

### **Earth Day Challenge:**

Preinstructional Planning

#### **OBJECTIVES**

Students explore how saving energy helps the environment and then brainstorm ideas to help their families save energy and reduce, reuse, and recycle.

**Skills supporting learning standards:** brainstorming, informational text writing, participating in group discussions

#### **MATERIALS**

- Copies of the "Earth Day Challenge" student activity sheet
- Pencils

### **During Instruction**

## Using the Activity Sheet

1. Ask students the following questions to get started:

- *What kinds of things need energy, such as electricity or gas, to work?* (Answers may include lights, appliances such as refrigerators, stoves, ovens, phones, TVs, air conditioners, heaters, elevators, cars, buses, subways, trains, etc.)
- *Where does the electricity we use to power machines, lights, and other things come from?* (Explain that electricity is a secondary source of energy. It's made from other types of energy. Electricity can be made from fossil fuels, such as natural gas, oil, or coal, or from renewable sources like wind and solar power, etc. Fossil fuels take millions of years to form, and once they are used, they can't be replaced. Renewable sources build up again naturally and much more quickly.)
- *What does conserving energy mean?* (To use less energy.)
- *How can using less energy help the planet?* (Explain that creating and using energy can cause pollution. Renewable sources create less pollution than fossil fuels. Using less energy can help reduce the amount of pollution we create. Saving energy can also help us conserve or keep more of our natural resources, such as fossil fuels.)
- *How can we conserve energy?* (Answers may include: turn off the lights when you leave a room, unplug chargers after using them, turn off TVs and computers when done using them, turn off water while brushing your teeth, etc.)
- *What else can we do to conserve energy and natural resources to help Earth?* (Explain that it takes energy and natural resources to make many things we use. For example, trees are a natural resource used to make furniture and paper. We can help save energy and resources and reduce pollution by reducing, reusing, and recycling. Reduce or use fewer things so we create less trash; reuse things such as plastic bags and paper instead of throwing them away; recycle paper, cans, and glass bottles so that they can be made into new things, etc.)

2. Copy and distribute the activity sheet. Review the instructions as a class. Students will work in teams to complete the challenge and brainstorm activities and meals for their families that don't require electricity, gas, or heat to create. In addition, they will brainstorm tips to help their families save more energy and reduce, reuse, and recycle.

3. Invite student volunteers to share their lists.

## Books to Explore

*Where Does the Garbage Go?* by Paul Showers

*Every Day on Earth: Fun Facts That Happen Every 24 Hours* by Steve Murrie and Matthew Murrie

*You Can Save The Planet: 50 Ways You Can Make a Difference* by Jacquie Wines

## **Learning to Save Energy and Help Save Planet Earth**

Preinstructional Planning

### OBJECTIVES

#### **Students will:**

- Explore and discuss ways to save energy and reduce waste
- Make inferences
- Develop vocabulary
- Participate in group discussions

### MATERIALS

- Save Energy and Help Planet Earth Activity Sheet printable
- Earth Day Family Pledge printable
- Crayons
- Pencils

### **During Instruction**

---

#### SET UP

Make copies of the Save Energy and Help Planet Earth Activity Sheet printable for each student.

---

#### LESSON DIRECTIONS

**Step 1:** To start the activity, explain to students that April 22 is Earth Day. It is a day celebrated by people around the world to honor the planet and think about how to protect it and stop pollution. On Earth Day, some people clean up their neighborhoods to get rid of garbage, plant trees and flowers, or do other things to help keep Earth healthy.

**Step 2:** Ask students to name ways they can help Earth. Answers may include recycling (or reduce, reuse, recycle), conserving water, not littering, reusing paper, not wasting energy, composting, etc.

**Step 3:** Next, ask students: How do you think saving energy can help the planet?

**Step 4:** Explain the connection between energy and electricity:

- Electricity gives us energy to use things like computers, lights, heating, refrigerators, and more.
- Electricity can be made out of resources from Earth called fossil fuels, such as natural gas, oil, and coal, or from renewable sources like wind and solar (sun) power.
- Fossil fuels, also called natural resources, take millions of years to form, and once they are used, they can't be replaced. Renewable sources build up again naturally and much more quickly.
- Saving energy can help us use fewer natural resources from Earth.
- Also, creating and using energy can pollute Earth's air. Using less energy can help reduce the amount of pollution we create.

**Step 5:** Copy and distribute the Save Energy and Help Planet Earth Activity Sheet printable. The page features sentences describing energy-saving and energy-wasting actions. Students will color the image of Earth for each action that saves energy. They will then draw a picture to show why they want to help Earth. Read the introduction and directions with the class.

**Step 6:** Review the answers together and have students share their drawings. Students should color the image of the Earth for the following sentences:

- Turn off the lights when I leave a room.
- Turn off the TV when I'm not watching it.
- Recycle paper, cans, and bottles.

