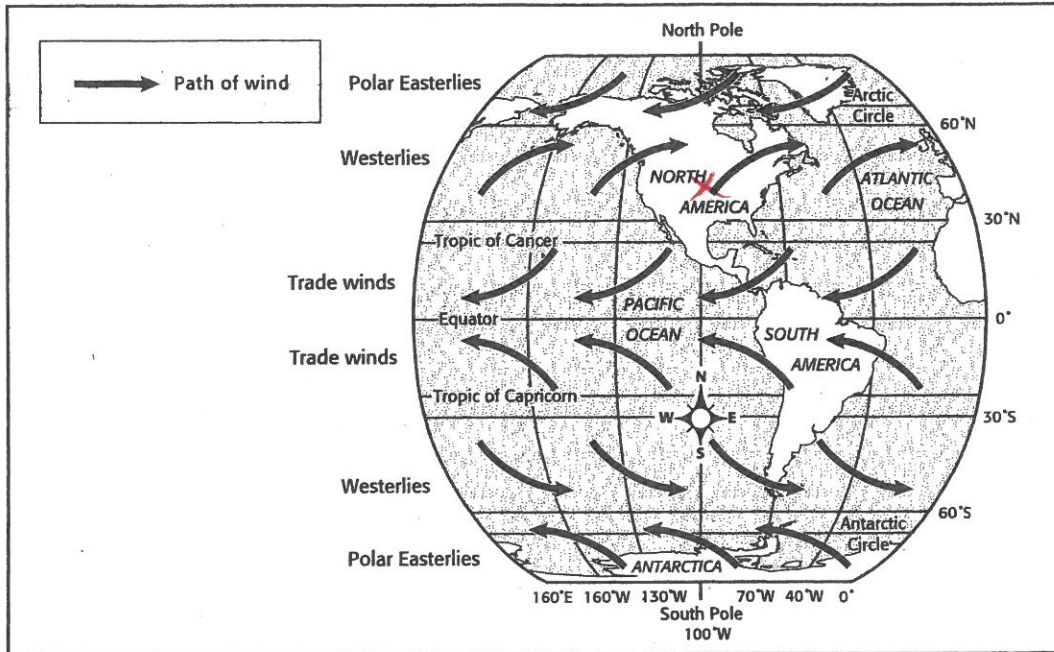


Map Skills



13. Wind is caused by changes in atmospheric pressure. Atmospheric pressure, also called barometric pressure, is the force, or pressure, of the air above Earth.

Use the map above to answer the questions below.

1. **Analyzing Data** Which do you think affects wind movement more, latitude or longitude?

latitude

2. **Finding Locations** If you live in South America at the equator, in which direction does the wind blow?

east to west

3. **Making a Hypothesis** In which direction do the Westerlies blow? Why do you think they are called the Westerlies?

W to E, wind comes from West

4. **Making a Hypothesis** If you were sailing to North America from Europe, near which line of latitude would you sail? Why?

T. of Cancer & T. of Capricorn  
tr. winds blow west

5. **Making Conclusions** Find the general location of your community on the map. If a storm were approaching you, which direction would it be coming from?

South west

Ch. 13

Assessment  
**Quiz**

**Section: Climate and Climate Change**

**MATCHING**

In the space provided, write the letter of the term or phrase that best matches the description.

- D 1. long-term, prevailing weather conditions at a particular place
  - C 2. a gas that can reach the upper atmosphere after a large-scale volcanic eruption
  - A 3. position with respect to the equator, measured in degrees north or south
  - E 4. is greater for cold air, causing cold air to sink below warm air
  - B 5. a belt of prevailing winds
- a. latitude
  - b. westerlies
  - c. sulfur dioxide
  - d. climate
  - e. density

**MULTIPLE CHOICE**

Choose the one best response. Write the letter of that choice in the space provided.

- B 6. During summer in the Southern Hemisphere, the Northern Hemisphere experiences
  - a. a tilt toward the sun.
  - b. winter.
  - c. summer.
  - d. excess rainfall.
- D 7. In regions closer to the poles, the sun
  - a. never sets.
  - b. never changes its altitude.
  - c. is higher in the sky.
  - d. is lower in the sky.
- C 8. Because water \_\_\_\_\_, ocean currents have a great effect on climate.
  - a. moves more slowly than air
  - b. stays colder than air
  - c. holds large amounts of heat
  - d. cannot hold heat
- C 9. During an El Niño event, winds in the western Pacific Ocean strengthen and push \_\_\_\_\_ eastward.
  - a. warm air
  - b. cold air
  - c. warm water
  - d. cold water
- A 10. The pattern of \_\_\_\_\_ determines Earth's precipitation pattern.
  - a. global atmospheric circulation
  - b. solar activity
  - c. volcanic eruptions
  - d. All of the above

Ch. 13

Assessment

Quiz

**Section: The Ozone Shield**

**MATCHING**

In the space provided, write the letter of the term that best matches the description.

