

# Ecological Succession Introductory Activity

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

**Ecological Succession:** A series of predictable changes that occurs in a community over time. As ecological succession occurs, types of species present in a community will change in response to changing environmental conditions such as fires, climate change, and the clearing of forests to plant crops.

**Task:**

Imagine that Columbia High School has been abandoned. There is no one to mow the grass, clean the hallways, or maintain the buildings. In the boxes provided, draw the MHS football field as it is today and as you predict it will look after the number of years listed to the left. Also, make a list of the plant and animal species that you predict will inhabit this area at each time increment.

Time	Drawing	Plant and Animal Species Present
Present		
1 year		
10 years		

50 years		
100 years		

## Ecological Succession

Ecosystems are constantly changing in response to natural and human disturbances. As an ecosystem changes, older inhabitants gradually die out and new organisms move in, causing further changes in the community. This series of predictable changes that occurs in a community over time is called **ecological succession**.

Ecological succession is slow and gradual; it occurs over a period of many years.

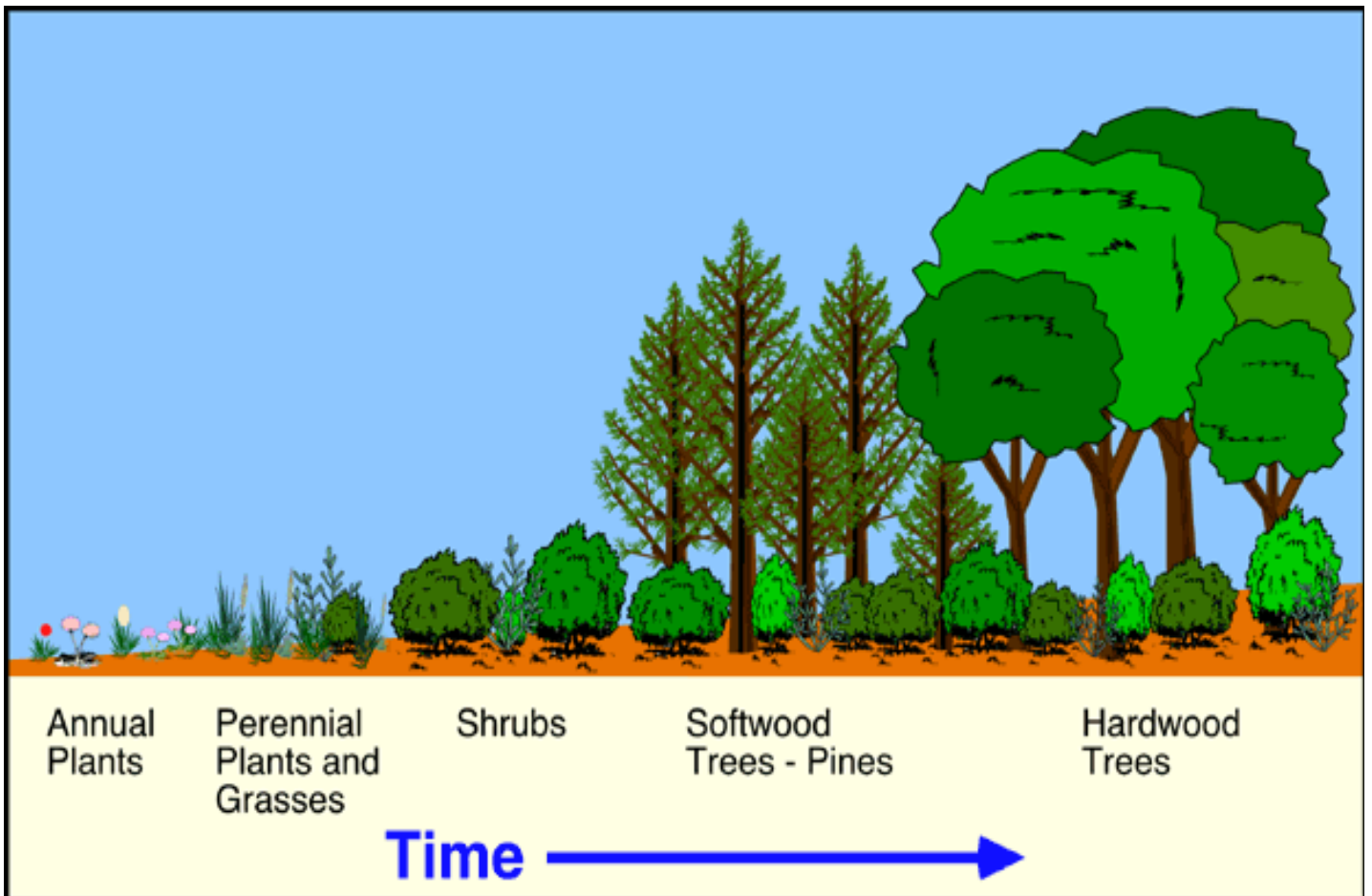
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**Pioneer species** arrive first. As environmental conditions change, they are replaced by other species, and later these species may be replaced by another set of species.

**Primary Succession:** Succession that occurs on surfaces where no soil exists. It leads to the gradual establishment of biotic communities in lifeless areas.

- Rock weathers and crumbles into particles, releasing nutrients.
- Physical and chemical breakdown of rock
- Soil slowly forms
- Initial pioneer species: lichens, mosses.
- Next you will see: Herbs, grasses, low shrubs.
- Climax Community: Trees.

**Secondary Succession:** Ecological succession in an area where natural vegetation has been removed or destroyed but the soil or bottom sediment has not been destroyed. Secondary succession may follow a disturbance that destroys a community without destroying the soil.



### Understanding and Analysis Questions

1. What is ecological succession?
2. How is primary and secondary succession different?
3. How is primary and secondary succession the same?
4. What is the first group of organisms to colonize an area called?
5. What species is able to live on bare rock?
6. List the communities in a successional sequence of primary succession?
7. List the communities in a successional sequence of secondary succession?
8. What is the first species in secondary succession?
9. Why does primary succession take longer than secondary succession?
10. List some events that would start primary succession?
11. List some events that would start secondary succession?
12. Why is a clear cut more damaging to a community than a forest fire?