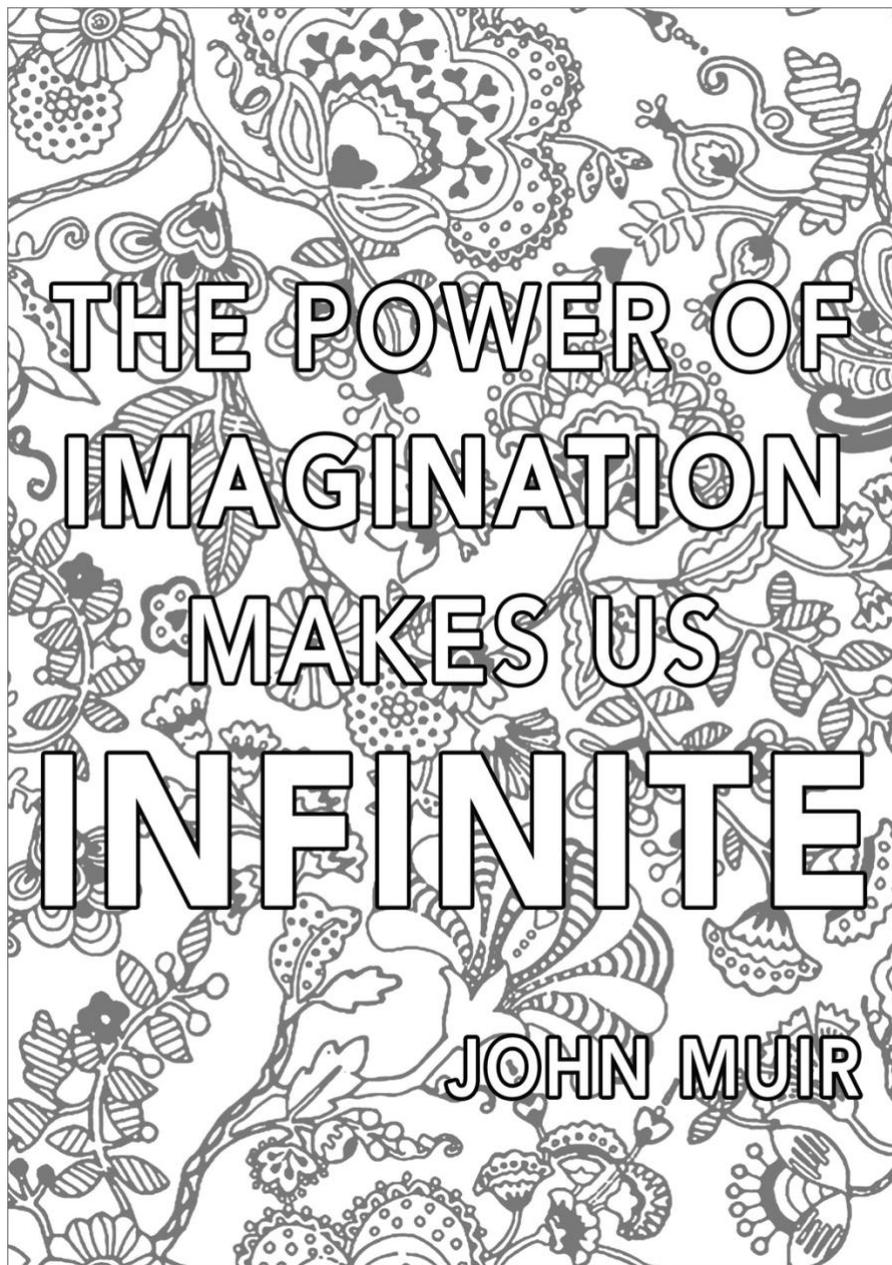
## **An Earth Day Story Book**

### Preinstructional Planning

- OBJECTIVES
- This reading comprehension and writing activity will have students thinking about energy conservation and easy ways to save energy.
- **Skills supporting learning standards:** phonemic awareness, vocabulary development, spelling, informative/explanatory text writing, participating in group discussion
- **During Instruction**
- The mini-storybook teaches students energy-saving tips while reinforcing their recognition and use of the sight word "will." To start, write the word "will" on the board or chart paper. Explain that "will" is used in many ways. For example, we use it to express things that are expected to happen in the future (*It will rain tomorrow*), or as a way of saying we're willing to do or are okay with doing something (*I will be nice*). Provide students with examples.
- Next, copy and distribute the activity sheet to students. Read the instructions and then have students cut out and fold the page to make their booklets. Students should fold on the horizontal line, then the

vertical line. With younger students, read the story together and have students fill in the word “will” on the lines. Older students can complete the sentences on their own. Students should finish the book by writing a sentence about and drawing a picture of something they will do to help save energy. Students can then color the booklet and share it with their families.

