

## STUDY GUIDE 14.5: Ecological Succession

### KEY CONCEPT

Ecological succession is a process of change in the species that make up a community.

### VOCABULARY

succession	pioneer species
primary succession	secondary succession

**MAIN IDEA:** Succession occurs following a disturbance in an ecosystem.

1. What is ecological succession?

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2. Fill in the chart below with a description and simple sketch of the four main steps of primary succession. Include the amount of time it takes for each stage of this process.


3. Fill in the chart below with a description and simple sketch of the four main steps of secondary succession. Include the amount of time it takes for each stage of this process.


### Vocabulary Check

4. What is the difference between primary and secondary succession?

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5. Use your knowledge of the word *pioneer* to write a definition for the term *pioneer species*.

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## Section Quiz 14.5: Ecological Succession

Choose the letter of the best answer.

- \_\_\_\_\_ 1. A sequence of biotic changes that regenerate or create an ecological community is known as
- migration.
  - factors.
  - succession.
  - erosion.
- \_\_\_\_\_ 2. The development of an ecosystem in an area that has been covered by lava begins with the
- breakdown of rock by pioneer species.
  - migration of animals.
  - growth of trees and shrubs.
  - appearance of soil.
- \_\_\_\_\_ 3. Lichens and mosses that first live in uninhabited areas are examples of
- non-native species.
  - pioneer species.
  - primary species.
  - secondary species.
- \_\_\_\_\_ 4. Secondary succession is most likely to occur
- after a forest fire.
  - with pioneer species.
  - if a glacier shrinks.
  - on a new volcanic island.
- \_\_\_\_\_ 5. Which of the following statements about primary succession is true?
- It begins with a climax community.
  - Small mammals are first to inhabit the area.
  - It only occurs after glaciers retreat.
  - It begins with bare rock.

## REINFORCEMENT 14.5: ECOLOGICAL SUCCESSION

**KEY CONCEPT** Ecological succession is a process of change in the species that make up a community.

Each time an ecosystem is damaged, the process of succession re-forms the area. **Succession** is the sequence of biotic changes that regenerate a damaged community or create a community in a previously uninhabited area. Succession is a process with no distinct beginning or end. In a community, succession is always occurring.

After a volcano erupts, the molten lava hardens and leaves behind nothing but solid rock. **Primary succession** is a type of succession that begins with a previously uninhabited, barren landscape. **Pioneer species** are the first organisms that live in this type of habitat. Pioneer species begin the process of breaking down the rock into soil that can hold plants. This process may take hundreds of years, but eventually the soil produced by pioneer species will give rise to entire ecosystems of plants, animals, and other organisms.

More often an environment had many different plants and animals, but a disaster such as a fire or flood may have destroyed much of the habitat. **Secondary succession** is the reestablishment of a damaged ecosystem in an area where the soil was left intact. The dynamic processes of succession are always changing the face of an ecosystem.

1. What is succession?

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2. Why are pioneer species so important for primary succession?

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3. Explain why succession is a never-ending process.

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