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Warm-Up | Succession and Extinction

Lesson Objectives

By the end of this lesson, you should be able to:

- Identify and explain the stages of [ ] in an ecosystem.
- Identify factors that may disturb ecosystem [ ].
- Assess the importance of [ ] in an ecosystem.

Science Practice: Locate data on a [ ] and relate that data to a corresponding graph.

Words to Know

Fill in this table as you work through the lesson. You may also use the glossary to help you.

	a species at risk of becoming extinct
	the succession that occurs on surfaces where the soil remains after a disturbance
	a stable community that experiences little succession
	a species that has completely disappeared
	a species at risk of becoming endangered
	the planned management of natural resources to ensure sustainable use
	the succession that occurs on surfaces where there is no soil after a disturbance
	a gradual pattern of change that occurs in an ecosystem after a disturbance
	the first species to populate an area after a disturbance

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Slide 1

Lesson Question

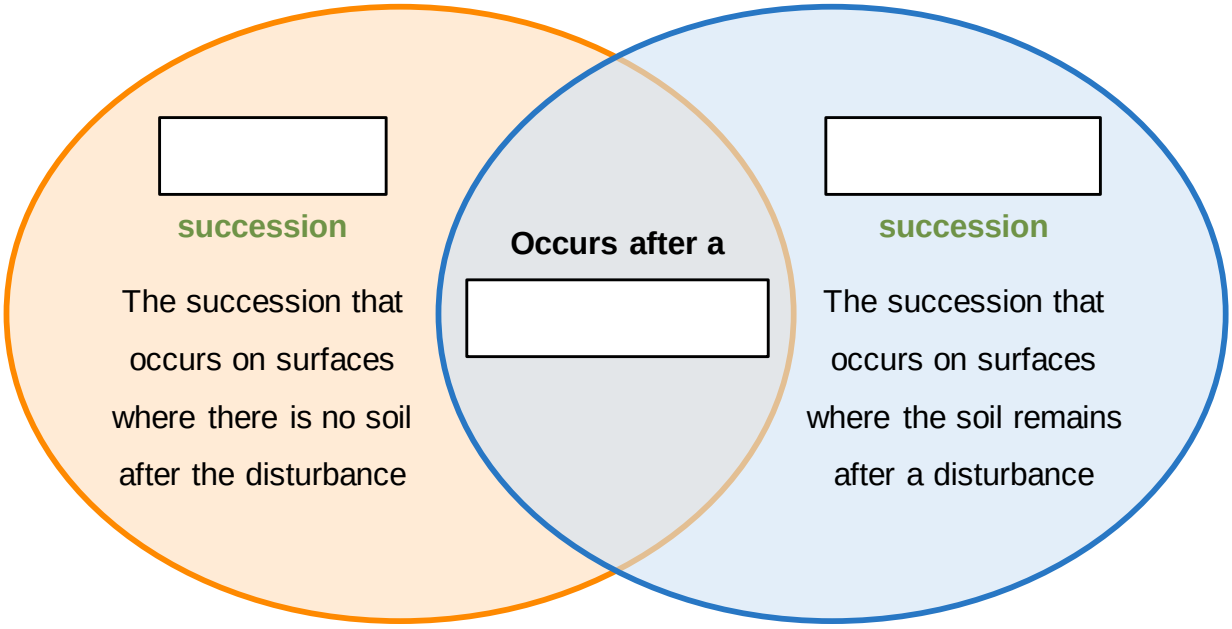
Slide 2

Changes in an Ecosystem

- _____ – a gradual pattern of change that occurs in an ecosystem after a disturbance
  - Ecosystem responds in predictable _____

Types of Succession

Complete the diagram.



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Slide 2

Primary Succession

- No [ ] after disturbance
- Causes
  - [ ] eruption
  - [ ] movement or melting

Secondary Succession

- Soil [ ] after disturbance
- Human and [ ] influences
  - [ ]
  - Clear-cutting
  - Climate change
  - [ ] species

