High School Science Virtual Learning

Earth Science
Climate Variation

May 05, 2020

High School Earth Science
Lesson: May 05, 2020

Objective/Learning Target:
Students will understand why climate varies in different regions.

Let’s Get Started:

1. What is climate?

2. What factors affect local weather?

Let's Get Started: Answer Key

1. Climate is long-term weather in a region.

2. Factors that affect weather include temperature, air pressure, precipitation, humidity, and wind.

Lesson Activity:

Directions:

1. Watch the video at the link below.
2. Answer the questions on the slides that follow.

Links: Climate Variation

Practice

Complete the following questions using the information you learned during the lesson activity.

Questions:

1. What are the 6 main factors that can cause climate variation?
2. How do latitude and sunlight work together to cause climate variation?
3. Describe at least two ways mountains cause climate variation.
4. How does the size of a landmass contribute to climate variation?

Once you have completed the practice questions check with the answer key.

1. Latitude, mountains, ocean currents, air pressure, proximity to oceans, size of land masses
2. The sun's radiation hits the equator more directly than it does at the poles. This difference causes temperatures to be warmer near the equator than it is at the poles.
3. a. Increasing altitude moving up the mountain results in lower temperatures than other areas at the same latitude.
   b. Mountains can cause rain shadows (the windward side gets a lot of rain, the leeward side is very dry)
4. Larger land masses have extreme temperature ranges, while smaller masses have very little temperature variation, due to the amount of land in close proximity to the ocean.

More Practice:

Follow the links below to do more practice.

1. Explain sunlight distribution across Earth.
2. What is the result of this distribution?
3. How is this balanced?
4. What causes the variations in climates?

Link: climate systems

Once you have completed the More Practice questions check with the answer key.

1. Sunlight is unevenly distributed due to the tilt of the Earth on its axis. More energy reaches the equator than the poles.
2. Sunlight distribution causes the equator to be warmer than the poles.
3. The climate system moves heat from the equator to the poles through the atmosphere and oceans.
4. Interaction between the sun's energy and the movement of heat via the atmosphere and oceans.

Additional Practice:
Click on the link below for additional reading on climate.

Link: Climate