2 Succession and disturbance – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	**Write it 3 times** (English)		
Ecological succession			
primary succession			
secondary succession			
pioneer species			
climax community			
keystone species			
indicator species			

Recall

In Part A you met biodiversity. Now see how ecosystems change and rebuild:

- After a fire or a landslide, plants slowly return.
- Some species matter far more to a community than their numbers suggest.

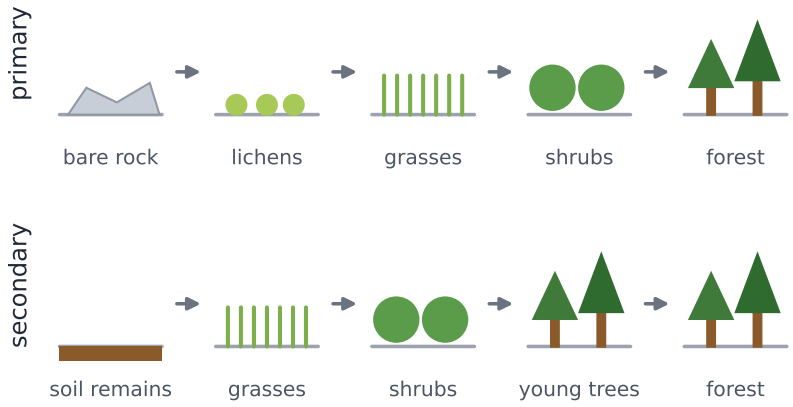
Each idea has a short worked example before the Practice.

New ideas

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1 Ecological succession

Ecological succession is the gradual, orderly change in a community over time.



primary: bare substrate (no soil) · secondary: soil remains ⇒ faster recovery

- **primary succession** starts on bare rock with **no soil** (after a glacier or lava) – very slow,
- **secondary succession** follows a disturbance that leaves the soil (after a fire or farming) – much faster.

2 Pioneers to climax

The first arrivals, **pioneer species** like lichens, slowly build soil. Over time the community develops toward a stable **climax community** .

3 Keystone species

A **keystone species** has an effect far larger than its numbers – remove it and the whole community can collapse (like sea otters that keep sea urchins in check).

4 Indicator species

An **indicator species** signals the health of an ecosystem by its presence or absence – lichens vanish where the air is polluted.

Watch out: primary succession is much **slower** than secondary succession, because it must first build soil from bare rock, while secondary succession already has soil to start from.

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Practice

Try these in order. The methods are all above.

2.1 State the difference between primary and secondary succession. [2]

2.2 Explain why primary succession is slower than secondary succession. [2]

2.3 Name a typical pioneer species and state what it does. [2]

2.4 State what a keystone species is. [2]

2.5 Explain how an indicator species can show that an ecosystem is polluted. [2]