

5. Creating a Mini-forest

(easily adapted for Junior Grades)

Source: Adapted from *One World, One Earth*. See Resources.

Description

Children work together in small groups to create a large classroom mural of a forest, thus becoming familiar with the components of a forest ecosystem. Through this activity and the follow-up discussion the connections within an ecosystem should be emphasized — nothing exists in isolation.

Background Information

Two centuries ago, almost all of southern Ontario was forested. Mature forest ecosystems of maple, beech, oak and pine dominated the landscape. Today, 94% of the original forest is gone, and with it the complexity of forest ecosystems and the tranquility that a large forested expanse could offer. Ecosystems are made up of interacting living and non-living parts that are dependent upon each other. Most students living in the city have little first-hand experience of exploring forests and all the pieces within the forest ecosystem puzzle.

Materials

- ▶ large mural paper
- ▶ pre-cut shapes of trees, butterflies, nests, birds, small green plants, deer, fox, squirrels, rocks, raindrops, rabbits, raccoons, beehives, frogs, ponds, rivers,
- ▶ clouds, sun, rainbows (older students could design their own shapes)
- ▶ leaves, sticks, pine cones previously collected from outside (by the teacher or the children)

Time Allotment

Introduction and mural: 25 minutes

Drama extension: 10 minutes

Discussion: 5 minutes

Teaching/Learning Strategies

1. Introduce the concept of forests to the students. What are forests? Where do we find them? What do we find in them? Discuss individuals' experiences in forests (camping, hiking etc.).
2. To help facilitate this activity, older students can help with the murals, in particular to pre-cut shapes.
3. For older primary/junior students, instead of pre-cutting shapes simply write the name of an appropriate forest component (tree, shrub, wildflower, birds, fox, deer, mosquito, sunlight, clouds, raindrops, etc.), on a piece of paper and give each student one or two specific things to draw before they are added to the mural.

4. Brainstorm a list of animals, plants and other elements (*rocks, water, soil, light*) that may be found in a forest.
5. In what ways do the elements of the forest depend on one another (*animals need the plants for food, birds live in the trees, the trees need sunshine to grow, etc.*)?
6. For older students introduce the term ecosystem and discuss how a forest is a system of natural parts working together.
7. Split the class up into 3 or 4 working groups.
8. Their goal is the cooperative creation of a mini-forest.
9. Each group will receive a selection of pre-cut forest shapes (to colour, if time permits) as well as some leaves and sticks.
10. The students will paste these items onto the large mural backdrop to create a forest scene. Teachers may help the students in placing the items so that they illustrate the connections between the parts of the ecosystem.
11. If time allows, ask student groups to make small skits for their mural, highlighting the interactions between the species, to present to the class.

Follow-up Discussion Questions:

- How many connections can we count in each mural?
- How are we connected to forests?
- Imagine the trees in this forest were cut down. How would the forest change?
- If we put a road through the middle of the forest, how would the forest change?

Extensions for additional classroom projects/activities

- Take a field trip to a local forest for observation and exploration.
- Engage in additional studies on deforestation and other problems facing forests.
- Build the forest dramatization into a larger drama activity. Children can develop scripts and act out how the different parts of the ecosystem are connected to one another, or how they could help the forest stay healthy.

Curriculum Connections: Clustering of Expectations

GRADE 1: SCIENCE & TECHNOLOGY—Needs and Characteristics of Living Things (2007)

- 1.1 identify personal action that they themselves can take to help maintain a healthy environment for living things, including humans
- OE 2 investigate needs and characteristics of plants and animals, including humans
- 2.2 investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth, and space, using a variety of methods and resources (*e.g., prior knowledge, personal experience, discussions, books, videos/DVDs, CD-ROMs*)
- OE 3 demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans

- 3.5 describe how showing care and respect for all living things help to maintain a healthy environment (*e.g., ...caring for the school and the schoolyard as an environment*)
- 3.6 identify what living things provide for other living things (*e.g., trees produce the oxygen that other living things breathe; plants such as tomatoes and apple trees and animals such as cows and fish provide food for humans and for other animals...*)

GRADE 1: SCIENCE & TECHNOLOGY—Materials, Objects, and Everyday Structures (2007)

- 3.6 distinguish between objects (including structures) and materials found in nature (*e.g., tree: sap*) and those made by humans (*e.g., toy: plastic*)

GRADE 1: SCIENCE & TECHNOLOGY—Energy in our Lives (2007)

- 3.5 demonstrate an understanding that humans get the energy resources they need from the world around them and that the supply of many of these resources is limited so care needs to be taken in how we use them

GRADE 2: SCIENCE & TECHNOLOGY—Growth and Changes in Animals (2007)

- OE 1 assess ways in which animals have an impact on society and the environment, and ways in which humans have an impact upon animals and the place where they live
- 1.2 identify positive and negative impacts that different kinds of human activity have on animals and where they live (*e.g., actions of animals lovers and groups that protect animals and their rights, the home owner who wants a nice lawn, people who visit zoos and wildlife parks, pet owners*), form an opinion about one of them, and suggest ways in which the impact can be minimized or enhanced
- 2.5 investigate the ways in which a variety of animals adapt to their environment and/or to changes in their environment, using various methods

GRADE 3: SCIENCE & TECHNOLOGY—Growth and Changes in Plants (2007)

- 1.1 assess ways in which plants are important to humans and other living things, taking different points of view into consideration, and suggest ways in which humans can protect plants
- 3.8 identify examples of environmental conditions that may threaten plant and animal survival (*e.g., ...changes in habitat because of human activities such as construction*)