

Depending On Each Other: Communities & Ecosystems

OBJECTIVE

To understand the delicate balance of an ecosystem and how each member of the community depends on each other to keep the web of life strong. To understand the interactions and interdependencies of the members of their own community and how they belong.

ACTIVITY OVERVIEW

Students will choose an ecosystem to study as a class. They will determine the inhabitants, the environment, how the food chain works, how the inhabitants interact and depend on each other, and other factors that make it a unique ecosystem. Then they'll compare their own community to find similarities and differences.

MATERIALS

- 🐾 Approximately ten untangled wire hangers
- 🐾 String or yarn
- 🐾 Velcro squares
- 🐾 Construction paper squares
- 🐾 Markers
- 🐾 Books on various types of ecosystems, like *Colorado Wildlife*, by Jeff Rennicke, which discuss the ecosystems in Colorado, such as the Plains, Woodlands, and the Subalpine Zone

ACTIVITY

Preliminary Discussion

- 🐾 What is an ecosystem?
- 🐾 Discuss the balance of plants and animals living in an ecosystem and how they depend on each other in nature.
- 🐾 Discuss different types of ecosystems, i.e. coral reefs, prairies, deserts, rainforests and woodlands.
- 🐾 Compare an ecosystem to the community where you live: Who lives in your community? How do these inhabitants depend on each other? What types of interactions occur?

Procedure

The class will vote on one ecosystem they want to study and divide into four groups to study the following categories pertaining to that particular ecosystem:

1. Inhabitants
2. Environment
3. Food Chain
4. How the inhabitants interact and depend on each other

Some of the information they find will overlap, but that's necessary in order to see the full picture. You'll then construct the "Web of Life." Taking several wire hangers, bend them into a large circle, twisting the ends together. Using several pieces of yarn or string, tie them onto the perimeter of the circle and pull the ends into the middle, tying those together at the center. You'll be making something similar to a spider's web. When the students have finished studying each category, they'll make pictures and write phrases on construction paper squares, in conjunction with the category they studied.

These squares will portray the various elements that make up that ecosystem. Apply Velcro to the back of the squares and have the students put them on the "Web of Life" so the order and placement of the squares tells the story of the ecosystem. Have each group discuss what they learned.

The next step in this lesson is to learn how the community in which we live is similar to the ecosystem that was studied. Divide into four groups again and ask each group to discuss the same topic, this time focusing on their own community. Emphasize that the interactions within a community are parallel to the interactions within an ecosystem. Everyone and everything is dependent on one another. Again, have the students make pictures and write phrases on paper squares that symbolize the various aspects of their community. Using a second "Web of Life," have the students place their squares on the web. Go through the same process of having the students discuss what they learned.

Post-Discussion

- 🐾 What did you learn about the interactions and interdependencies of all living things within an ecosystem?
- 🐾 How does the community in which we live parallel an ecosystem?
- 🐾 What happens when one strand of the "web" breaks? Who is affected? Discuss specific examples.
- 🐾 How do each of us affect what happens in our communities? Think of a time when your actions affected those around you.

EXTENSION ACTIVITY

Take a field trip to the Denver Botanic Gardens, Tropical Discovery at the Denver Zoo, or the Museum of Nature and Science, where you can see examples of various ecosystems.