INTERACTIONS

Relationships

Bioinvasion: Species introduced into an ecosystem they are not native to.

Competition: organisms compete for food, water and space within an ecosystem.

Predation: organisms seeking out other organisms for food. Often referred to as Predator-Prey.

SUCCESSION

Succession
(Life begins anew)

Primary Succession: where no living organisms lived before.

Secondary Succession: occurs when a community has been destroyed or disturbed.

A **climax community** is a stable community with diverse populations of species

IMPACTS

Human Impacts
On Ecosystems

Habitat Destruction

Chemical Use

Hunting

Garbage

Pollution

STATUS

Status and Protection of Species

Extinction: none of a species is left on Earth.
Extirpation: none of a species is left within an area where many existed previously.
Endangered: individual numbers of a species is critically low.
Threatened: number of individuals of a species is declining rapidly.

COSEWIC: CDN committee that monitors species numbers and recommends species 'at risk' status.

ECOLOGICAL FOOTPRINT

Ecological Footprint

How much energy, materials, and land we need (including the land needed to dispose of our waste). This is then converted into an estimate of the total amount of land required to support each one of us.

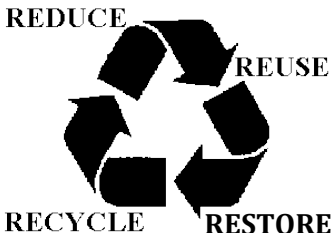
The average Canadian ecological footprint is approx. 7.7 hectares.

Earth can support 1.7 hectares per person

SUSTAINABILITY

Sustainability

Resource use and restoration, for as long as possible, to sustain life



MONITORING

PHYSICAL
Changes in the landscape

ENVIRONMENTAL
Changes in climate, temperature and weather patterns

CHEMICAL
Quality of land, air and water

BIOLOGICAL
Changes in living resources and populations of these resources

NICHE

Within an ecosystem individual members of that ecosystem assume roles that interact with the biotic and abiotic parts of that ecosystem to ensure its survival.

To determine the **niche** of an individual organism you must consider what nutrients it consumes, and how it interacts with other organisms, or the abiotic parts of that ecosystem, to get the nutrients it needs.

BIOACCUMULATION

Bioaccumulation: increases in concentrations as pollutants enter and move up the food chain.

Biomagnification: The greatest concentration is at the top of the food chain where higher level consumers accumulate these substances.

Pollutants move into the environment from the point source and are dispersed and deposited, because they cannot be broken down, stored or recycled quickly.