- As a follow-up activity, create a class storybook about energy conservation. Have each student contribute a page with an energy-saving tip and picture.





## Gateway: Nests

### Children will:

- Learn what park rangers do.
- Discover different birds, insects, and other animals, what their nests look like and what they are made of.
- Be introduced to how birds and animals take care of their babies.
- Make a bird feeder allowing them to explore even more about birds.

### View:

Watch [Sesame Street Explores National Parks: Gateway-Nests](#) and help children learn that there are so many wonderful and interesting things to observe and discover in nature, such as animal families and the nests they live in.

Afterwards, ask children questions such as: What are some things that park rangers do? What kinds of nests did Elmo and Murray learn about at Gateway? How did the mom and dad birds take care of their babies? What kinds of animals and nests did Elmo and Murray explore at their own local park? If you were an animal, where would you build your nest? What would you build it out of? Why?

### Materials:

- Milk or Juice Cartons (enough for multiple groups of children)
- Construction Paper
- Crayons or Markers
- Hole Puncher
- Old Shoelaces or Rope
- Tape or Glue
- Scissors (or safety scissors if children will be cutting)

### do:

1. Cut out a square section from the front side of the carton with scissors. Leave at least three inches from the bottom of the carton to hold the seeds.
2. Trace and cut construction paper to match the square cutout on the outside of the feeder.
3. Split your class into small groups and give each group a construction paper cutout for decorating.
4. The children can tape or glue the decorated construction paper to the cartons.
5. To hang the bird feeder, use a hole puncher to make a hole on the lip of the carton. Help the children string the shoelace through the hole and tie a knot to secure it.
6. To make the perch for the birds to sit on, carefully poke a sharpened pencil just below the opening you previously cut.
7. The children can help place birdseed inside the bird feeder.

8. Look for a place outside to hang the bird feeder so that it is up high where other animals won't bother the birds while they eat. It can also be placed outside on a windowsill.
9. Become bird watchers and observe the birds as they visit your feeders!

educator [View and do](#)



## Gateway: Nests

### discussion/activity ideas:

- Encourage children to draw pictures of all the birds that they observe in their very own nature journals (web link). Also, keep track of how many birds come to the feeder each day. Notice the differences between the birds that come to the feeder. How many different types of birds do you see?"
- Talk about how parent birds need food to stay strong and healthy, so that they can take good care of their baby birds. Also talk about how the parents take food back to their nests to help feed the babies.
- Split your class into small groups and have them pretend to be bird families building nests and taking care of baby birds.
- Choose a local bird and learn about their nests. Encourage children to go outside and collect those same materials (e.g. fallen sticks or grasses) and build their own nest.
- Ask children again where they would build a nest if they were a bird and what it would be made of. Encourage them to draw pictures of their nests in their [nature journal](#).
- Talk about park rangers and why everyone should take care of their parks and nature.
- Earn Nature Explorer Badges! [Print out badges](#) and give one to each child to color in. Then tape the badges to the children's shirts so that they can proudly wear them.

## Gateway: seasons

---

### Children will:

- Learn what a park ranger does.
  - Learn about spring and the changes it brings.
  - Make nature explorer tools (binoculars and amplifiers) to promote investigation and observation of the seasons using their senses.
- 

### View:

Watch [Sesame Street Explores National Parks: Gateway-Seasons](#) and help children learn that there are so many wonderful and interesting things to observe and discover in nature using different types of explorer tools.

Afterwards, ask the children questions such as: What kinds of things do park rangers do? What did Elmo and Murray learn about the animals migrating to Gateway? What changes happen during springtime? What do you hear, see, smell, feel outside now? What season do you think we are in?

---

### Materials:

- Toilet Paper Rolls
  - Crayons, Markers
  - Safety Scissors
  - Paper Cups
  - Old Magazines or Newspapers
- 

### do: Binoculars

1. Reuse toilet paper rolls to create pretend binoculars.
  2. Give two toilet paper rolls to each child.
  3. Encourage children to search through old magazines or newspapers to find images of nature, or take a nature walk outside to collect things from the ground to decorate with, such as flowers, twigs or leaves.
  4. Have children decorate each roll with their names, drawings, magazine cutouts, or items collected.
  5. Help the children tape the two rolls together, so that they look like binoculars.
  6. Have the children use their pretend binoculars to explore the seasons and nature up close!
- 

### do: Nature amplifiers

1. Reuse clean paper cups to create personal sound amplifiers.
2. Cut out the bottom of paper cups and give one to each child.

(cont. on next page)

## Gateway: seasons

---

### do: Nature amplifiers

3. Encourage children to search through old magazines or newspapers to find images of nature, or take a nature walk outside to collect things from the ground to decorate with, such as flowers, twigs or leaves.
4. Have children decorate each cup with their names, drawings, magazine cutouts, or items collected.
5. Encourage children to decorate their cup with their names and images of things found in nature, such as flowers, animals and birds.
6. Have the children hold the narrow end of the cup to their ears to listen closely and observe the sounds of the seasons!