- |              |   |                        |
|--------------|---|------------------------|
| <u>  A  </u> | 1. strong circulating winds over Antarctica   | a. polar vortex        |
| <u>  C  </u> | 2. a possible consequence to humans from a thinning ozone layer                       | b. chlorofluorocarbons |
| <u>  E  </u> |   | c. skin cancer         |
| _____        | 3. single-celled organisms that live near the ocean's surface                         | d. ozone layer         |
| _____        |   | e. phytoplankton       |
| <u>  D  </u> | 4. a part of the stratosphere that absorbs most of the ultraviolet light from the sun |                        |
| <u>  B  </u> | 5. a class of human-made chemicals that may damage the ozone layer                    |                        |

**MULTIPLE CHOICE**

Choose the one best response. Write the letter of that choice in the space provided.

- 13
- D   6. Scientists estimate that a single chlorine molecule in the CFC structure can destroy as many as \_\_\_\_\_ ozone molecules.
- |          |            |
|----------|------------|
| a. 100   | c. 10,000  |
| b. 1,000 | d. 100,000 |
- A   7. As the amount of ozone in the stratosphere decreases,
- |   |
|---|
| a. more ultraviolet light is able to reach Earth's surface. |
| b. less solar energy is able to reach Earth's surface.      |
| c. the amount of methane in the atmosphere increases.       |
| d. the amount of phytoplankton in the ocean increases.      |
- C   8. Polar stratospheric clouds are high-altitude clouds made of
- |                                  |                             |
|----------------------------------|-----------------------------|
| a. ozone and CFCs.               | c. water and nitric acid.   |
| b. ozone and molecular chlorine. | d. water and sulfuric acid. |
- A   9. Which of the following is *not* a damaging effect of ultraviolet light on the amphibian population?
- |                                      |
|--------------------------------------|
| a. interference with photosynthesis  |
| b. death of eggs                     |
| c. genetic mutations among survivors |
| d. reduction of populations          |
- B   10. High ultraviolet (UV) radiation levels at Earth's surface can
- |                  |                             |
|------------------|-----------------------------|
| a. produce CFCs. | c. thin the ozone layer.    |
| b. damage DNA.   | d. change weather patterns. |



Ch. 13

Assessment  
**Quiz**

**Section: Global Warming**

**MATCHING**

In the space provided, write the letter of the term that best matches the description.

- C 1. site where continuous CO<sub>2</sub> records have been maintained since 1958
  - E 2. an increase in Earth's average temperature, resulting from increased greenhouse gases in the atmosphere
  - A 3. a greenhouse gas released from burning fossil fuels
  - D 4. a complex set of equations that account for many factors and require a great number of computations to solve
  - B 5. tiny, shrimp-like animals that many other marine animals depend on for food
- a. carbon dioxide
  - b. zooplankton
  - c. Mauna Loa, Hawaii
  - d. computer model
  - e. global warming

**MULTIPLE CHOICE**

Choose the one best response. Write the letter of that choice in the space provided.

- B 6. Which of the following will require most developed countries to decrease emissions of carbon dioxide and other greenhouse gases?
  - a. Montreal Protocol
  - b. Kyoto Protocol
  - c. Emissions Reduction Act
  - d. Reforestation Project
- A 7. Most of the warming that has been observed over the 20th century can be attributed to
  - a. human activity.
  - b. plant growth.
  - c. glacial melting.
  - d. droughts.
- D 8. The attempt to slow global warming is made difficult by
  - a. economic factors.
  - b. political factors.
  - c. social factors.
  - d. All of the above
- C 9. Which of the following is *not* a major greenhouse gas?
  - a. water vapor
  - b. carbon dioxide
  - c. sulfur
  - d. methane
- D 10. In an area away from forests and cities, geochemist Charles David Keeling measured the amount of
  - a. ozone in the air.
  - b. oxygen in the air.
  - c. nitrous oxide in the air.
  - d. carbon dioxide in the air.