Name _____ Date _____ Class _____

SECTION 1 Reinforcement

The Nature of Waves

CHAPTER 9.1 Review

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

1. What is a wave?

2. What travels on a wave?

3. How is a wave created?

4. What is a mechanical wave?

5. List the two types of mechanical waves and define them.

   a. _____

   b. _____

6. What type of wave is a sound wave?

7. How does sound travel through a medium?

8. Describe the motion of something floating in water waves.

9. What causes ocean waves?

10. What are seismic waves?

Name Date Class

Chapter Test A

Introduction to Waves

I. Testing Concepts

Directions: *In the blank at the left, write the letter of the term that best completes each statement.*

_____ 1. A _____ is a repeating disturbance or movement that transfers energy through matter or space.
a. medium **b.** fluid **c.** material **d.** wave

_____ 2. The matter through which mechanical waves travel is called a _____.
a. medium **b.** substrate **c.** region **d.** domain

_____ 3. The high point on a wave is called its _____.
a. crest **b.** trough **c.** rest position **d.** none of these

_____ 4. The low point on a wave is called its _____.
a. crest **b.** trough **c.** rest position **d.** none of these

_____ 5. The less-dense region of a longitudinal wave is called a _____.
a. compression **b.** rarefaction **c.** rest position **d.** none of these

_____ 6. A _____ is the distance between one point on a wave and the nearest point just like it.
a. wavelength **b.** frequency **c.** crest **d.** trough

_____ 7. The _____ of a wave is the number of wavelengths that pass a fixed point each second.
a. volume **b.** frequency **c.** crest **d.** trough

_____ 8. The _____ of a wave is the amount of time it takes one wavelength to pass a point.
a. period **b.** frequency **c.** crest **d.** trough

_____ 9. The greater a wave's amplitude, the _____ energy the wave carries.
a. more **b.** less **c.** both a and b **d.** none of these

_____ 10. _____ is the bending of a wave caused by a change in its speed as it moves from one medium to another.
a. Refraction **b.** Reflection **c.** Rarefaction **d.** Fusion

_____ 11. _____ occurs when an object causes a wave to change direction and bend around it.
a. Refraction **b.** Reflection **c.** Correction **d.** Diffraction

_____ 12. When two or more waves overlap and combine to form a new wave, the process is called _____.
a. refraction **b.** reflection **c.** interference **d.** diffraction