---

### discussion/activity ideas:

- Reference the Nature Words vocabulary sheet included in the [More About This Topic section](#) and talk to children about what the words tools, amplify and magnify mean.
- Explore the season outside and encourage children to record what they saw and heard using their tools in their very own [nature journals](#). Based on their observations, have them brainstorm what season it is.
- How does your family adapt to the different seasons? Do you wear different clothing? How do you think animal families adapt to the different seasons?
- Talk about park rangers and why everyone should take care of their parks.
- Earn Nature Explorer Badges! [Print out badges](#) and give one to each child to color in. Then tape the badges to the children's shirts so that they can proudly wear them.

## Gateway: habitat

---

### Children will:

- Learn what a park ranger does.
- Discover different habitats and the animals that live there.
- Explore their neighborhood habitat and count the number of animals they find there, also called a census.

---

### View:

Watch [Sesame Street Explores National Parks: Gateway-Habitat](#) and help children learn that there are so many wonderful and interesting things to observe and discover in nature, such as different habitats and the animals that live there.

Afterwards, ask the children questions such as: "What kinds of things do park rangers do? What is a habitat? What did Elmo and Murray learn about the salt marsh at Gateway? What activity did they do in their local park? How do the habitats Elmo and Murray discovered compare to the habitat where you live?"

---

## Materials:

- Nature Journal • Paper • Poster Board
  - Crayons, Markers • Safety Scissors • Coloring Sheets of plants and animals (optional, not provided)
- 

## do:

1. Discuss with children that today they are all going to be park rangers, explore their neighborhood habitat and take a census to count the number of the animals that live there.
2. Split your class into three groups and give each group an animal to look out for, such as a squirrel, dog or bird, and then head outdoors to find and count them.
3. Encourage children to tell you each time they find their target animal, and then record it in your class nature journal.
4. Return to the classroom and create a chart on a large piece of poster board. Include a title, such as “Spring Nature Census.” Draw three columns, one for each animal that you searched for. At the top of each column, include a picture and the name of the animal.
5. Tell each group of children how many animals they found and encourage them to draw that many pictures in the column for their animal. Help them cut out their pictures and use as tally marks for your census chart. Or, you can print out pictures of the animals for the children to color in and use those as tallies.

## Gateway: habitat

---

### do: (cont.)

6. Have the children count how many animals there are all together in each column. Explain to them how to read the chart. Ask, “Which animal has the most tallies?”
  7. Do this activity again in different seasons throughout the year with the same three animals and compare how the answers have changed and talk about why they may have changed.
- 

### discussion/activity ideas:

- Talk with children about what a census is (a count of how many things are in a certain area) and have them count how many people are in their family.
- Go to the library or search online to find out more about the animals you took a census of, and why your neighborhood makes a good habitat for them.
- Discuss how habitats change from season to season.
- Talk about park rangers and why everyone should take care of their parks.

- Earn Nature Explorer Badges! [Print out badges](#) and give one to each child to color in. Then tape the badges to the children's shirts so that they can proudly wear them.

## families

### Children will:

- Learn what park rangers do.
- Discover animals and their families.
- Discuss what a family is and understand the similarities and differences between human families and animal families
- Draw their own family portrait and an animal family portrait.

---

### View:

Watch [Sesame Street Explores National Parks: Grand Canyon-Families](#) and help children learn that there are so many wonderful and interesting things to observe and discover in nature, such as animal families.

Afterwards, ask children questions such as: "What is a family? Who makes up a family? How do people in your family take care of each other? Do animals have families? How do animal families take care of each other? What did Elmo and Murray learn about the California Condor family? What kinds of animal families did they observe in their local park?"

- 
- Photographs of children's own families (optional, as a reference)

### Materials:

- Paper
- Markers/crayons/colored Pencils

### do:

1. Take children outside and search for animal families. Encourage them to record and draw any that they find in their nature journal (insert address).
2. Return to the classroom and give each child two pieces of paper.
3. On the first piece of paper, have them draw the animal family that they observed outdoors or pick an animal and draw what they think the animal's family would look like.
4. On the second piece of paper, have them draw a picture of their own family. Children can use their photograph for reference if necessary.
5. In groups, have children share their pictures with everyone and compare the differences.
6. Hang the animal and human family portraits around the classroom to display different kinds of families!

