Name Date Class

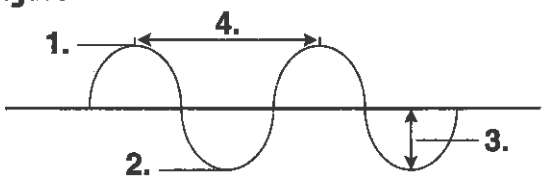
SECTION 2 Reinforcement

Wave Properties

CHAPTER 9.2 REVIEW

Directions: *Study Figure 1, then identify each part by filling in the blanks below.*

Figure 1



1. _____

2. _____

3. _____

4. _____

Directions: *Answer the following questions on the lines provided.*

5. List three characteristics of a wave that you can measure.

_____

6. What is meant by the frequency of a wave? What is the unit?

_____

_____

7. If the frequency of a given wave increases, what happens to the wavelength?

_____

_____

Directions: *Fill out the following table by describing how to measure each of the quantities for the two types of waves.*

Wave	Wavelength	Amplitude
8. transverse		
9. compressional		

10. What is the velocity of a wave with a frequency of 6 Hz and a wavelength of 2 m?

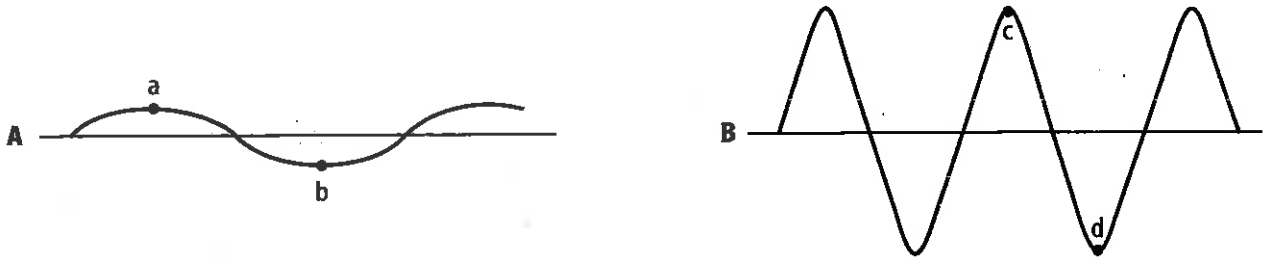
_____

_____

Chapter Review (continued)

Part B. Concept Review

Directions: *Use the diagram below to answer questions 1–5.*



1. What type of wave is wave A? _____
2. Which wave carries more energy? _____
3. What do points **a** and **c** represent? _____
4. What do points **b** and **d** represent? _____
5. How does the frequency of wave B compare with that of wave A?

_____

Directions: *Using the equation* $v = \lambda \times f$, *find the missing values.*

6. What is the velocity of a wave with a frequency of 760 Hz and a wavelength of 0.45 m?

_____

7. A wave with a wavelength of 15 m travels at 330 m/s. Calculate its frequency.

_____

Directions: *Answer the following questions on the lines provided.*

8. How do scientists know that seismic waves can be either compressional or transverse?

_____

_____

9. Why do surfers like water waves with high amplitudes?

_____

_____

_____

10. Will loud sounds from traffic near a school break glass objects inside the school? Explain.

_____

_____

Name Date Class

Directed Reading for Content Mastery

Section 1 ▪ The Nature of Waves
Section 2 ▪ Wave Properties

Directions: *Determine if each statement is true or false. If it is false, change the italicized word(s) to correct the sentence.*

_____ 1. Waves transfer *matter* as they travel.

_____ 2. A wave will travel *only as long as* it has energy to carry.

_____ 3. Anything that moves *up and down or back and forth* in a rhythmic way is vibrating.

_____ 4. *All* waves need a medium in order to travel.

_____ 5. *Transverse and congressional* waves are the two types of mechanical waves.

_____ 6. In a *longitudinal* wave the matter in the medium moves back and forth at right angles to the direction that the wave travels.

_____ 7. In a *transverse* wave the matter in the medium moves back and forth in the same direction that the wave travels.

_____ 8. In a transverse wave, the peak of the wave is the *crest* and the lowest spot is the *trough.*

_____ 9. The *refraction* of a wave is how many wavelengths pass a fixed point each second.

_____ 10. The speed of a wave is determined by multiplying the *wavelength by the frequency.*

_____ 11. In a longitudinal wave, the denser the medium is at the compressions the *smaller* its amplitude.

_____ 12. In a transverse wave, the higher the amplitude, the *more* energy it carries.

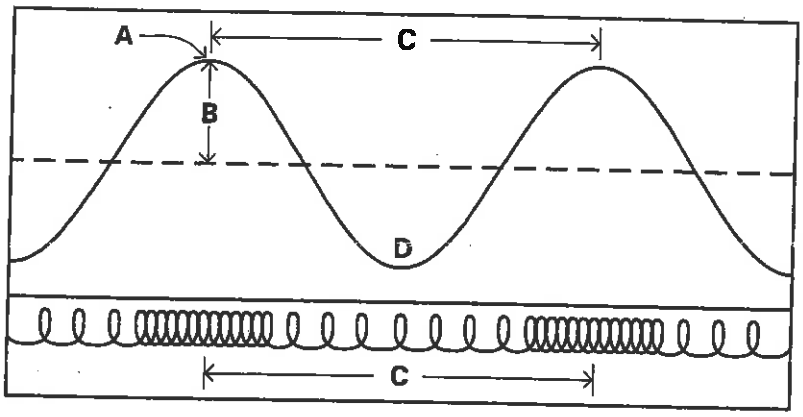
NAME _____

CLASS _____ DATE _____

Worksheet Reteaching

Characteristics of Waves

Use this worksheet to study Lesson 11.2.



1. **a.** In the diagram, the wavelength is labeled _____.

b. The crest of the wave is labeled _____.

c. The trough of the wave is labeled _____.

d. The amplitude of the wave is labeled _____.

2. The number of waves that pass a point in one second is called the _____ of the waves.

3. The speed of the waves can be calculated using the following formula.

wave speed = _____

4. A boat at a dock rocks up and down with a frequency of 1.5 hertz. The waves are 5 meters long.

a. What is the wavelength of the waves?

_____

b. What is the frequency of the waves, in waves per second?

_____

c. Substitute the data in the formula for wave speed and solve.

_____

d. The speed of the waves is _____ meters per second.