

Chapter 21 Climate

Section 21.1 Factors That Affect Climate


This section explains how latitude, elevation, topography, water, winds, and vegetation affect climate.

Reading Strategy

Summarizing Information As you read, summarize the effect(s) each factor has on climate. For more information on this Reading Strategy, see the **Reading and Study Skills** in the **Skills and Reference Handbook** at the end of your textbook.

Factor	Effect(s) on Climate
1. Latitude	a.
2. Elevation	b.
3. Topography	c.
4. Water bodies	d.
5. Global wind	e.
6. Vegetation	f.

Factors That Affect Climate

-  Circle the letter of the answer that correctly completes the following sentence. As latitude increases, the intensity of solar energy
 - decreases.
 - increases.
 - stays the same.
 - is unrelated.
- Temperate zones have _____ summers and _____ winters because of the angle of the sun's rays and the length of daylight in the summer and winter.
- Why do the polar zones have cold temperatures year-round?


- Is the following sentence true or false? The polar zones are located between 66.5° north and south latitudes and the poles.

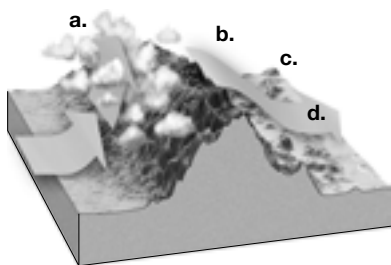
- Circle the letter of the region between the Tropic of Cancer and the Tropic of Capricorn.
 - polar zone
 - temperate zone
 - tropics
 - equator

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6. What effect does elevation have on precipitation? _____



7. Describe why a rain shadow occurs. _____

8.  Is the following sentence true or false? The higher the elevation is, the colder the climate. _____
9. Circle the letter of the angle at which the sun's rays strike the surface of Earth in the tropics.
 - a. almost a 45° angle
 - b. almost a right angle
 - c. less than a 45° angle
 - d. more than a right angle
10. The figure below shows the rain shadow effect. Identify the labeled items on the lines provided.



- a. _____
- b. _____
- c. _____
- d. _____

Match each sentence with the term that completes it.

Sentence	Term
_____ 11. In the temperate zones, the sun's rays strike the Earth at a _____ angle than near the equator.	a. global winds
_____ 12. When the sun's rays strike Earth at an angle less than 90°, the energy is spread out over a _____ area.	b. larger
_____ 13.  _____ distribute(s) heat and moisture around Earth.	c. precipitation
_____ 14.  Plants influence _____ through transpiration, which releases water vapor from their leaves into the air.	d. smaller