

Name: _____

Date: _____ Period: _____

Water & Climate

The Physical Setting: Earth Science

Worksheet: Climate Variables

1. Which current is a warm ocean current that flows completely around Earth?
 - a. North Equatorial Current
 - b. California Current
 - c. West Wind Drift
 - d. Gulf Stream
2. What is the best explanation for ice caps existing at the Earth's poles and some mountains located near the Earth's Equator have snow-covered peaks?
 - a. Both mountain and polar regions have arid climates.
 - b. An increase in snowfall and an increase in temperature have a similar effect on climate.
 - c. Mountain and polar regions receive more energy from the Sun than other regions do.
 - d. High elevation and high latitude have a similar effect on climate.
3. Which one of the following statements best explains why climates at continental shorelines generally have a smaller yearly temperature range than inland climates at the same latitude?
 - a. Land changes temperature rapidly, due to the high specific heat and lack of transparency of land.
 - b. Ocean water changes temperature slowly, due to the high specific heat and transparency of water.
 - c. Ocean water is a good absorber and a good conductor of heat energy.
 - d. Land is a poor absorber and a poor conductor of heat energy.
4. Compared to an inland location of the same elevation and latitude, a coastal location is likely to have
 - a. warmer summers and cooler winters
 - b. cooler summers and warmer winters
 - c. warmer summers and warmer winters
 - d. cooler summers and cooler winters
5. According to the Earth Science Reference Tables, the climate of which location in New York State is influenced least by large bodies of water?
 - a. Buffalo
 - b. Jamestown
 - c. New York City
 - d. Binghamton
6. A city located near the center of a large continent has colder winters and warmer summers than a city at the same elevation and latitude located on the continent's coast. Which statement best explains the difference between the cities' climates?
 - a. Air masses originate only over land.
 - b. Wind speeds are greater over land than over oceans.
 - c. Water changes temperature more rapidly than land.
 - d. Land has a lower specific heat than water.

Worksheet: Climate Variables

7. What is the primary reason New York State is warmer in July than in February?
 - a. The altitude of the noon Sun is greater in February.
 - b. The insolation in New York is greater in July.
 - c. The Earth is closer to the Sun in July.
 - d. The Earth is traveling faster in its orbit in February.

8. On which date does the maximum duration of insolation occur in the Northern Hemisphere?
 - a. June 21
 - b. December 21
 - c. March 21
 - d. September 23

9. During which month does the minimum duration of insolation occur in New York State?
 - a. February
 - b. December
 - c. September
 - d. July

10. Which statement best describes how the insolation changes in New York from May 21 through June 21?
 - a. The intensity and the duration of insolation both decrease.
 - b. The intensity of insolation decreases and the duration of insolation increases.
 - c. The intensity and the duration of insolation both increase.
 - d. The intensity of insolation increases and the duration of insolation decreases.