

Populations and Communities ▪ Section Summary

Living Things and the Environment

Guide for Reading

- What needs are met by an organism's surroundings?
- What are the two parts of an organism's habitat with which it interacts?
- What are the levels of organization within an ecosystem?

All the living things, or **organisms**, and nonliving things that interact in a particular area make up an **ecosystem**. Organisms live in a specific place within an ecosystem. **An organism obtains food, water, shelter, and other things it needs to live, grow, and reproduce from its surroundings.** Some organisms make their own food in a process called **photosynthesis**. Other living things depend on plants and algae for food. The place where an organism lives and that provides the things the organism needs is called its **habitat**.

An organism interacts with both living and nonliving parts of its habitat. The living parts of an ecosystem are called **biotic factors**. The nonliving parts of an ecosystem are called **abiotic factors**. Abiotic factors include water, sunlight, oxygen, temperature, and soil.

A **species** is a group of organisms that are physically similar and can mate with each other and produce offspring that can also mate and reproduce. All the members of one species in a particular area are referred to as a **population**. All the different populations that live together in an area make up a **community**. **The smallest level of organization is a single organism, which belongs to a population that includes other members of its species. The population belongs to a community of different species. The community and abiotic factors together form an ecosystem.**

The study of how living things interact with each other and with their environment is called **ecology**. Ecologists, scientists who study ecology, look at how all the biotic and abiotic factors in an ecosystem are related. They study how organisms react to changes in their environment. Living things constantly interact with their surroundings, responding to changes in the conditions around them.