any observations of changes people have made to animals' environments. Following the activity, discuss these observations as a class.</p>	<a href="#">Model Lesson</a>	<p>Have students complete the Primary Assessment Constructed Response (CR) item titled Animals and People. Students may use the Board Builder tool to create a board that shows what they know about the focus question. Emphasis should be placed on the evidence they have collected to support their findings. You may also wish to assign the online concept assessment, located in the Evaluate tab of the Core Interactive Text, and use the results in the student reports to guide you in assigning any remediation to students.</p>	

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				<p>Explain 1: Have students use the evidence that they collected in the Explore session to complete the sections of the Scientific Explanation Student Sheet: Animals and People titled "Claim" and "Explanation." Students may type their responses directly into the digital resource, or they may write or draw their responses on a printed copy of the resource. The digital resource includes a link to a PDF version of the Student Sheet. Have groups of 2–4 students share their explanations with each other. Students should then revise or enhance their explanations based on group discussion.</p> <p>Explain 2: Using the Interactive Glossary, show students the definition of adaptation. Explain that unique body designs help animals live in particular places. Then have the students view the video segment Summary of Where Animals Live. From this video, students will review that an animal's habitat has to have just the right mixture of the things it needs for survival.</p> <p>Have students give examples of the ways the animals in the video change things in their environments (make holes in trees, burrow under the ground, build nests, chew or chop down trees).</p> <p>Have students draw a labeled picture of an animal home, showing all the things the animal needs. The picture should also show ways in which the animal has changed the environment, and, if applicable, ways in which the animal affects people. Students should share and compare their drawings in small groups of 3 or 4.</p>			
				<p>Explore 1: Have students revisit the Scientific Explanation Student Sheet: Animals and People.</p> <p>Revisit the Lesson Questions briefly to let students discuss what they have learned so far. Tell them they will learn more ways that animals and people affect each other in this part of the lesson.</p> <p>Have students discuss what they have filled in their Scientific Explanation sheets so far with a small group.</p> <p>Remind students that they should be gathering evidence to support their claim as they complete the activities.</p>	<a href="#">Scientific Explanation Student Sheet: Animals and People</a>		
				<p>Explore 2: Explain that the video students are about to view uses the term ecosystem. Ask if any students know what this means. Define the term for the class using the Interactive Glossary.</p> <p>Explain that "ecosystem" is a broader, more general term than "habitat." An ecosystem may include many different animals as well as trees, rocks, and water bodies. Habitat, in contrast, is used to focus on the surroundings of one particular animal or species.</p> <p>After this brief discussion, have students view the beginning of the video segment How Change Impacts an Ecosystem. Pause the video at 0:20 and ask:</p> <p>What is happening in this ecosystem? Why is this happening? What do you think will happen to the ecosystem when the bulldozer stops digging in the soil? What animals in this area will be affected by the people who were digging?</p> <p>Resume the video segment. Highlight the key statement in this video, which occurs at 0:59: "If one part of the ecosystem is disturbed, the impact will be felt throughout the entire system." Repeat this statement to the class and ask students to explain what this means and how changes will affect animals. Emphasize that the changes they have been exploring have all been changes brought about by humans. Have students view the video segment Human Habitats. Pause the video at 0:42 and ask:</p> <p>Explain 2: Have students use the evidence that they collected in the Explore session to add to the sections of the Scientific Explanation Student Sheet: Animals and People titled "Claim" and "Explanation." Have groups of 2–4 students share their explanations with each other. Students should then revise or enhance their explanations based on group discussion.</p>			
				<p>Elaborate 1: Ask students to brainstorm the different ways that human actions can affect animals. Note their responses on the board or on chart paper.</p> <p>Tell students they are going to view a video segment that shows what concerns animals might have about humans and the environment if the animals could talk.</p> <p>Show students the video segment Humans and the Forest. Then, have students brainstorm the different ways that humans' actions harm forest environments and affect the animals that live there. Again, record their responses.</p> <p>Explain that people can help animals like the baby deer. Scientists can transport animals in distress who have lost their habitat to new homes where they will be safe.</p> <p>Show students the video segment The Wolves in Their New Home. Now they will be adding positive ways that humans can help animals to their understanding of this topic. Finding a wild animal a safe, new habitat in which to live (if handled properly and if successfully executed) is one way that humans can help animals. Explain that it is not always possible to relocate all animals affected by human actions.</p> <p>Discuss both video segments as a class. Then have students complete a think-pair-share to answer the following question: Do you think that</p>			

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