Changes in Ecosystems: Ecological Succession

Regular Biology
Mr. Wilbrandt
Targets

• I will be able to...

• Identify primary or secondary succession and their parts.

• Determine what a climax community is.
What is Ecological Succession?

- Natural, gradual changes in the types of species that live in an area
- Can be primary or secondary
- The gradual replacement of one plant community by another through natural processes over time
Primary Succession

• Begins in a place **without any soil**:  
  » *Sides of volcanoes*  
  » *Landslides*  
  » *Flooding*

• First, **lichens** that do not need soil to survive grow on rocks

• Next, **mosses** grow to hold newly made soil

• Known as **PIONEER SPECIES**
Pioneer Species

Lichens break down rock to form soil.

Low, growing moss plants trap moisture and prevent soil erosion.
Primary Succession

• Soil starts to form as lichens and the forces of weather and erosion help break down rocks into smaller pieces.

• When lichens die, they decompose, adding small amounts of organic matter to the rock to make soil.
Primary Succession

• Simple plants like mosses and ferns can grow in the new soil
Primary Succession

- The simple plants die, adding more organic material (nutrients to the soil)
- The soil layer thickens, and grasses, wildflowers, and other plants begin to take over
Primary Succession

• These plants die, and they add more nutrients to the soil
• Shrubs and trees can survive now
Primary Succession

- Insects, small birds, and mammals have begun to move into the area.
- What was once bare rock, now supports a variety of life.
Secondary Succession

- Begins in a place that already has soil and was once the home of living organisms
- Occurs faster and has different pioneer species than primary succession
- Example: after forest fires
Climax Community

- A stable group of plants and animals that is the end result of the succession process
- Does not always mean big trees
  - Grasses in prairies
  - Cacti in deserts
And so…

• I now can…

• Identify primary or secondary succession and their parts.

• Determine what a climax community is.
For more help, just…

• Visit my website
• Go to Bio Unit 3
• Click on ‘Ecological Succession’