

Introduction to Ecosystems



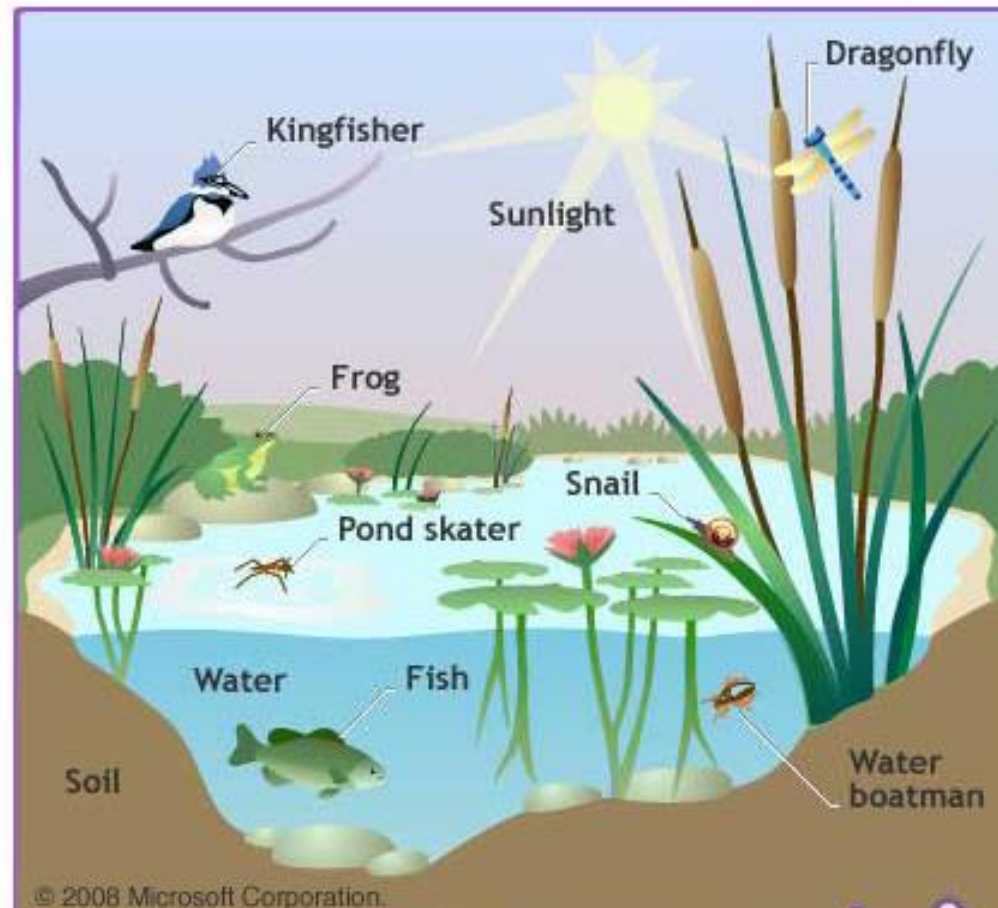
Ecology

- **Ecology** is the study of the relationships between biotic and abiotic factors



What is an ecosystem?

- An ecosystem is composed of all the factors (both biotic and abiotic) and interactions in an environment.



Biotic vs. abiotic

- **Abiotic** factors of an ecosystem are non-living.



rocks



water



air



temperature

- **Biotic** factors of an ecosystem are living.



plants



birds



bugs



animals

Biotic parts of an Ecosystem

- Living things are either consumers or producers.
- Producers make (or produce) their own food. Example: plants
- Consumers need to eat (or consume) their food. Example: animals



Consumers

- There are several different kinds of consumers:

- **Herbivores**: eat plants only

Example: deer



- **Carnivores**: eat animals only

Example: wolf



- **Omnivores**: eat plants and animals

Example: raccoon



- **Decomposers**: break down dead things

Example: bacteria and fungus

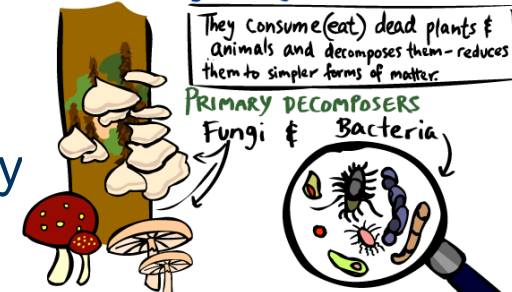


Decomposers

- **Scavengers:**
 - eat dead animal and plant matter
 - **Detritivores :**
 - Eat detritus (decomposing matter)
 - Ex. crabs, earth worms, insects that eat decaying wood
 - **Saprotrophs :**
 - break down dead or decaying organisms outside of their body and consume what they need.
- * **Humus:** Soil material made of plant and animal matter undergoing decomposition.



DECOMPOSERS



Food Chain

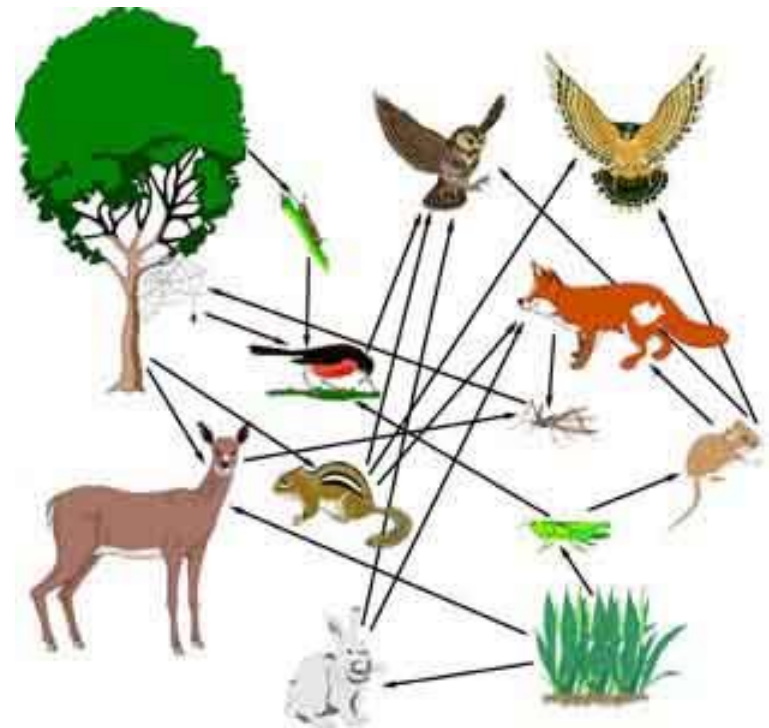
- A food chain is a single chain of organisms (living things) that eat each other. The chain ALWAYS starts with a producer.



Grass → Rabbit → Fox

Food Web

- A food web is made out of many food chains in an ecosystem.



Questions to think about...



- 1) What does “bio” mean?
- 2) Are people herbivores, omnivores, or carnivores?
- 3) What is more realistic – a food chain or a food web?
- 4) Why does a food chain always start with a producer?

Vocabulary

- Ecosystem
- Abiotic
- Biotic
- Producer
- Consumer
- Herbivore
- Carnivore
- Omnivore
- Decomposer
- Food chain
- Food web

**Add these
words to
your
vocabulary
list!**

