



What is an Ecosystem?

K—2nd Grades

Lesson 2. An Ecosystem is More Than its Parts!

Essential Questions:

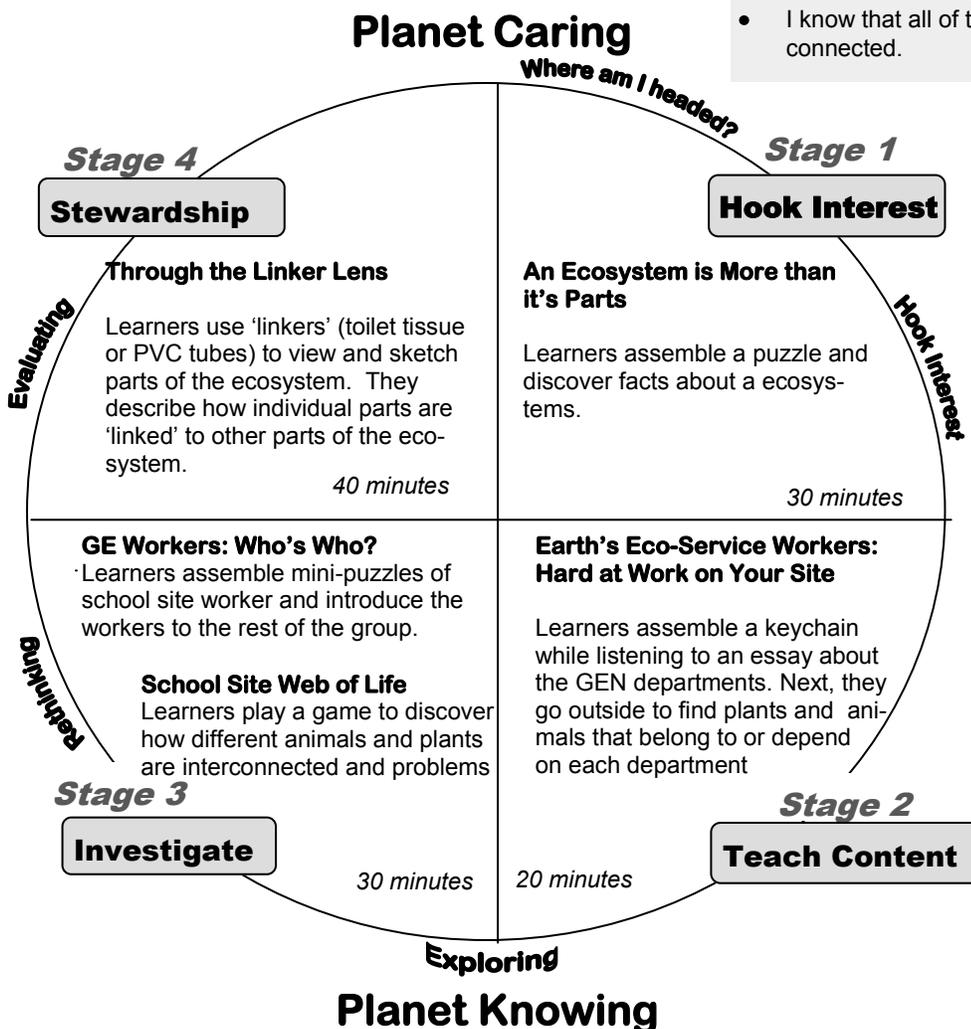
- What work is the Earth doing at my school?*
- Who and what lives on my school ecosystem and what jobs do they do?*
- How does the earth help keep me healthy?*
- Is my school ecosystem healthy?*
- How can I help my school ecosystem be healthier?*

At a Glance:

The lesson begins as learners assemble a puzzle, name the parts of an ecosystem and identify the managers. Learners deepen their knowledge of the eco-service departments by listening to a story (daily log) of what the plants and animals are doing on Garden Earth, while assembling a keychain. Stage 3's activity depicts the interconnectedness of different plants and animals, showing the holistic view of Earth's ecosystems through a 'web of life' game. Learners complete this lesson as they use observations tubes to locate parts of their school site ecosystem and draw or write about them in their journal.

Concepts:

- The earth provides me with many things that I need to live.
- I am part of the Earth.
- Water, air, soil, plants and animals are also parts of the Earth.
- The Earth does work to stay healthy.
- When the Earth is healthy, plants and animals stay healthy too.
- People can help the Earth stay healthy.
- I know how to help the Earth stay healthy.
- I know that all of the parts of an ecosystem are connected.



Objectives

Learners ...

- 1) describe the parts of their school site ecosystem.
- 2) describe how different animals and plants are interconnected.
- 3) use their senses to explore the environment.
- 4) show respect for the creatures that live on their school site.

