

Ecological Succession Activity

7th Grade Science
Unit 9

Introduction

The environment may be altered in substantial ways through the activities of humans, other living things, or when natural disasters occur, such as climate changes and volcanic eruptions. Although these changes are sometimes occur very quickly, in most cases species replace others gradually, resulting in long-term changes in ecosystems. These gradual long-term changes in altered ecosystems are called **ecological successions**. Ecosystems tend to change with time until a stable system is formed. The type of succession, which occurs in an ecosystem, depends upon climatic and other limitations of a given geographical area. **Pioneer organisms** are the first organisms to reoccupy an area, which has been disturbed by a disruption. Typical pioneers in a succession include grasses in a plowed field or lichens on rocks. These pioneer organisms modify their environment, ultimately creating conditions which are less favorable for themselves, but establishing conditions under which more advanced organisms can live. Over time, the succession occurs in a series of plant stages, which leads to a stable final community, which is very similar to the plant community, which originally existed in the ecosystem. This final stable plant community is called a **climax community**. This community may reach a point of stability that can last for hundreds or thousands of years. It has been observed that when natural disasters occur, such as a floods or fires, the damaged ecosystem is likely to recover in a series of successional stages that eventually result in a stable system similar to the original one that occupied the area.

Directions

Complete the following tasks and answer the following questions.

Task #1: Reading Analysis

1. Use the information provided above to answer the following questions.
2. Use the QR App on your device and scan the QR code below to check your answers.

- What is ecological succession?

Answer Check



- What are some examples of pioneer species?

Answer Check



- What is the role of a pioneer species in succession?

Answer Check



- What is climax community?

Answer Check



Task #2: Succession Card Sort

1. Obtain a set of succession picture cards. There are 8 cards and they are labeled A-H.
2. Arrange the succession cards in the correct order according to the type of succession.
3. List the correct order of the cards below. **There will be 4 cards per type of succession.**

a. Primary Succession Card Sort Order _____

b. Secondary Succession Card Sort Order _____

4. Use the QR App on your device and scan the QR code below to check your answers.

Primary Succession
Card Sort Order Check



Secondary Succession
Card Sort Order Check



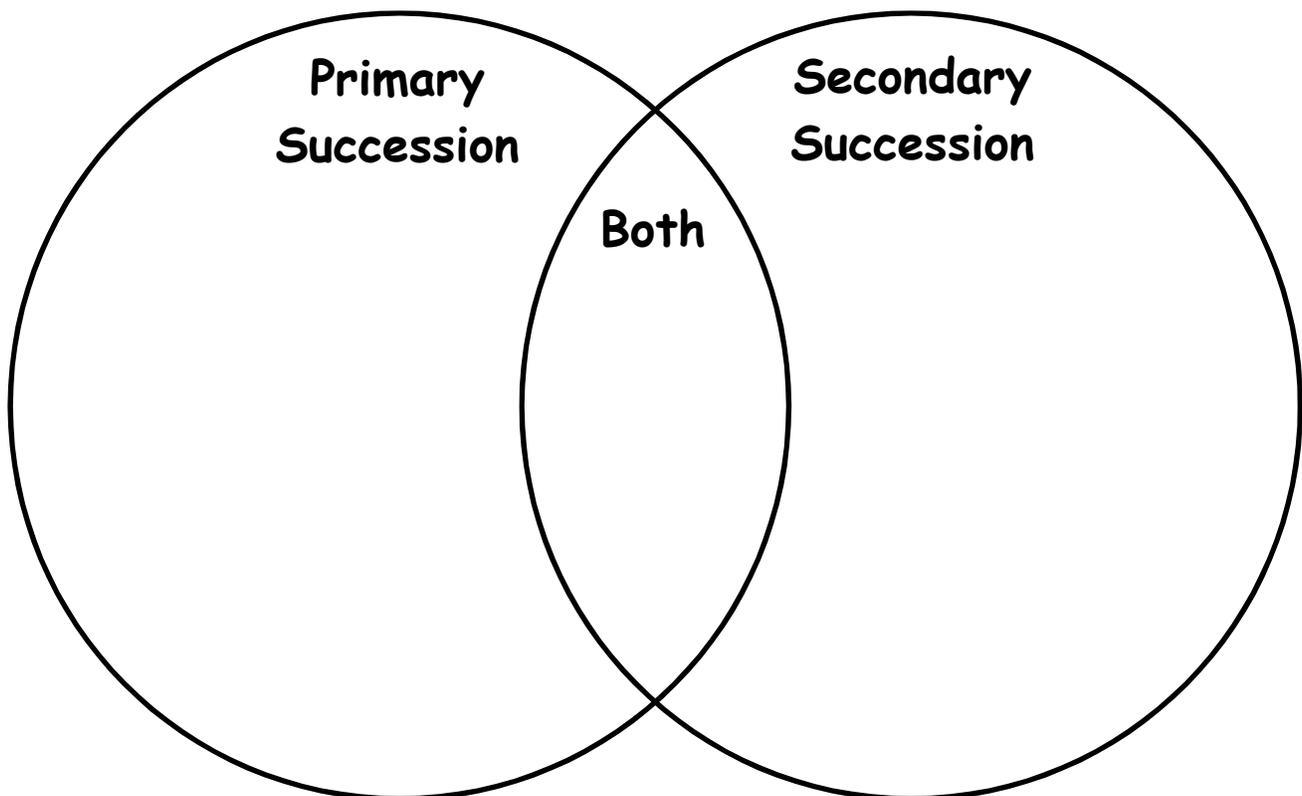
5. Explain the order of the cards for Primary Succession.

6. Explain the order of the cards for Secondary Succession.

Task #3: Venn Diagram

1. Complete the Venn Diagram below that compares and contrasts Primary Succession to Secondary Succession.
2. Complete the Venn Diagram using the bulleted phrases below.

- No previously existing life.
- Plants and Animals adapt.
- Comes after a natural disaster.
- Climax Community.
- Starts as a result of a forest fire or flood.
- Starts as the result of a volcano or receding glacier.
- Previously existing life.
- Pioneer Species.
- Starts with previously existing soil.
- Starts on bare rock.
- Lichens break down rock.
- Happens relatively slow.
- Happens relatively fast.
- Gradual growth.



3. Use the QR code below to check your answers. Make any corrections necessary.