## families

### discussion/activity ideas:

- Go to the library and find books or search the Internet to learn more about animals and their families.
- Talk about animal and human families. "How do family members take care of one another? How are animal and human families the same? How are they different?" (refer to the pictures during this discussion)
- What are things the children love to do with their families?
- Condor babies usually have one parent who is out "working" (finding food) while the other parent is home taking caring of them. Does that ever happen to you?
- Explain to children what a family tree is and encourage them to create their own by drawing pictures of their family members and grouping them together. Encourage them to ask their parents or caregivers for help.
- Talk about park rangers and why everyone should take care of their parks and nature.
- Earn Nature Explorer Badges! [Print out badges](#) and give one to each child to color in. Then tape the badges to the children's shirts so that they can proudly wear them.

## seasons

### Children will:

- Learn what park rangers do.
- Learn about the four seasons.
- Use their senses to explore each of the four seasons and create a class journal.

### Viewing:

Watch [Sesame Street Explores National Parks: Grand Canyon-Seasons](#) and help children learn that there are so many wonderful and interesting things to observe and discover during the four seasons.

Afterwards, ask children questions such as: "What are some things that park rangers do? What are the four seasons? What did Elmo and Murray learn about the seasons at Grand Canyon? What is the weather like outside right now? Guess what season you're currently in!"

### Materials:

- Paper
- Glue, Tape
- Yarn, String, or Binder Rings
- Crayons, Markers
- Hole Puncher
- Paper Bags

**Note:** This activity will be done over the course of one school year. If you are visiting a national park, encourage children to leave things where they are and only draw pictures or take photos.

### do: Nature walk

1. Hand out a paper bag to each child (for collection purposes) and go on a nature walk outside with your class. Encourage them to observe using all their senses.

2. Have children collect nature items they find outside that relate to the season that you're currently in, such as leaves, acorns, flowers, twigs etc. Remind them to respect nature and only collect things found on the ground.

---

### do: Nature Collage

1. Return to the classroom and instruct each child to glue or tape their object/s on a piece of paper to add to the class' four seasons journal. They can also draw pictures of nature elements they observed on the walk and the names of these elements.
2. Join the children together in a large group and have each child present what they found.
3. This nature walk and collage-making can be done once during each season, repeating the above steps each time.

### seasons

#### do: Class Nature Journal

1. Once this has been done for all four seasons, it will be time to put the journal together to make a Four Seasons Class Journal!
2. Hole punch each page and use the yarn, string or a binder ring to combine all the pages into a journal.
3. Join the children together again in a large group and share and compare what was found during all the four seasons. How are the things the same and different?

#### discussion/activity ideas:

- Discuss what children found during the different seasons. Why were you able to collect more items during some seasons than in others? What did you feel/smell/see/hear during each of the seasons?
- Talk about how the weather felt during each of the seasons and play a fun game figuring out the appropriate clothing to wear. Make pictures of different clothing (shorts, jacket, raincoat, snow boots etc.) and pull them out of a bag, having the children guess which season they'd wear it in.
- How does your family adapt to the different seasons? How do you think animal families adapt to the different seasons?
- Talk about park rangers and why everyone should take care of their parks and nature.
- Earn Nature Explorer Badges! [Print out badges](#) and give one to each child to color in. Then tape the badges to the children's shirts so that they can proudly wear them.

### habitat

#### Children will:

- Learn what park rangers do.
- Discover different habitats and the animals that live there.
- Explore a tree habitat outside and then do an art activity to create a tree habitat in the classroom.

## View:

Watch [Sesame Street Explores National Parks: Grand Canyon-Habitat](#) and help children learn that there are so many wonderful and interesting things to observe and discover in nature, such as different habitats!

Afterwards, ask the children questions such as: “What kinds of things do park rangers do? What is a habitat? What did Elmo and Murray learn about the different habitats at Grand Canyon? What habitats did they discover in their local park? How do those habitats compare to the habitat where you live?”

- Large Pieces of White Paper

## Materials:

- Crayons, Markers
- Fallen Leaves and Twigs

---

## do: Binoculars

Talk with your class about how a tree can be a habitat or part of a habitat for many different animals, bugs, or birds. Then take them on a nature hunt and explore the different trees in your local park or neighborhood. Encourage them to examine the different parts of the tree like the leaves, branches, and roots. Then have them record and draw what they observe about these trees in their nature journal (add link). They can record what the trees look like, what bugs they found or if there were any nests. Also, have them collect different fallen leaves and twigs to help make your classroom tree.

1. Tape together many large pieces of white paper and draw an outline of a tree.
2. Have children tape or glue the leaves and twigs they found outside onto the branches of your classroom tree.
3. Encourage children to work together to color in the tree and draw other things they observed, such as bugs, birds or animals, or the texture of the bark.

