Name _____

Date _____

Lesson Quick Study

Lesson 2 - How Do Ecosystems Change Over Time?

1. Inquiry Skill Practice–Observe

By observing the changes that occur in models, scientists can infer what changes might occur in nature. In the Investigate, you built and observed a model of a pond. What would you expect to observe in a real pond after several years of drought?

Possible answer: I might observe that the pond is smaller, with less water as the water evaporates. It might be filled with soil, and plants might grow over it. The pond might disappear eventually.

2. Use Vocabulary

Write a complete sentence that uses the word *succession* correctly.

Possible answer: A forest fire can cause secondary succession.

3. Reading Skill Practice–Cause and Effect

Focus Skill

Read the selection. Identify the causes and effects in this story of secondary succession.

When Mount St. Helens erupted in 1980, hot ash and mudflows destroyed the ecosystem. Nutrients from burned plants enriched the soil. Many seeds were buried deep in the soil. Soon the mountain was covered with wildflowers. Later, shrubs and then fir trees grew. The slopes are now the habitat of insects, birds, and other animals.

Possible answer: Cause: Mount St. Helens erupted. Effect: Ecosystem was destroyed. Cause: Nutrients from burned plants enriched soil. Effect: Seeds grew into wildflowers. Cause: Shrubs and trees grew. Effect: New habitat attracted animal life.

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4. Focus Skill Cause and Effect

Complete the graphic organizer below.

CAUSE	→	EFFECT
Lichen grows on bare rock.	→	A Soil begins to form.

Possible answers:

CAUSE	→	EFFECT
B The climate changes.	→	Succession occurs.
C Animals change the ecosystem.	→	
D New plants or animals are introduced.	→	

5. Critical Thinking and Problem Solving

List several ways people protect themselves during rapid changes in ecosystems.

Possible answer: People look out for forest fires in areas where they are a threat; weather satellites track hurricanes so that radio and TV stations can broadcast warnings when people need to move to safety; radar is used to detect thunderstorms and tornadoes so that radio and TV stations and sirens can advise people to take shelter.

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