



High School Science Virtual Learning

College Biology

April 20, 2020



High School College Biology

Lesson: April 20, 2020

Objective/Learning Target:

Students will be able to discuss the key characteristics of the different biomes.

Let's Get Started:

1. The formation of goosebumps on your skin in cold weather is an example of a(an) _____ response, while seasonal migration is an example of a(an) _____ response.
2. What is the main way that living organisms contribute to the water cycle?



Answers:

1. physiological; behavioral
2. Plants move water from the ground to the air via transpiration.



Lesson Activity:

1. Read over pages 13-31 of the Chapter 18 Notes. ([Linked Here](#))
2. Watch this Crash Course video on [Ecology](#). (4:46 - End)



Practice:

1. Describe the biome that you live in. Be sure to include major producers, consumers, and climate in your answer.
2. In your notes you learned about biotic and abiotic factors. Describe at least one example where an abiotic factor affects a biotic factor negatively. Give one example of a positive impact.
3. How do plants and animals differ in their response to unfavorable environmental changes?



Practice:

4. According to the video what two factors define every biome on the planet? Explain what role these factors play for a species.
5. Why is there so much rainfall in the tropics?

Practice Answers:

1. We live in a deciduous forest biome. That means the trees lose their leaves in the winter. The biome is dominated by these types of trees. You may not see that in the city but if you travel out of town you will see these types of trees everywhere. Grasses dominate the land and provide more food than any other organism. Rabbits, squirrels, deer and mice are some of the more common consumers. We have four distinct seasons with plenty of rain in the spring, cold winters and hot dry summers.

Practice Answers:

2. Water is an abiotic factor. When water is in short supply this has a big impact on plants. There are also plenty of nutrients in the soil, like nitrogen. When these are in short supply plants struggle to grow and thrive. Sunlight is an abiotic factor.

When there is plenty of sunshine plants thrive.

3. Unlike plants, animals are able to move away from unfavorable environmental conditions.



Practice Answers:

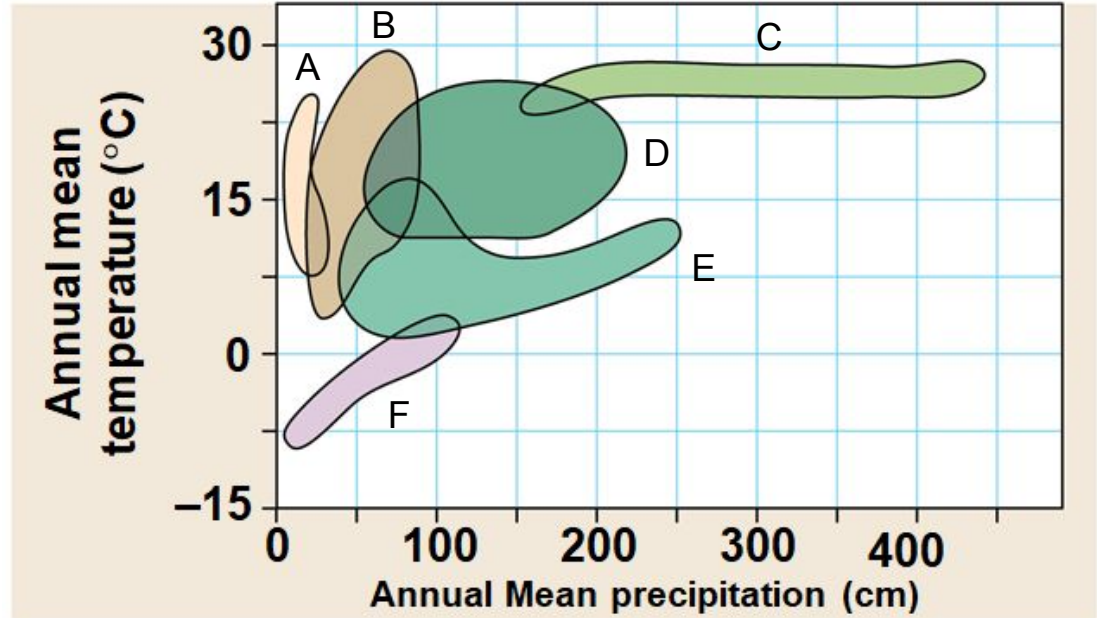
4. Water and temperature. All organisms need water in order to survive. How much is available determines what producers can survive there and thus determines the rest of the trophic levels. Temperature also determines what organisms are suited for a particular environment. Together these two factors can exclude an entire species from inhabiting one biome or another.

Practice Answers:

5. When the colder air replaces the warmer air in the lower atmosphere, the abundant moisture from the tropics loses the ability to be stored in the atmosphere. As a result, the excess moisture that cannot be held by the colder air is then turned into thunderstorms and rain showers.

Practice:

1. Identify the following biomes on the graph below: tundra, northern coniferous forest, desert, temperate grassland, temperate broadleaf forest, and tropical forest.



Practice:

2. We are on a coastal hillside on a hot, dry summer day among evergreen shrubs that are adapted to fire. We are most likely standing in a _____ biome.
3. What are three abiotic factors account for the rarity of trees in arctic tundra?
4. What are phytoplankton? Why are they essential to other oceanic life?
5. How does the loss of leaves function as an adaptation of deciduous trees to cold winters?

Practice Answers:

1. A. desert; B. temperate grassland; C. tropical forest; D. temperate broadleaf forest; E. northern coniferous forest; F. tundra
2. chaparral
3. Permafrost, very cold winters, and high winds
4. Phytoplankton are photosynthetic algae and bacteria. They are food for animals in the photic zone; those animals in turn may become food for animals in the aphotic zone.
5. By reducing loss of water from the trees when that water cannot be replaced because of frozen soil.



Review Tools:

- [Kahoot 2](#)

- [Kahoot 3](#)

- Mr. Anderson videos about [ecology](#), [biomes](#), and [human impacts](#)