

Lesson 2: How do organisms interact?

Vocabulary

competition when two or more species in an ecosystem must use the same limited resources

parasite an organism that lives on or in another organism, helping itself but hurting the other organism

host an organism that is harmed by a parasite

Change in Ecosystems

Changes help keep ecosystems in balance. For example, animals use the oxygen in an ecosystem. But new plants put oxygen back into the ecosystem.

Populations in an ecosystem change. Organisms need resources, like food and water. Think about the chipmunk at the beginning of the chapter. Chipmunk populations grow where there is a lot of food. More food, water, and space are needed when a population grows. A larger chipmunk population may use up many of these resources.

Each chipmunk gets less food, water, and space when there are fewer resources. Some chipmunks will die. Others will move to a new place. This means there are more resources for the chipmunks that stay. Then the population increases.

Competing and Sharing

Populations can grow when they get what they need. But populations that live in the same ecosystem may need the same resources. This is called **competition**. Organisms have to compete for resources. Organisms that compete well live longer and have offspring.

Populations compete for living space. Different plants compete for light and water. Birds compete for the same place to build a nest. Foxes and owls compete for animals to eat.

Animals also behave in ways to avoid competition. For example, both hawks and owls eat some of the same animals. Hawks and owls hunt for food at different times to reduce competition. Hawks hunt during the day. Owls hunt at night.

Living in groups can make it easier for animals to get food or stay safe. Wolves hunt for animals like deer. Wolves work together to hunt a deer. Deer travel in groups to protect themselves. This makes it hard for wolves to attack any one deer.

Living Side by Side

Two different organisms can live together. Sometimes living together can help both organisms. For example, fungi and algae live together on rocks. The algae give sugar, food, and water to the fungi. The fungi protect the algae. They guard the algae from too much sun and very warm weather.

Sometimes living together helps one organism but hurts the other. The organism that is helped is called a **parasite**. Parasites live on or in another organism, called the **host**. The host is harmed by the parasite. A parasite uses its host for food. For example, mistletoe is a parasite plant. It grows on oak trees. Mistletoe takes food and water away from its host tree.

Lesson 2 Checkpoint

1. What are two behaviors that help animals to avoid or reduce competition?

2.  **Cause and Effect** Identify the cause and effect of deer traveling in groups.

3. What is a parasite?

4. What might happen to the parasite if its host were to die?
