



## Grade 7 Science

### *Unit 1: Interactions within Ecosystems*

Ecosystems are comprised of both living and non-living things. Some ecosystems can be very large and cover vast areas of Earth. Other ecosystems, such as a small pond or a rotting log, can be localized to a very small area. Each ecosystem can be described by the types of organisms that live there and by the physical (non-living) conditions that exist there. The interactions between the organisms and the physical conditions work to create the ecosystem. By the end of grade 6, students have learned that the variety of living things on earth, as well as the places in which they live, are seemingly endless. Through their study of the concepts in this unit, students will further refine their understanding of the places in which organisms live and how the interactions between living and non-living things create these special living spaces as well as how humans can affect these spaces.

### *Specific Curriculum Outcomes*

209-1 Carry out procedures controlling the major variables to study the effect of temperature on solubility.

306-1 Describe how energy is supplied to, and how it flows through, a food web.

306-2 Describe how matter is recycled in an ecosystem through interactions among plants, animals, fungi and microorganisms

306-3 Describe interactions between biotic and abiotic factors in an ecosystem

### *Suggested Teaching and Learning Strategies*

Use the Planktology section of the [Oceanography and Planktology Presentation Resource](#), the [Newfoundland Plankton Resource](#) and the mussel life cycle section of the [General Aquaculture Presentation Resource](#) to learn about the plankton life cycle as well as the mussel life cycle and how they are connected. A field trip can be made to collect and observe plankton using the tools made in some of the activities. Then complete the activities below.

- [Energy Flow of a Mussel Farm Activity](#)
- [Plankton Net Activity](#)

- **Plankton Viewer Activity**
- **Aquascope Activity**

Using the **general aquaculture presentation** mussel and salmon life cycle sections learn about the different species and production cycles.

As an overall activity not pertaining to any SCO if tools are available:

- **Mussel Meat Yield Activity (important for the mussel aquaculture industry)**
- **Mussel Dissection Activity**
- **Salmon Dissection Activity**
- **Mussel and Salmon Life Cycle Card Games Activity**

**Other activities** that can be incorporated into the teacher's repertoire:

- **Aquaculture and Fisheries Trivia**
- **Make an impression of a fish activity**
- **Hypothesis in Science activity**
- **Husbandry techniques and recording data activity**
- **Designing fish and fish anatomy activity**
- **Backyard fish farming techniques**

**Videos** about aquaculture and habitats:

- Videos on mussel farming
- Videos about sustainability in salmon farming
- Salmon farming video
- Virtual dissection of a salmon
- Seaweed video – Integrated Multi-Trophic Aquaculture