



**Science Unit:** *Temperate Forest*

**Lesson 2:** *Pacific Spirit Forest Field Trip*

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 1 - 4 with age appropriate modifications.  
Duration of lesson: 3 hours  
Location: Pacific Spirit Park Entrance on West 4th Avenue, 1 km west of Blanca at East Canyon Trailhead (parking pullout)  
Notes: No toilets available, recommended 5:1 ratio for students to adults

### **Objectives**

1. Learn about the temperate rain forest ecosystem and the organisms that live in it, focusing on nurse logs and nurse stumps. Focus on decomposition, decay, and tree lifecycles, with dead, fallen trees providing nutrients, moisture and ideal habitats for new tree seedlings to grow.
2. Using magnifying glasses, look at fungi, mushrooms, pill bugs, sow bugs, earthworms, slugs and other organisms growing in/on nurse stumps.
3. Learn to identify major tree species.

### **Background Information**

Nurse logs/stumps are dead, decaying trees which have fallen to the forest floor. These logs are home to many living organisms, which help to decompose the wood. These organisms (slugs, pill bugs, sowbugs, fungi, springtails, bacteria, millipedes, mites, snails, carpenter ants) are called decomposers and are essential for cycling the nutrients in a forest ecosystem. Nurse logs are often home to plants and tree seedlings (especially hemlock), which find nutrients and moisture from the decaying log.

### **Vocabulary**

Forest: Large tracts of land covered by trees and undergrowth.  
Ecosystem: Community of plants and animals and its physical environment.  
Nurse log/stump: A dead, fallen log or dead stump which has started to decay and provides a habitat and food for many animals and plants.  
Decomposition: Process of breaking up into smaller parts.  
Lifecycle: The entire sequence of phases in the growth and development of any organism.  
Fungi: Organisms which have no leaves, flowers or true roots, and obtain food from living or dead organisms.



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### Materials

- Magnifying glasses
- Paper
- Cardboard to write on
- Pencils
- Backpacks/water/snack
- Raingear
- Tree identification cards
- Plastic bag for garbage
- First aid kit
- Toilet paper
- Digital camera
- Bell (to get students' attention)

### In the Classroom (before leaving on the fieldtrip)

#### Introductory Discussion

1. Review vocabulary.
2. Divide students into small groups with one adult per group. Students can name their group with a forest name (e.g., Bears, Cougars, Eagles, etc.).
3. Discuss safety and respect for organisms in the forest. Review the 3L rule, "look at it, learn from it and leave it".
4. Use quiet voices on the forest field trip and use "deer ears" to hear leader and forest animals. Bell will be used to gather students at the end of an activity.

#### Science Activity/Experiment

1. Before students arrive in forest: find 6-8 good nurse stumps/logs, which are hosts to many plants/animals.
2. Discuss how nurse stumps/logs were created (tree may have blown over in windstorm, been cut by early loggers). Divide students into small groups (3-4 students, 1 adult) and find a nurse log/stump. Using magnifying glasses students can look for invertebrates, plants, and fungi living in their nurse log. Students can draw what they see and label drawing. Come together as a class and discuss findings.
3. Go on a nature scavenger hunt to find objects on a list. Walk slowly and quietly through forest noticing birds, insects, slugs, etc. Find snags (dead standing trees) and look for signs of insects, woodpecker holes. Point out trees scarred by lightning. Look for birds' nests, spider webs.
4. Walk to clearing for snack and hand out tree identification cards for each group. Students then try to find matching trees.
5. Tell native story of how Douglas fir cones have mouse tails and back legs sticking out of the ends of the cone scales.
6. Time permitting, walk down to NW Marine Dr to stream rehabilitation site and discuss streams and salmon and their importance in forest ecosystem.
7. Walk back to trail head or have the bus pick up at the Spanish Banks West parking lot.

#### References

1. B.C. Ministry of Forests. 1999. Forests in Focus, ISBN 0-7726-3966-3. Pages.1-7, 15-16, 21-23.
2. B.C. Forestry Association. "Stump Sleuths" Forest Fun Series, FORED



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3. Brough, Sherman, G. 1998. Wild Trees of British Columbia. Pacific Educational Press.
4. Cornell, Joseph. 1998. Sharing Nature with Children. Dawn Publications.
5. <http://www.cpawscalgary.org/education/freeresources/lessons.html#5min> [Nature scavenger hunt]
6. <http://landscapesmag.com> [log hotel]
7. Schreiber, Anne. 1994. Log Hotel. Scholastic Books.

**Temperate Rain Forest  
Nurse Log / Nurse Stump Study**

Name \_\_\_\_\_

1. Draw your **nurse stump** or **log**.  
Draw and label 4 things **living** on your stump or log.  
(Use magnifying glasses to get a better look.)

2. What does your **nurse log** or **stump** feel like?

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3. Why are nurse logs (stumps) important?

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