## habitat

### discussion/activity ideas:

- Discuss your classroom tree. What do children notice about the tree? How is it the same or different from the trees outside? Which animal, bugs, or birds might it make a good habitat for?
- Talk with children about the different leaves they found outdoors. What color are they? What do they smell like? What is the same? What is different?
- Count how many points the different leaves have. Does each leaf have the same number of points?
- Go outside and encourage children to make bark rubbings of the trees using a crayon and paper.
- Discuss how habitats change from season to season. Are there different animal families that live in the different habitats?
- Talk about park rangers and why everyone should take care of their parks.
- Earn Nature Explorer Badges! [Print out badges](#) and give one to each child to color in. Then tape the badges to the children’s shirts so that they can proudly wear them.

# Nature words



**instructions:** Want to talk like a park ranger? Use this vocabulary sheet to help your child learn and use new nature vocabulary.

Use these words to talk about and describe your explorations with nature in your national park, local park, or backyard!

**Amphibian:** An animal, such as a frog, toad, salamander, or newt, that:

- goes through a big change called a metamorphosis
- lives part of its life on land breathing through its skin and part of it in the water breathing through its gills
- has thin, moist skin, four legs, and a backbone

**Arachnid:** A small animal, such as a spider, that has eight legs.

**binoculars:** A tool that helps you get a closer look at things that are far away.

**camouflage:** To disguise or hide by blending into the background.

**compare:** To figure out if things are the same or different.

**deciduous:** A tree that loses its leaves once a year.

**garden:** A place where plants, flowers, fruits, and vegetables are grown.

**habitat:** A place where animals live and can find food, water, and a place to sleep.

**hibernate:** When animals sleep for a very long time from winter until spring, when it's warm and easy to find food again.

**insect:** a small animal that has six legs, two antennae, and usually two pairs of wings, such as flies, crickets, mosquitoes, beetles, butterflies, and bees.

**investigate:** To do things that will help you find the answer to your question.

**Journal:** A book used to keep track of observations through writings, drawings, or photographs.

**magnify:** To make something look bigger.

**metamorphosis:** When something goes through a really big change, like when a caterpillar changes into a butterfly.

**migration:** When animals move because the seasons change.

**nature:** Plants, animals, and other things outside that are not made by people.

**observe:** To use your senses to find out more about something.

**pollinate:** When bees spread pollen from one plant, flower, fruit, or vegetable to another to help make more flowers grow.

**season:** A time of the year that is characterized by a certain change in weather. There are four seasons in a year: winter, spring, summer and fall. In winter it's cold and snowy, in spring it's warm and rainy, in summer it's hot, and in fall it's cool and windy.

Depending on where you live the seasons might feel different.

**senses:** What we use to experience everything around us. There are five of them: sight, taste, touch, smell, and hearing.

**texture:** The way something feels.

**tool:** Something used to help do a specific task, such as a magnifying glass, a shovel or a flashlight.



# HABITAT SCRAMBLE

## METHOD

In a role-playing simulation, students act as species in a habitat trying to survive by collecting cards that represent all of the essential habitat services – water, soil, shelter, space, air, and food.

## MATERIALS

- Hula hoops or rope (1 per group of four)
- Habitat cards (provided, 4 sets per habitat)

## INTRODUCTION

A **habitat** is an area that provides water, soil, shelter, space, air, and food for various species. Plants as well as animals depend on specific habitats to survive. Every habitat has a **carrying capacity** for the number of species that can be supported by that habitat's resources. Often, human impact interferes with or destroys these habitats.

## PROCEDURE

1. Make habitat areas using either hula hoops or circles of rope. Initially there should be a habitat for each group of four students. Place four sets of Habitat Cards (24 cards total) inside each of the circles (habitats). These can be scattered in the circle, face up.
2. Review the term habitat and list the six characteristics of a good habitat – water, soil, shelter, space, air, food. These are printed on the Habitat Cards.
3. Ask the students to name some animal species that live in particular habitats.

## CONCEPT

No species, plant or animal, can survive without a suitable habitat. Sometimes human populations and activities can spoil or destroy the habitats of other species.