Name _____ Date _____ Class _____

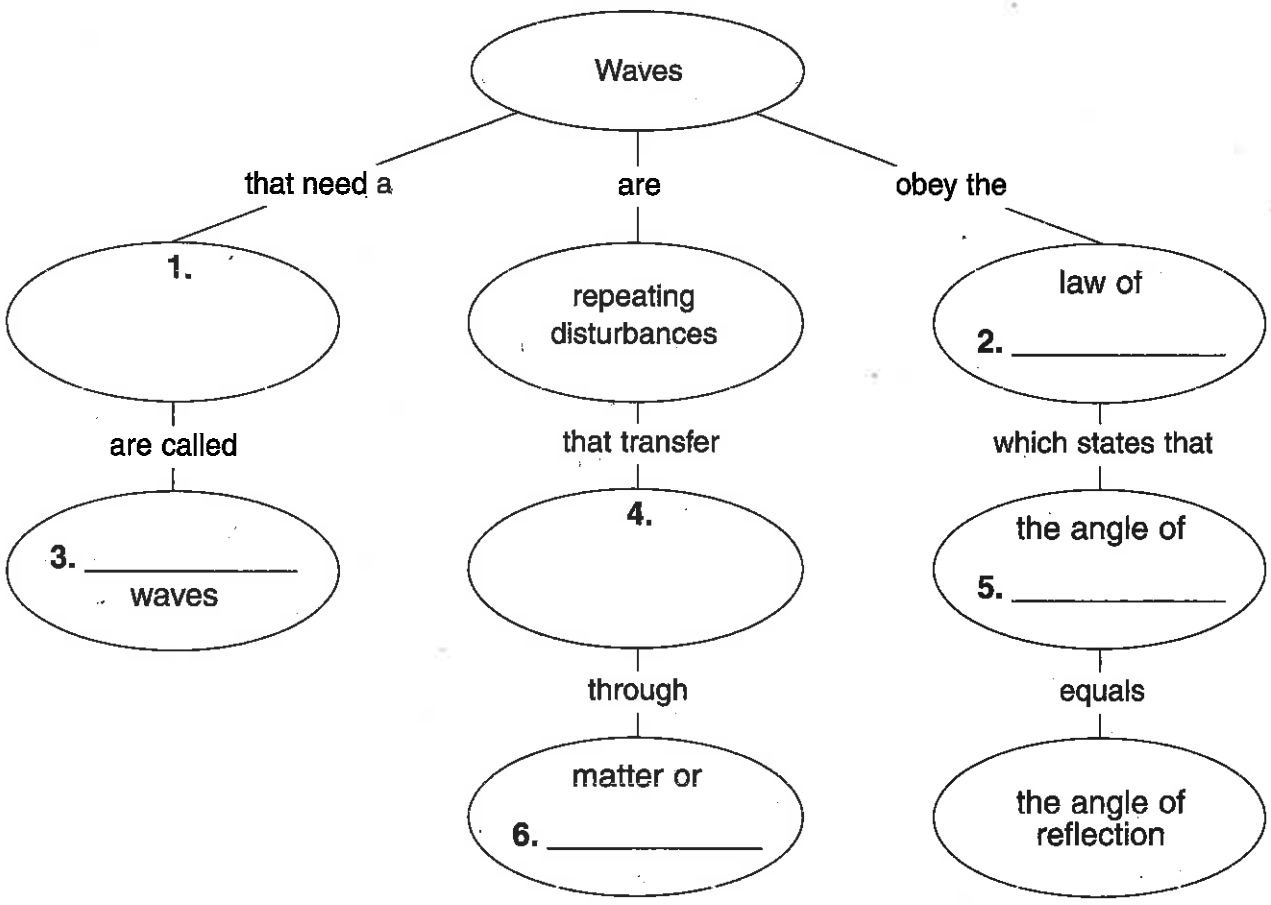
Directed Reading for Content Mastery

Overview
Introduction to Waves

Directions: *Complete the concept map using the terms in the list below.*

reflection **medium** **incidence**

energy **mechanical** **space**



Directions: *For each of the following write the letter of the phrase that best completes the sentence.*

_____ **7.** The high point of a transverse wave is _____.

a. a rarefaction **b.** the frequency **c.** the crest

_____ **8.** The less dense region of a compression wave is called _____.

a. a rarefaction **b.** the frequency **c.** the crest

_____ **9.** The number of wavelenghts that pass a fixed point each second is _____ of a wave.

a. a rarefaction **b.** the frequency **c.** the crest

NAME _____

CLASS _____ DATE _____

Worksheet

Types of Waves

1. A disturbance that travels through matter or empty space is called a _____.
2. Waves change the _____ of matter as they move through it.
   a. size b. mass c. arrangement
3. The matter through which a wave moves is called a medium. The medium of an ocean wave is _____.
   a. sand b. salt water c. ships
4. Waves are classified by the way they move the medium. A transverse wave moves the medium at right angles to _____.
5. Longitudinal waves push matter back and forth. The matter, or medium, moves parallel to the direction of the wave. Two examples of longitudinal waves would be _____.
   a. an ocean wave
   b. a field of grass in the breeze
   c. a line of falling dominoes

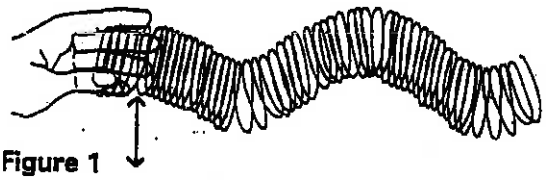


Figure 1

6. Figure 1 shows a _____ wave.
   a. longitudinal b. transverse
7. Figure 2 shows a _____ wave.
   a. longitudinal b. transverse

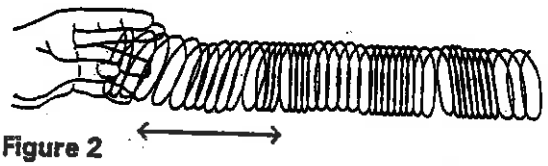


Figure 2

8. When water moves in a wave, the energy of the wave moves _____.
   a. along with the wave b. up and down only
9. When a wave moves through a spring, what moves all the way from one end to the other?

_____