



# Interactions of Life

## Section 1 Living Earth

A. Biosphere—the part of Earth that supports \_\_\_\_\_

1. The \_\_\_\_\_ portion of Earth's crust, all the waters on Earth's surface, and the surrounding \_\_\_\_\_
2. Made up of different \_\_\_\_\_ that are home to different kinds of organisms

B. Ecosystem—all the organisms living in an area and the \_\_\_\_\_ parts of their environment

1. \_\_\_\_\_ is the study of interactions that occur among organisms and their environment.
2. A **population** is made up of all the organisms in an ecosystem that belong to the same \_\_\_\_\_.
3. A **community** is all the \_\_\_\_\_ in an ecosystem.

C. \_\_\_\_\_—the place in which an organism lives

1. Must provide the kinds of food, shelter, temperature, and \_\_\_\_\_ the organism needs to survive
2. Example: \_\_\_\_\_ are the woodpecker's habitat

## Section 2 Populations

A. Competition—two or more organisms seek the same \_\_\_\_\_ at the same time

1. Competition for food, living space, or other resources can \_\_\_\_\_ the population's size.
2. Competition is usually most intense between members of \_\_\_\_\_ species.

B. Population \_\_\_\_\_—indicates whether a population is healthy and growing

1. Population \_\_\_\_\_—the size of a population that occupies a specific area
2. Two ways to measure the \_\_\_\_\_ of a wildlife population
  - a. \_\_\_\_\_ method
  - b. \_\_\_\_\_ method
3. Elements that affect population size
  - a. \_\_\_\_\_—any living or nonliving feature that restricts the number of individuals in a population
  - b. **Carrying capacity**—the \_\_\_\_\_ number of individuals of one species that an ecosystem can support

**Note-taking Worksheet (continued)**

- c. \_\_\_\_\_ potential—highest rate of reproduction under ideal conditions
- d. \_\_\_\_\_ and \_\_\_\_\_ rates
- e. \_\_\_\_\_ of organisms into or out of an area

C. Exponential growth—the larger a population becomes, the \_\_\_\_\_ it grows

**Section 3 Interactions Within Communities**

A. \_\_\_\_\_—source of energy that fuels most life on Earth

1. Producers—organisms that use an outside energy source to make \_\_\_\_\_

- a. Most producers use the Sun and contain \_\_\_\_\_, a chemical required for photosynthesis.
- b. Some producers, found near volcanic vents on the ocean floor, use inorganic molecules as energy sources for \_\_\_\_\_.

2. Consumers—organisms that cannot make their own energy-rich molecules; they obtain energy by \_\_\_\_\_.

- a. Herbivores, such as deer and rabbits, eat \_\_\_\_\_.
- b. Carnivores, such as frogs and lions, eat \_\_\_\_\_.
- c. \_\_\_\_\_, such as pigs and humans, eat both plants and animals.
- d. \_\_\_\_\_, such as earthworms and bacteria, eat dead organisms.

3. Food chain—a model that shows the \_\_\_\_\_ among the organisms in an ecosystem

B. Symbiosis—any close relationship between \_\_\_\_\_

- 1. \_\_\_\_\_—a symbiotic relationship in which both species benefit
- 2. Commensalism—a symbiotic relationship in which one organism \_\_\_\_\_ and the other is \_\_\_\_\_
- 3. Parasitism—a symbiotic relationship in which one organism \_\_\_\_\_ and the other is \_\_\_\_\_



**Note-taking Worksheet (continued)**

- C. \_\_\_\_\_—an organism's role is its environment, including its habitat and food, and how it avoids danger, finds a mate and cares for its young

1. Predator and prey

- a. \_\_\_\_\_—consumer that captures and eats other consumers
- b. \_\_\_\_\_—the organism that is captured by the predator
- c. Predators limit the size of prey populations, \_\_\_\_\_ the number of different species that can live in an ecosystem

2. \_\_\_\_\_ actions improve a species' survival.

- a. Example: one deer warns the others of \_\_\_\_\_ in the area.
- b. Example: individual \_\_\_\_\_ perform different tasks required for the survival of all.