PROCEDURES IN BRIEF: Lesson 2—An Ecosystem is More Than its Parts!

Stage 1. An Ecosystem is More than it's Parts!

Procedure:

1. Explain to learners that they will be working together to complete a puzzle.
2. Pass out puzzle pieces to learners.
3. Allow learners to each have a turn telling about the picture on his or her piece.
4. Ask a participant to start the puzzle by laying their piece on the floor or a large table.
5. Next, ask learners to raise their hands if they think they have a piece that belongs beside the first piece. You may need to guide learners in recognizing this.
6. Repeat step 5 until the puzzle is complete.
7. Tell learners that their pieces have worked together to make an ecosystem. Before each learner had only one part of an ecosystem, but when the parts are put together, they represent a whole ecosystem.
8. Ask if learners have heard the word "ecosystem" before. Ask them to repeat it after you. Explain "ecosystem" by saying, "an ecosystem is a group of living and non-living parts that work together to do a lot of jobs. These jobs are: cleaning the air that we breathe; making the food we eat; making sure the flowers are pollinated so that there are fruits, seeds and baby plants; purifying the water we drink; recycling waste by decomposing things); keeping pests in balance; and making sure there is diversity among living things.
9. Ask learners for examples of ecosystems that they may know about. Guide them in realizing that their yard at home is an ecosystem, the park is an ecosystem, and even their school yard is an ecosystem.
10. Tell learners that one way of explaining how an ecosystem works is to learn about the Garden Earth ecosystem. Introduce the department managers and the work that they are in charge of by pointing to their pictures on the puzzle pieces.

Supplies

- puzzle pieces

Stage 2. Earth's Eco-Service Workers: Hard at Work on Your Site

Procedure:

Part A

1. Provide each student with their supplies to assemble a keyring with beads.
2. Have learners attach the string to the split key ring.
3. Learners will assemble their beaded key chain as they listen to the story. Either the instructor or the learners read the essay.
4. Before you state each Department name in the story, learners can guess which Department it is.
5. Once the story is complete, learners may finish assembling their key chain. Tie off the end of the string with the beads.
6. Attach the lanyard hook-clip to the split key ring.
7. Lastly, attach the lanyard hook-clip to the GEN pie logo disc.

Part B

1. Use the beaded key chains to review the GEN Departments and the function of each with your learners.
2. Use photos of Department workers to discuss organisms that both depend upon these services and help provide these services on your school site.

Supplies

- **Script:** Garden Earth Naturalist: Daily Log
- beads
- string
- key ring
- lanyard hook-clip
- GEN pie logo disc
- small baggie or cup for each child
- pictures of GEN Department workers
- worksheets

Stage 3. Garden Earth School Site Web of Life

Procedure:

1. Tell learners, "in this activity we will imagine that we are different plants or animals that live in the school ecosystem".
2. Have learners form a circle and sit down. Give each student a card that identifies the role they will play in the activity. Have learners hold their card so all can see it.
3. Tell learners, "You all are important parts of the school site ecosystem and you depend upon each other for survival. Identify one (or more) parts of the school ecosystem that you need."
4. Choose one student to start the activity. Give this student one end of the ball of string; you hold the complete ball. Ask this student to name one part of the ecosystem that he/she needs to survive and explain why. Pass the string to the student holding the card named by the first student. Continue until all the learners have participated.
5. Next, tell the learners, "Look at the links from your part to other parts of the ecosystem. We have formed a web of life and you are all closely related in this fragile web."
6. "Now imagine this – All the trees and plants on our club site had to be cut down to allow space for more trailers and parking spaces. The first thing that happened when the trees were cut was many animals that depended upon the trees fled or died."
7. Instruct learners that if they depended upon these plants in any way, then they need to drop their strings since the trees were cut down.
8. "Unfortunately, after the trees were cut down, topsoil was exposed to rain and eroded away - and eventually washed into the streams. The quality of the nearby stream, at least temporarily, is very poor. If you needed the stream for your survival, you need to drop your string."
9. Learners can see that with a few changes to the ecosystem, the web of life is damaged or destroyed.

Supplies

- Ball of yarn
- Species cards

Stage 4. Through the Linker Lens!

Procedure:

1. Learners use 'linkers' (toilet tissue tubes or PVC pipes) to view 'parts' of the school ecosystem.
2. Demonstrate how to use the tubes to locate items that are 'close to the ground as well as items that are far away or in the treetops. Explain with the following comments, 'You can see near or you can see far! And as you look closely, think about how each object is connected or 'linked' to something else on earth.'
3. Instruct learners to draw three of their findings and name or draw one thing that it is 'linked' to (needs to survive or that needs it to survive).
- 4.

Supplies

- Toilet tissue tubes or 6" PVC pipes
- Journal or paper
- colored pencils, markers, or crayons
- Pencils