

2.5 Food Chains and Food Webs

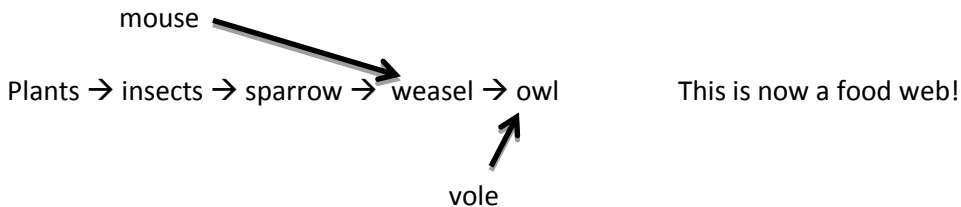
Plants → insects → sparrow → weasel → owl

is an example of a food chain

→ means 'is eaten by'

Food Chain = a sequence of organisms, each feeding on the next, showing how energy is transferred from one organism to the next.

But...weasels also like to eat mice. So we add that in. And owls eat voles (also a rodent). So we add that. Now it looks like:



Food Web = a representation of the feeding relationships within a community.

Trophic Levels + Other special words

A **trophic level** is an energy level. A producer creates (produces) food. These are the green plants. A consumer eats (consumes) other food. These are everything except green plants.

Red fox = consumer = 4th trophic level

↑
Snake = consumer = 3rd (tertiary) trophic level

↑
Mouse = consumer = 2nd (secondary) trophic level

↑
Grass = producer = 1st (primary) trophic level

The green plants are the 1st energy level. Whatever eats the green plant is the 2nd energy level, in this case it is the mouse. Etc. etc. Just count up the food chain.

****Note – energy is lost** as you move up the chain. Remember, every cell in your body undergoes 'cellular respiration' to create energy. You and every living thing, uses some of this energy in just living (energy to walk, to think, to grow, to heal, to move etc.). So...the amount of energy diminishes (gets smaller) as you go up the food chain. For this reason, food chains rarely have more than 5 levels. There just isn't enough energy left to support the larger consumers.

There are 3 kinds of consumers:

- Herbivore = something that eats just plants
- Carnivore = something that eats just animals (meat)
- Omnivore = something that eats plants & animals

Also:

Aquatic = water

Terrestrial = land