

# Lesson 1

## Biome Classifications

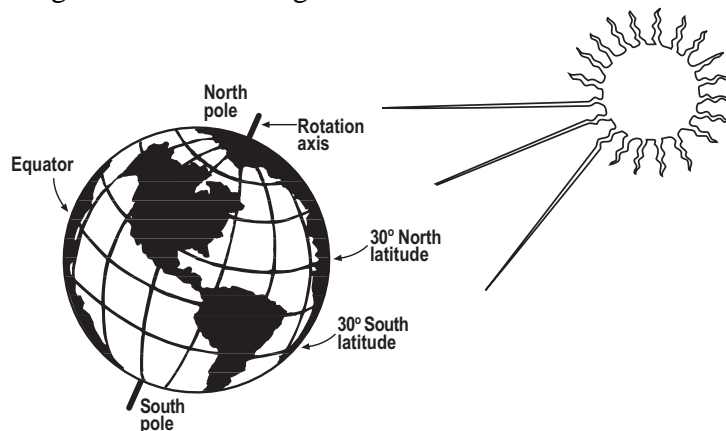


### Vocabulary

You will find these words in the following lesson. Fill in a definition for those you already know. Find the remaining words in your reading and then write the definitions from the information given.

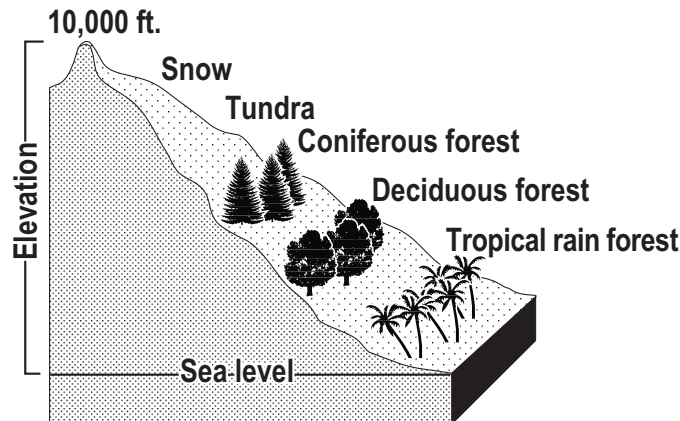
Word/Term	Definition
climate	
biome	
homeostasis	
diversity	
latitude	
altitude	

Life on Earth has great diversity. Much of that diversity is related to the area in which an organism lives. The earth is divided into major ecosystems called biomes. Terrestrial (land) biomes are classified by the climate factors that characterize each particular region. Climate is determined by the yearly temperature and precipitation. These characteristics of climate also change based on latitude and altitude. Latitude is important to climate because temperatures change according to the angle at which the sun hits the earth. The earth is tilted on its axis, and the angle of the sun changes based on the latitude of the area.



The highest temperatures are found in the areas with the most direct sunlight, along the equator. The lowest temperatures are found at the poles with the least direct sunlight. The amount of precipitation is affected by the distance from bodies of water and wind movement in the area.

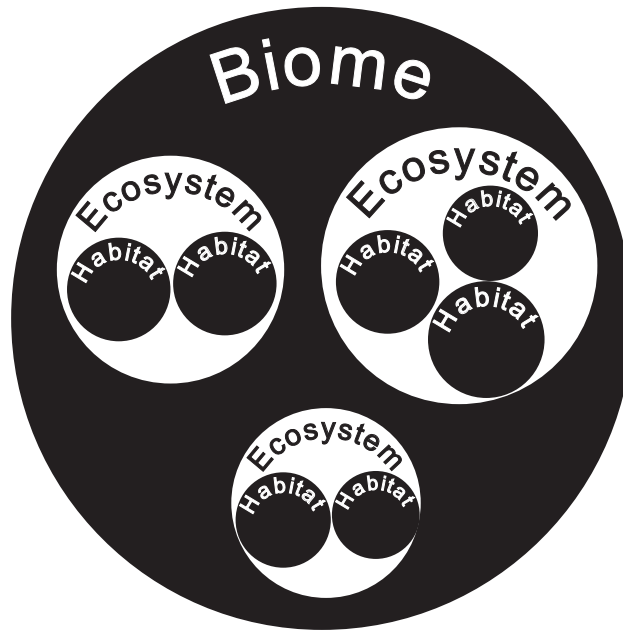
Altitude also affects climate. As altitude increases the atmosphere becomes thinner and the temperature decreases.



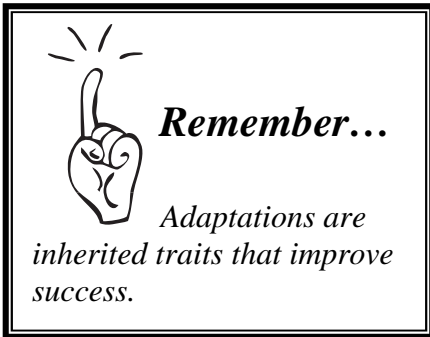
Climate is the most important factor in determining the type and diversity of organisms that can live in an area. In general, the colder the temperature the less diverse is the population.

Aquatic biomes are classified by the salt content of the water, the movement of the water, the size of the body of water, and the amount of soil in the water. The organisms found in aquatic biomes also change with the depth of the water.

Biomes are large, general types of ecosystems. They are made up of a combination of smaller ecosystems, which are many different habitats. A habitat is the specific place in which an organism lives. The organization of biomes can be represented by this graphic organizer:



Climate determines the kinds of organisms that live in an area because it affects the abiotic (non-living) resources available. Those non-living resources, such as the type of soil, availability of water, and amount of oxygen, have the most direct effect on the type of plants found in a biome. The plants determine the herbivores found in the biome which in turn determine the carnivores. In certain extreme temperature zones there is no plant growth on land, which makes those land areas unable to support animal life.



In order to survive in an area plants and animals need space, food, water, predator avoidance, reproduction, and the ability to maintain homeostasis. Homeostasis is a relatively stable state of equilibrium or balance among various groups within the overall population of the biome. Each organism in a biome has adaptations to meet all of the survival requirements for that particular environment.

Although there are many ways to group biomes, the most common types of biomes are: rainforest, temperate deciduous forest, coniferous forest/taiga, desert, tundra, grassland, freshwater, wetlands, and marine (saltwater).

- ▨ Desert                      ▩ Tropical Grasslands    ▩ Tropical Forest            ▨ Temperate Grasslands
- ▧ Temperate Forest      ▩ Arctic Tundra            ▨ Mountains                ■ Wetlands



**Analysis**

1. What is a biome?

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2. How are biomes categorized?

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3. How does latitude determine climate?

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4. What affect does altitude have on climate?

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5. How does climate determine the types of organisms that can live in a particular area?

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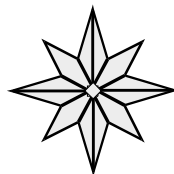
**6.** How do the types of plants determine the types of carnivores found in an area?

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**NOTES or questions for your teacher / mentor:**



**End of Lesson 1**