

Chapter 16 The Dynamic Ocean

## Section 16.2 Waves and Tides

*This section discusses waves and tides and explains what causes them.*

### Reading Strategy

**Building Vocabulary** As you read this section, define in your own words each vocabulary term listed in the table. 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.

Vocabulary Term	Definition
Wave height	a.
Wavelength	b.
Wave period	c.
Fetch	d.

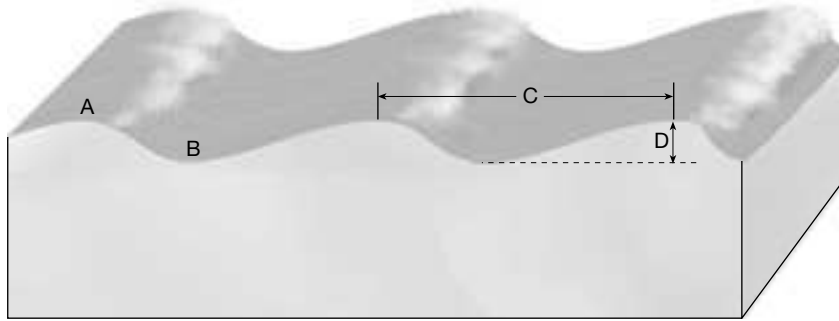
### Waves

- Waves in the ocean are \_\_\_\_\_ traveling along the water.
- Circle the letter of the source of most waves' energy and motion.
  - Earth's gravity
  - wind
  - Earth's rotation
  - the moon's gravity
- The distance wind travels across open ocean water is called \_\_\_\_\_.
- What three factors determine the height, length, and period of ocean waves? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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5. Write the name of the wave part represented by each of the following letters in the figure.

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_
- D. \_\_\_\_\_



6. ➡ Is the following sentence true or false? Through circular orbital motion, wave energy moves forward through ocean water, while individual water particles move around in a circle, staying essentially in the same place. \_\_\_\_\_

**Tides**

7. ➡ What causes ocean tides? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

8. ➡ Circle the letter of the forces that produce tides.
- a. inertia and gravity
  - b. friction and wind
  - c. temperature and pressure
  - d. gravity and friction

9. Is the following sentence true or false? Most places on Earth experience one low tide and one high tide each day.  
 \_\_\_\_\_

Match each definition with its term.

Definition	Term
_____ 10. tide with the greatest difference in height between successive high and low tides	a. spring tide
_____ 11. tide with the least difference in height between successive high and low tides	b. neap tide
_____ 12. difference in height between successive high and low tides	c. tidal range

13. ➡ Worldwide, the three main tidal patterns that exist are diurnal tides, \_\_\_\_\_ tides, and mixed tides.