

Alberta Climate Warriors Curriculum Connections

Science 7

GRADE 7

Unit A: Interactions and Ecosystems (Social and Environmental Emphasis)

Overview: Ecosystems develop and are maintained by natural processes and are affected by human action. To foster an understanding of ecosystems, this unit develops student awareness of ecosystem components and interactions, as well as natural cycles and processes of change. Building on this knowledge, students investigate human impacts and engage in studies that involve environmental monitoring and research. By reflecting on their findings, students become aware of the intended and unintended consequences of human activity, and recognize the need for responsible decision making and action.

Focusing Questions: How do human activities affect ecosystems? What methods can we use to observe and monitor changes in ecosystems, and assess the impacts of our actions?

Key Concepts

The following concepts are developed in this unit and may also be addressed in other units at other grade levels. The intended level and scope of treatment is defined by the outcomes below.

- interactions and interdependencies
- environmental monitoring
- environmental impacts
- producers, consumers, decomposers
- nutrient cycles and energy flow
- species distribution
- succession
- endangered species
- extinction
- environmental management

Outcomes for Science, Technology and Society (STS) and Knowledge

Students will:

1. Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
 - illustrate how life-supporting environments meet the needs of living things for nutrients, energy sources, moisture, suitable habitat, and exchange of gases
 - describe examples of interaction and interdependency within an ecosystem (*e.g., identify examples of dependency between species, and describe adaptations involved; identify changing relationships between humans and their environments, over time and in different cultures—as, for example, in aboriginal cultures*)