• Primary succession happens on land where there is no soil and it eventually turns into a new ecosystem. One example is after a volcanic eruption.
• Secondary succession is when a disturbance changes a community, which then needs to be "rebuilt". One example is after a forest fire.
• Succession in a marine ecosystem happens when a large whale dies and in three stages animals decompose the whale entirely while using the carcass as a home for their ecosystem.

**Biomes**

- A biome is a complex of communities that cover a wide area characterized by soil and climate conditions.
- Animals adapt to thrive specifically in their biome.
- A microclimate is a climate that differs from the surrounding climates.
- The major biomes are: Tropical rain forest, tropical dry forest, tropical savanna, desert, temperate grassland, temperate woodland and shrub land, northwestern coniferous forest, boreal forest and tundra.
- While most organisms in a biome are very similar there are variations depending on smaller factors.
- Each of these biomes has specific abiotic factors, dominant plants, and wildlife, and geographic distribution (usually affected by latitude).

**Other Land Areas**

- There are land Areas that are not categorized by the major biomes.
- Two of these land areas are mountain ranges, and polar ice caps.

**Aquatic Ecosystems**

- Many of earth’s ecosystems are underwater.
- These ecosystems are determined by: Depth, flow, temperature, and water chemistry.

**Freshwater Ecosystems**

- There are two main types of freshwater ecosystems: Flowing water and standing water.
- In flowing water ecosystems (rivers, streams, creeks, and brooks) organisms have adapted to the rate of flow there. Many of these start uphill and spring from underground and wash down sediments which plants can establish themselves in.
- In standing water ecosystems (lakes or ponds) there will generally be water moving within them that distribute heat, energy, and nutrients.
- A freshwater wetland (bog, marsh, or swamp) either covers soil or is present or near the top of soil. They can be flowing, standing, fresh, salty, or brackish. Some are wet