## GRADE LEVEL

Lower and upper elementary

## SUBJECTS

Science, Social Studies, Language Arts, Math, Art

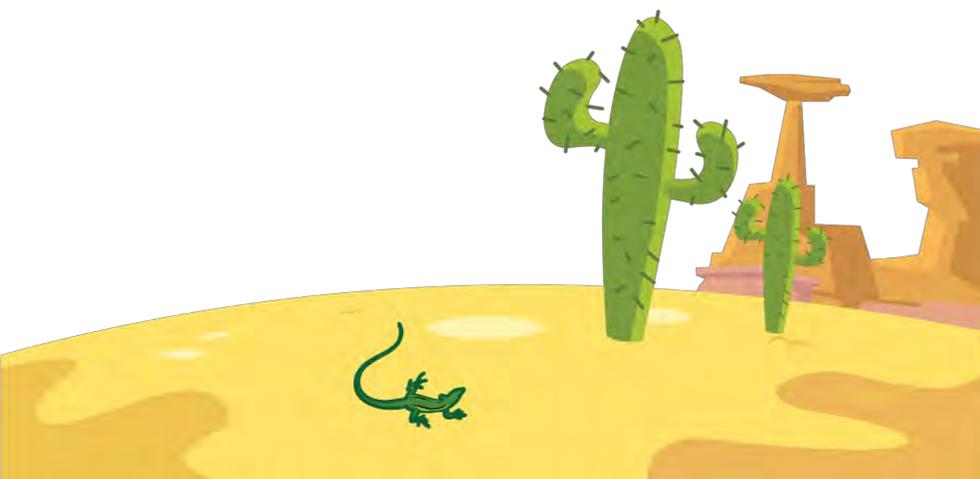
## OBJECTIVES

Students will be able to:

- Explain the importance of an organism's habitat by listing what the habitat provides the species.
- Demonstrate the importance of carrying capacity within a habitat.
- Identify factors that can change a habitat so that it no longer is able to support its species.
- Identify ways that human activities can contribute to the destruction of a habitat.

## SKILLS

Cooperating, observing, making comparisons, deductive reasoning



This could be a habitat close to school or home or one in another part of the world. Remind the students that plants are also species and need all the characteristics to be able survive.

Explain that the hula hoops on the floor represent habitats.

4. Tell the students that only four animals/plants can survive in each habitat without it becoming too crowded or its resources becoming depleted.
5. Explain that when you give the signal, each person should go to a habitat, but that only up to four can live in each of the habitats.
6. Have the students find a habitat, allowing for cooperation among the students, so that only four are in each habitat (if the number of students isn't a multiple of four, you will have one or two habitats with only three students).
7. Tell the students that they should look at the cards and collect what they need to survive. When all students find the cards they need, ask them if their habitat is healthy enough for them to all survive. Note: At this point in the simulation, each habitat should be healthy enough for all to survive since there are sufficient resources.
8. Have the students return their cards to the habitat area. Then have them leave their habitats and face away from the habitat area. Create some kind of disturbance in the habitats, so that they are no longer able to support all the species that live there. To do this, remove some of the cards from each habitat. Tell students what the disturbance is – it could be a natural disaster or land development, for example.
9. Ask the students to return to their habitats. They can return to the same habitat or choose a different one. Tell the students that once again they need one of each card to be able to survive. If a participant does not have one of each of the cards, he or she steps away from the circle because he/she can no longer survive. Discuss what might have caused the cards to disappear. Examples: take away some water cards because there is a drought or the water has become polluted; take away some shelter cards because trees have been cut down or meadows have been mowed.
- 10 . Once again have the groups leave their habitats and face away from the area. This time an entire habitat will be destroyed (remove a hula hoop and all the cards inside it). Have the students go back to a habitat area, reminding them that the carrying capacity is four per habitat. Some students will be without a habitat. Ask the students with habitats if those without habitats can join their habitats. (*No*) What will happen if they allow more species in their habitat? (*The plants/animals that are already living there will run short on resources.*) Here is a good time to discuss carrying capacity, showing how by destroying an entire habitat (clear cutting or building homes) another habitat can also be destroyed as more species compete for limited resources.

#### DISCUSSION QUESTIONS

1. What are the characteristics of a healthy habitat, one that would make a good home for a species to live?  
*The characteristics are water, soil, shelter, space, food, and air.*
2. Can you think of a specific habitat and a species that lives there? Suggest that the students look outside or think about some place they visited on a field trip. (*Possible answers: a woodland and a squirrel lives there, or a pond and a green frog lives there.*) Ask the students to help describe all the characteristics of the habitat that help the species survive.  
*Possible answer: If a squirrel lives in a woodland, the woodland has soil that allows trees to grow which provide food and shelter. Rain provides water for the soil and the trees, then the squirrel can chew on the buds and leaves for additional moisture. There is space for the squirrel to run around and collect what it needs.*
3. What do we as humans do to change the habitat for these species?  
*Answers will vary but may include: cut down trees, kill off the predators so there are too many squirrels for the limited resources, remove woodlands to build a new shopping mall or other buildings.*
4. How can we work to make sure that there are good habitats for the species that live in them?

*Answers will vary but may include: recycling paper so we don't need to cut down more trees, getting more natural areas zoned for habitat protection, preventing pollution and litter in habitat areas.*

#### MEASURING LEARNING

Have each student draw two pictures (a before and after) of a habitat that undergoes change. On the first picture, they will label all the things that make this a good habitat for a particular species. On the second picture, they should illustrate how the habitat changes in response to a natural disaster or human encroachment.

#### FOLLOW-UP ACTIVITY

Ask the students to create an imaginary creature. Remind them that it will need to do all the things that would make it a living thing. Then have them build a habitat that would support their creature. This could be done as a drawing, or by actually making the creature and then building a 3-D habitat where it can live. The students should be able to share all the ways the habitat supports the creature and how the creature uses the habitat to survive.

