

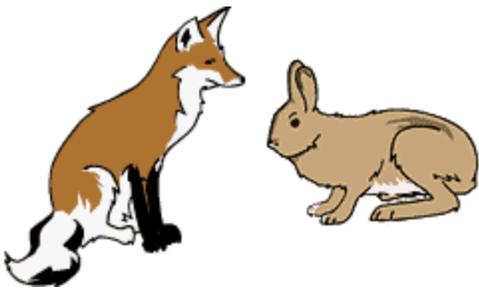
Biodiversity of an ecosystem

An **ecosystem** can be a forest, an ocean, a desert, a large lake, and so on. The ecosystem consists of all living things (animals and plants) and all non-living things (water, soil, sunlight, temperature) within the many habitats, and all the relationships that exist among them. Every single component of an ecosystem has a role to play within the ecosystem.

Biodiversity encompasses all the various ecosystems. It represents all the different animals and plants and the different places (habitats) where they live. There are millions of things going on in an ecosystem. The possibilities are endless and the components are inter-related. One component could be indispensable to another.

Example:

- *A small bark beetle (insect) eats the wood of a spruce tree and hides there;*
- *A woodpecker perches on the spruce tree looking for bark beetles to eat;*
- *A squirrel builds a nest in the middle of an old, hollow sugar maple;*
- *That same squirrel races along the branches of a red oak, a white pine, then a beech in search of food.*
- *The needles of a hemlock harvests solar energy;*
- *A hare seeks shelter among some young fir trees, hiding from a fox in a large yew bush surrounded by hawthorns;*
- *Geese feed on aquatic plants near the shore of a small lake;*
- *A fox hides in the high grasses to attack the geese.*



Fox

Snowshoe hare



The **food chain** is another example of the relationships that exist between the various components of the ecosystem.

To understand a food chain, you simply have to know who eats whom.

Example : *The nutrients in the soil are taken in by the roots of a **beech tree**, whose nuts are gathered by a **squirrel** or a **hawk**, which are shot by a hunter.*

