

# What is a Forest?

## Objective

To define forest and forest ecosystem.

## Learning Outcomes

It is expected the students will:

- a) define forest and ecosystem; and
- b) understand that forests are one type of ecosystem.

## Method

Students discuss and make general observations about forests.

## Background

All forms of life require energy and materials for their existence. The biosphere receives almost all of its energy from the sun. The biosphere also contains the various chemical elements that are necessary for life. In the process of living, organisms use and give off energy while recycling materials. An ecosystem consists of a community of living organisms and their physical (soil, water, air) environment. The living and non-living elements of an ecosystem are connected through flows of energy and the cycling of chemical elements.

A forest is a common type of ecosystem. Forests consist of air, soil, water, nutrients and particular species of animals, birds, insects, micro-organisms, trees and other plant life. In the narrow technical sense, a forest is a common vegetation community dominated by trees and other woody shrubs, growing close enough together that the tree tops touch or overlap, creating various degrees of shade on the forest floor. The amount of understorey or vegetation depends on the forest type and age. Forests are also defined as areas of standing trees that are being managed or maintained to produce benefits such as timber, recreation and wildlife habitat.

Many types of forests are recognized around the world, including: coniferous, deciduous, ancient, boreal, climax, commercial, community, elfin, high, low, managed, natural, non-commercial, normal, old-growth, production, protection, second-growth, traditional, urban and virgin.

In the historical sense, forests were quite distinct from woods. In medieval times, woods were areas of forested land not reserved for the pleasure of the nobility. Forests, by contrast, were areas reserved for the nobility within which they could enjoy hunting, and such

## Activity Information

Duration: 45 minutes

Grade Level: K-12

Group Size: small groups

Keywords: biosphere, forest, ecosystem, organisms, successional, understorey

Key

Concepts: 1.1, 1.2, 2.2, 3.1, 3.2, 3.3, 3.4

Materials: none

Season: anytime

Setting: indoors or outdoors

Skills: communicating, discussion, interpretation, observation, reflection, writing

Subject: Science, Language Arts

## Try this journaling activity

Ask the students the following questions:

What I know about forests...

What I wonder about forests...

What I learned about forests...

areas were very strictly controlled under a system of laws and regulations. The etymological derivation of the word 'forests' is thought to be quite literally, a place designated by the King for the rest of wild animals, from the Latin *fera* and *statio*, meaning a safe abode or sanctuary. It is believed that this was later compounded to *foresta*.

Later on, the meaning of forests changed as the emphasis shifted away from retention of wildlife for hunting to more utilitarian wood values. A new era emerged in the late eighteenth century with the concept of a forest being an entity in need of management, and this attitude has evolved almost continuously through to the present day. Almost all the current controversies surrounding forests, virtually anywhere in the world, still hinge on the split between the forest as sanctuary and the forest as utilitarian resource.

### Procedure

1. Read the following paragraph to your students:

#### What is required to sustain life?

Imagine placing a single green plant in a glass jar with air, water, soil, and light from the sun. The plant could make its own food through photosynthesis (from water, carbon dioxide, and light). But eventually the plant would die as it used up all of the nutrients in the soil. It would die because it couldn't recycle the materials it needs to live; no green plant can decompose its own products into the inorganic compounds necessary for plant life. In fact, no single organism, population, or species is able to produce all of its own food and recycle all of its metabolic products. Life requires the interaction of several species in an environment that includes air and/or water to transport materials and energy.

From Environment Canada. 1993 A Primer on Environmental Citizenship  
Environmental Citizenship Series.

This is one of the fundamental principles of ecology: sustained life is a property of ecosystems, not organisms or species. An ecosystem therefore is defined as a community of living organisms and their physical environment.

1. A forest is a common type of ecosystem. Write the word 'forest' on the chalkboard or flip chart. In small groups have the students copy the word forest onto one piece of flip chart paper.
2. Have each group describe in words, drawings, or illustrations what they think a forest is and what elements it might include. Give each group 10-15 minutes.

- Let each group have a turn reporting what their group came up with either through the picture they created or through written descriptions.
- After each group has reported, provide them with some of the definitions from the background section of this activity. Compare the definition of a forest provided to what they included in their interpretation.

## Evaluation

- Define forest and give an example of a forest type (e.g. deciduous, coniferous, boreal).
- List characteristics of a forest.

## Extensions

- As suggested in the background, many of the current controversies regarding forests result from different definitions of the word 'forest'. Have students research a conflict regarding a local or provincial forest. Contact some of the individuals and groups involved and ask them for their definition of a forest. Compare and contrast your findings.
- Research the different forest type definitions listed in the background. What forest types are present in the students' ecoprovince or local area?

## Linking Activities

- Exploring Forests on page 4.
- Forests at Risk on page 179.
- Forests Around the World on page 162.

## References

- Dunster, Julian & Katherine. 1996. The Dictionary of Resource Management.
- Environment Canada. 1993 A Primer on Environmental Citizenship Environmental Citizenship Series.

