



# Ecosystems

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Grade: Grade 5

## Part A: Multiple Choice

Circle the best answer for each question.

1. After a volcanic eruption covers an island in bare rock, which organisms are most likely to appear first?

- A) Large trees that can grow quickly in volcanic soil.
- B) Lichens and mosses that can grow on bare rock and begin forming soil.
- C) Deer and rabbits that move in from nearby islands to graze.
- D) Predators like wolves that establish territory on the empty land.

2. A forest is destroyed by a wildfire, but the soil and seeds remain intact. What type of succession will occur?

- A) Primary succession, because all life was destroyed by the fire.
- B) No succession, because forests cannot recover after fire damage.
- C) Secondary succession, because soil and seeds are still present to support regrowth.
- D) Primary succession, because fire always resets an ecosystem to bare rock.

3. Ecosystem A has 50 plant species and Ecosystem B has only 5 plant species. A new plant disease arrives that kills one species. Which ecosystem is more resilient and why?

- A) Ecosystem B, because with fewer species the disease spreads more slowly.
- B) Both are equally resilient because one lost species has the same effect in either system.
- C) Ecosystem A, because losing one out of 50 species has a smaller impact on the food web.
- D) Ecosystem B, because the remaining four species will quickly fill the gap.

4. Pioneer species like lichens help start primary succession. Why are they so important to the organisms that come later?

- A) They provide shade so larger plants do not overheat in the sun.
- B) They break down rock and create the first thin layer of soil that other plants need.
- C) They attract large herbivores that spread seeds across the bare rock.
- D) They produce large amounts of fruit that feed the animals arriving later.

## Part B: Fill in the Blank

Write the correct answer on each line.

1. The gradual process by which an ecosystem changes and develops over time is called \_\_\_\_\_.
2. \_\_\_\_\_ succession begins on bare rock or land where no soil exists yet.

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