**WATER**



**SOIL**



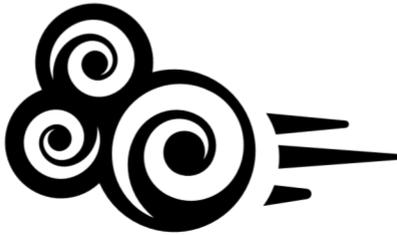
**SHELTER**



**SPACE**



**AIR**



**FOOD**



**WATER**



**SOIL**



**SHELTER**



**SPACE**



**AIR**



**FOOD**



## UNIT 6 | PEOPLE AND RESOURCE USE

# LEND A HAND TO THE EARTH

### METHOD

Students create handprint art and write an action they will take to protect the environment.

### MATERIALS

- Construction paper
- Markers
- 1 sheet of poster board
- Scissors

## INTRODUCTION

As the next generation of leaders, parents and voters, children should feel empowered to take positive action to protect the environment. In this activity they will create a “handprint” that contains a description of one way they can help the earth and then put that idea into action. The class’s handprints will be displayed together, showing a collective commitment to protecting the environment and representing the cumulative effect of individual actions.

## PROCEDURE

1. Ask the students to think of one positive action they will take to protect the environment and why that action is important. Explain that they will later be required to put their action into practice and report back to the class. You may find it helpful to brainstorm a list of ideas from which each student can choose an action. Be sure to discuss why each action is important.



### CONCEPT

Every person can take actions to help the environment and the cumulative effect of these individual actions can be immense.

### GRADE LEVEL

Lower elementary

### SUBJECTS

Science, Social Studies

### OBJECTIVES

Students will be able to:

- Identify one personal action that will help protect the environment.
- Create and write a pledge about their personal action.
- Discuss the cumulative effects of individual actions.

### SKILLS

Problem solving, brainstorming, decision making, writing



2. Have each student create a pledge using his/her chosen action. An example of a positive action pledge is “I will write or draw on both sides of a piece of paper.” This action is important because re-using paper means we need less new paper. New paper comes from trees that have been cut down and may be dyed or treated with chemicals that are harmful to humans and the environment. Trees produce oxygen and provide shade, so it is important to limit our paper consumption as much as possible.

Other suggestions of positive action pledges:

- I will help my parents find and repair leaky water faucets and pipes at home.
- I will turn off lights, televisions and computers when no one is using them.
- I will not leave the refrigerator door open.
- I will put my litter in a trash can or recycling bin.
- I will not let the water run while I’m brushing my teeth.
- I’ll help with the dishes and encourage my family not to use paper plates and cups.

3. Instruct students to trace their handprint on construction paper, cut it out, and write their action pledge on their handprint.
4. Arrange the handprints on the large paper and glue them down. Include a drawing of the earth in the middle of the poster, with the phrase “We All Can Lend a Hand to the Earth.”
5. Display the poster in your classroom or school.

#### DISCUSSION QUESTIONS

1. Describe your action and how you plan to make it happen. When and where will you first complete it? (Students may want to point to their handprint on the banner while doing so.)
2. Is the action something you can do every day or just once in a while? Will you need an adult’s help to complete your action or can you do it on your own?
3. How will your action have a positive impact on the earth?
4. When we all complete our actions, what kind of an impact will we have? What if everyone in our school made a positive action pledge? Or everyone in our community?

#### MEASURING LEARNING

Ask students to remember their pledge over the next few days so they can report back to the class when and where they were able to take their positive action. After a few days, have each student re-read their action pledge to the class and share one time they took that action.

Unit 6 | People and Resource Use

Activity: Lend a Hand to the Earth, Page 2

#### FOLLOW-UP ACTIVITY

Share one or both of the following thought-provoking books with your class:

- *If Everybody Did* by Jo Ann Stover (BJU Press, 1989). This very funny book uses lively illustrations to demonstrate the cumulative effects of individual, everyday actions. Use this book as a springboard for discussing questions such as: What if everybody left the water running (or even dripping) in the sink? What if everybody left the lights on? What if everybody threw trash on the ground?

If everybody did these things we would pollute our environment and use up our resources even more quickly. Pose the opposite kinds of questions to emphasize positive behaviors: What if everybody recycled their newspaper or read a copy at the library—how many trees could be saved? What if everybody washed their clothes only when they had a full load—how much water could be saved? What if everybody used re-usable plates at parties instead of disposable ones—how many bags of trash could we avoid producing?

- *The New 50 Simple Things Kids Can Do to Save the Earth* by John Javna (Earth Works Group, Andrews McMeel Publishing, 2009). This book highlights actions young people can take to care for the environment. It explains the relationships between the specific actions and the broader connections among living things.