

USA #8 Study Guide

1. Where an organism lives is called its habitat. Loss of habitat is a major cause of extinction, but people can help endangered populations by safeguarding their habitats.
2. When people introduce a new species to an area, it is called an *invasive* species. Invasive species sometimes out-compete native species for resources. The population of the native species will decrease and might become extinct.
3. Community interactions can be divided into predator-prey relationships, and symbiosis. In a predator-prey relationship an organism kills another organism and eats it. There are three kinds of symbiosis:

mutualism +/+

commensalism +/-

parasitism +/-

Unlike a predator-prey relationship, parasitism does not usually result in the death of an organism.

4. Food chains show the flow of energy from producers, to consumers, to decomposers. Arrows between the organisms point in the direction the energy moves.
producer → consumer → decomposer
Producers are typically plants and algae, organisms that do photosynthesis. Producers use the energy in sunlight to put carbon dioxide gas molecules together into high energy sugars.
Consumers eat other things to obtain energy, and include herbivores, predators, and scavengers.
Decomposers are bacteria and fungi that get their energy from feces and dead organisms.
5. The ultimate energy source for every land animal is the Sun. Sunlight energy enters the ecosystem through plants via photosynthesis, herbivores eat the plants, and carnivores eat the herbivores.
6. Decomposers are necessary for every ecosystem. Decomposers break down feces and dead organisms into simpler nutrients that producers (plants) require.
7. Pollinating insects and flowering plants benefit each other. The pollinating insect gets energy from the flower, and the flower is better able to spread its pollen to other flowering plants for sexual reproduction.
8. Predators like wolves and sharks have a positive effect on an ecosystem. Without these top predators the population of herbivores will increase quickly past their carrying capacity; there will not be enough resources to support the herbivore population.
9. A food web is many food chains connected together. Food webs show the flow of energy through a community, from producers, to consumers, to decomposers.
10. To combat invasive species, governments sometimes allow hunters to hunt the invaders. Hunters can help an ecosystem by decreasing the population of invasive species. This allows native species to rebound and preserves local biodiversity.