Science 7 Interactions Within Ecosytems Unit

Big Idea: We are all connected

Outcome:

IE7.2 Observe, illustrate and analyze living organisms within local ecosystems as part of interconnected food webs, populations and communities.

Observe 🡪 living organisms

Illustrate 🡪 living organisms

Analyze 🡪 living organisms

Understandings:

 That life is organized and linked in an ecosystem and everything impacts everything else.

 That we need to treat the environment with respect because it has ramifications for every other

 organism.

 That ecological data illustrates interactions and can tell us about the health of an ecosystem.

 That there are Canadian groups that support scientific research and conservation of ecosystems.

 That there are various ways to collect, compile and interpret data

Essential questions:

1. How are living and non-living components linked in an ecosystem?
2. How do we conduct a respectful field study? Why should we show respect?
3. What does ecological data tell us?
4. What groups support scientific research and conservation of ecosystems?

Students need to know:

 -the ecological organization of life (species, population, community, ecosystem, biome,

 biosphere)

 -ecosystem examples (biotic/abiotic)

 -how to conduct a respectful field study and what one is

 -which instruments are available, what they do, so they can choose the right one (magnifying

 glass, thermometer, light meter, hand-held microscopes, digital camera)

 -how to graph or make tables for data

 -see other observations of ecosystems (video/tv) OR view examples of food chains and webs

 -what producers, consumers, decomposers, herbivores, omnivores, carnivores are

 -how to make a food web

 -how to create table (key) and compile data

 -what Canadian organizations support Scientific research of ecology

And be able to:

 -illustrate the ecological organization of life

 -provide examples of ecosystems

 -conduct a field study

 -show respect

 -examine biotic and abiotic components

 -choose instruments to observe components

 -compile and display ecological data

 -identify strengths and weaknesses of different methods of collecting and displaying data

 -classify organisms

 -interpret interdependence

 -construct a classification key

 -provide examples of organization in Canada that support ecological research