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Slide 4

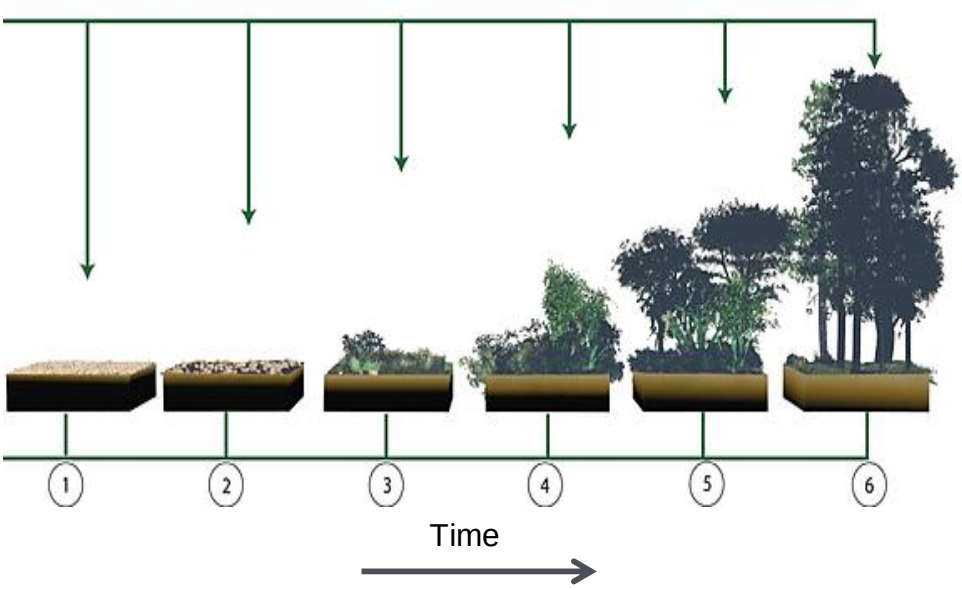
After a Disturbance

[ ] – the first species to populate an area after a disturbance

- Example: lichen

[ ] – a stable community that experiences little succession

Circle the pioneer species and climax community.



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Slide 4

Marine Succession

Whale fall community

- Whales die and fall to ocean [ ]
- [ ] feed on the carcass
- New [ ] feeds on remaining tissue
- [ ] enriches ocean sediment
- [ ] feed on oil in bones

Slide 7

The Importance of Biodiversity

- [ ] diversity: the variety of different species in a given area.
  - Maintains healthy [ ]
- [ ] diversity: the changes in the DNA that the individuals carry
  - Encourages [ ] of species
- Material [ ]
  - Provides raw [ ]

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Slide 7

Threats to Biodiversity

- _____ loss or fragmentation: the major threat to biodiversity
- _____ : the illegal hunting of wildlife
- _____ species: species that are brought from one ecosystem into another ecosystem where they are not native
- _____ : the introduction of harmful substances into the air, water, or land

Loss of Biodiversity: Species and Genetic Diversity

Loss of _____ diversity	Loss of _____ diversity
• Species rely on each other for _____ .	• Reduced options for mates leads to _____ .
• _____ of one species could affect many others.	• Species become susceptible to _____ .

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Loss of Biodiversity: Extinct, Endangered, and Threatened

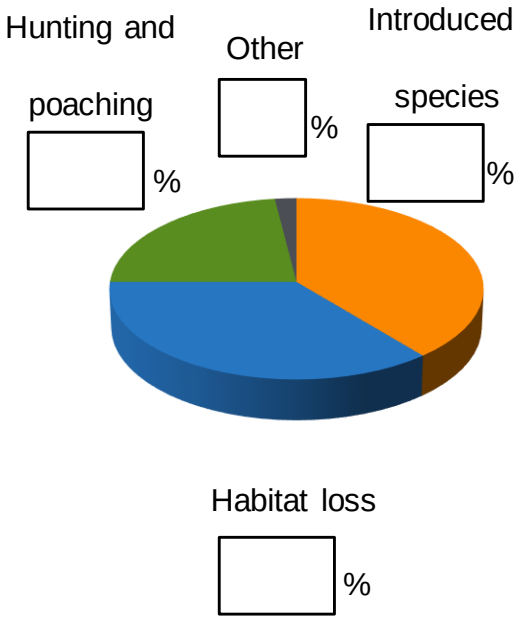
- An _____ is a species that has completely disappeared.
- An _____ is a species at risk of becoming extinct.
- An _____ is a species at risk of becoming endangered.

Threats to Biodiversity

REAL-WORLD CONNECTION

Complete the labels on the graph.

Causes of Extinction



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Slide 9

Protecting Biodiversity

[ ] – the planned management of natural resources to ensure sustainable use

- 1800s – National [ ]
- 1900 – [ ] Act
- 1973 – Endangered [ ] Act
- 1975 – [ ]: the Convention on the International Trade in Endangered Species

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Lesson Question

How do changes in the environment influence ecosystem stability?

Answer

Slide 2

Review: Disturbances in an Ecosystem

- Volcano
- Glacial movement or [ ]
- Wildfires
- Clear- [ ]
- Climate change
- [ ] species

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Slide 2

Review: Ecological Succession

An ecosystem responds to a [ ] with a predictable, gradual pattern of change.

- Primary succession occurs on surfaces where there is [ ] after the disturbance.
- Secondary succession occurs on surfaces where the [ ] after a disturbance.

Review: The Importance of Biodiversity

Loss of species diversity	Loss of genetic diversity
• Species [ ] on each other for survival.	• Reduced [ ] for mates leads to inbreeding.
• The loss of one species could [ ] many others.	• Species become susceptible to [ ].

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Use this space to write any questions or thoughts about this lesson.

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