



**Science Unit: *Temperate Forest***

**Lesson 4: *Layers of the Forest\****

School year: 2004/2005  
Developed for: Lord Selkirk Annex Elementary School, Vancouver School District  
Developed by: Catriona Gordon (scientist), Gwynne Thompson and Donna Milligan (teachers)  
Grade level: Presented to grades 1 - 2; appropriate for grades K – 4 with age appropriate modifications.  
Duration of lesson: 1.5 hours for mural (not including student research or riddles)  
Notes: \*This lesson is based on B.C. Ministry of Forests. Forests in Focus, p. 15-17. "Looking at the Layers"

**Objectives**

1. Learn about the various layers of the forest (underground, forest floor, understorey, canopy), and the organisms which inhabit each of these layers by making a large forest mural.
2. Students will research different forest organisms and make up a riddle. Other students will try to guess the organism. Then students may place pictures of their animals on the mural in the correct layer.

**Vocabulary**

Forest floor: Lowest, above-ground layer of the forest, where we walk.  
Leaf litter: Layer of undecomposed organic material including fallen leaves, twigs, branches and dead animals on forest floor.  
Understorey: Layer under the canopy, consisting of smaller trees and shrubs.  
Canopy: Uppermost continuous layer of leaves and branches and tallest trees.  
Habitat: The natural environment of an organism, the place where it is usually found.

**Materials**

- Tempera paints (brown, green, orange, blue, yellow, black, white, red)
- Large and smaller paint brushes
- Paint trays
- Plastic tablecloths or sheets as dropsheets
- Two 30'-40' long sheets of white roll paper
- Sponges cut out into leaf shapes for leaf prints
- Forest animal index cards (with picture and name of forest animal)
- Magazines with pictures of forest animals to cut out (optional)
- Large posters depicting temperate rainforests

**In the Classroom**

**Introductory Discussion**

1. Briefly discuss layers of the forest and brainstorm as to what animals/plants live in each layer.



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2. Discuss how different food is placed on different shelves of the supermarket.
  - Where do the forest animals get their food? Which layer? Where do they live?
    - Soil (underground layer): worms, soil mites, fungi, moles
    - Forest Floor: nurse logs, mammals, slugs, humans, salamanders
    - Understorey: shrubs, small trees, huckleberries, screech owl, tree frog, robin
    - Canopy: tallest trees, osprey, eagle

### Science Activity/Experiment

#### Activity 1: Mural

3. Preparation before class: Use gym or lunchroom and set up dropsheets, paper and paints. Lightly tape both pieces of paper together to make the mural wider. Lightly sketch in trees, streams, snags and nurse logs. Remove tape and have mural done in two pieces, top half and bottom half separately so that children have more room to work. Make sure that when the two halves are put together that they will match up (e.g. tree trunks, etc.)
4. Have children paint mural. They may like to use sponges cut in leaf shapes, leaf stamps, stencils or real leaves to make leaf prints on the trees. When dry, hang murals in the hall and have riddles placed beside them so other students can read riddles and guess the animal.
5. Students can bring in nature objects to stick on the mural (e.g. cones, leaves, acorns, seeds).

#### Activity 2: Riddles

6. Students choose an animal index card with the name and picture of forest organism.
7. During library time or class time, students research forest animal and come up with 4-5 interesting facts on the animal.
8. Students write out a riddle on the animal. (e.g. "I am bigger than a person, I have black fur, I eat berries, salmon, etc.).
9. Each day, 2-3 students can read out their riddles and other students must guess what the organism is. The students may then cut out or paint their animal and stick it on the mural in the appropriate layer of the forest.

### Closure Discussion

Review the layers of the forest and the organisms that live in each layer.

### References

10. B.C. Ministry of Forests. 1999. Forests in Focus, Pages 15-17. ISBN 0-7726-3966-3.
11. <http://curry.edschool.virginia.edu/go/edis771/webquest2000/student/scolleenmuldoon/> [Hide and Seek in the Rainforest]

### Extension of Lesson Plan

Ask parents to assist with class mural, label inside pencil drawings of trees so students know where to paint.

Name \_\_\_\_\_

## Who Lives in the Temperate Rain Forest?

I do.

I am \_\_\_\_\_.

I have \_\_\_\_\_.

I live \_\_\_\_\_.

I \_\_\_\_\_.

I eat \_\_\_\_\_.

\_\_\_\_\_ eats me.

Who am I?

Name: Teacher's List

## Who Lives in the Temperate Rain Forest?

I do.

I am \_\_\_\_\_  
(black, green, brown, stripey, very small, very big, a mammal, insect, bird, reptile, nocturnal, etc.)

I have \_\_\_\_\_.  
(feathers, wings, 8 legs, 6 legs, 4 legs, no legs, antlers, antennae, fluffy tail, big ears, thick fur, sharp teeth, a beak, fins, spots, a wiggly body etc.)

I live \_\_\_\_\_.  
(in trees, in soil, in leaf litter, in a stream, on leaves, in snags, in nurse logs in a cave, in a den, etc.)

I \_\_\_\_\_.  
(fly, hop, swim, run fast, move slowly, hunt \_\_\_\_\_, catch \_\_\_\_\_, slither, growl, chatter, squeak, hang upside down, etc.)

I eat \_\_\_\_\_.  
(wood, bark, dead leaves, seeds, insects, mice, blood, small/big mammals, berries, cones, fungi, fish)

\_\_\_\_\_ eat me.  
(birds (of prey), fish, small/big mammals, preying insects, etc.)

Who am I?