

## Final Draft Unit Roadmap

**Teacher name:** Danielle Smith and Meghan Quinn

**Grade level:** 3<sup>rd</sup> and 4<sup>th</sup> grade

**Unit title:** Forest Ecosystem

**Length of Unit** The span of the school year, activities and lessons 2-3 times a month

### Essential questions

- What are examples of predators and prey in the forest ecosystem?
- How does the forest change through the seasons?
- What are of food chains in the forest ecosystem? Some examples of herbivores, omnivores, and carnivores?
- What are the sources of energy in the forest ecosystem?
- What are coniferous and deciduous trees? What is the difference?
- What lives on the forest floor?
- How do can people conserve natural resources?
- What is an example of decomposition in the forest?

**Activities to support learning targets** (include source citations if commonly available or more detailed information if teacher-created)

Hands-on Nature, Information and Activities for Exploring the Environment with Children, Edited by Jenepher Lingelbach and Lisa Purcell, 1999.

- Rotting log experiment: observe insects, catch insects, and look at beetle carvings.
- Walk to the town forest to observe: trees and leaves, [www.brainpopjr.com](http://www.brainpopjr.com)
- Mike Clough came is discuss predator and prey, herbivore, omnivore, and carnivore species, students examined skulls of animals living in the forest, and food chains, materials supplied by Mike Clough
- Susan Sawyer came in to do leave identification and leaf sketching.
- In the winter: Winter twigs, dress up as twig, Google maps of the town forest.
- Animal tracks use animal tracks on print stamps at Science Night
- How animals and plants survive in the winter, fly away or stay, bird survival, bird songs, materials supplied by Mike Clough
- Owl Pellets, birds of prey, visit with Mike Clough and live owl exhibit.
- April: Science Night, students will present project to the community, such as matching forest animals to their tracks, food chain mobiles, maps to

the town forest, Posters of the layers of the forest, and types of trees found in the town forest.

- Forest Floor, decomposition of leaves in the soil, showed a [www.brainpopjr.com](http://www.brainpopjr.com) video
- Spring Sketching with Susan Sawyer, students sketching different types of red maple,

**Supporting resources** (websites, book titles, videos, human resources, etc. This is where you document the hours you have or will use content specialist support!)

\*does not include travel time

Susan Sawyer-leaf sketching = 2 hours/ 1 hour per class

- Spring sketching = 2 hours/ 1 hour per class

Mike Clough-animal skulls = 1 hour

-Owl = 2 hours

-Song birds = 2 hours

Joanne Pi-Walk to town forest = 1.5 hour

Books: Hands-on Nature, Information and Activities for Exploring the Environment with Children, Edited by Jenepher Lingelbach and Lisa Purcell, 1999, Wild Times Magazines, Scott Foresman Life Science leveled readers by Donna Watson, and Whose Tracks are these by Jim Nail.

4<sup>th</sup> grade: Forest/River Quest field Trip = all day, 5 hours

Websites: brainpopjr,

**Assessments of learning** (how will you document student learning and assess whether students can answer your essential questions and have achieved target GE/GSEs?)

Both 3<sup>rd</sup> and 4<sup>th</sup> grade:

Use journal writing and sketches to gather understanding

Use a vocabulary assignment to see if they understand the meaning of a word by writing its meaning, using it in a sentence, and drawing a picture

3<sup>rd</sup> grade: Students will share their reports a forest animal they have studied. This will include where the animal lives, what it eats, and other additional information.

4<sup>th</sup> Grade: Town forest maps, types of trees in the forest posters, food chain mobiles, and layers of the deciduous and coniferous forests posters.

[www.googleearth.com](http://www.googleearth.com)

Labs - Recording of observations from hands on investigations of animal skulls, owl pellets, rotting logs, leaf dichotomous key, and forest floor scavenger hunt.

**4<sup>th</sup> grade:** NH Animal project, forest test, food chain mobile

**A FEW Key GEs/GSEs you'll assess** (include both content and process learning targets)

S:LS1:4:2.3 Identify and explain how the physical structures of an organism (plants or animals) allow it to survive in its habitat/environment (e.g., roots for water; nose to smell fire). [LS1(K-4)FAF-4]

S:LS1:4:2.4 Identify the basic needs of plants and animals in order to stay alive

S:LS2:4:1.1 Describe how the nature of an organism's environment, such as the availability of a food source, the quantity and variety of other species present, and the physical characteristics of the environment affect the organism's patterns of behavior.

S:LS2:4:1.2 Describe the interaction of living organisms with nonliving things.

S:LS2:4:2.1 Recognize that the transfer of energy through food is necessary for all living organisms and describe the organization of food webs.

S:LS2:4:2.2 Recognize that energy is needed for all organisms to stay alive and grow or identify where a plant or animal gets its energy. [LS2(K-4)SAE-5]