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?
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
Overview
Introduction to Waves

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

reflection | medium | incidence
energy | mechanical | space

Waves
that need a
are
obey the
laws of

1. are called

2. ________

3. ________ waves

4. that transfer

5. ________

6. matter or

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 wavelengths that pass a fixed point each second is ________ of a wave.
   a. a rarefaction       b. the frequency       c. the crest
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

6. Figure 1 shows a _______ wave.
   a. longitudinal  b. transverse

7. Figure 2 shows a _______ wave.
   a. longitudinal  b. transverse

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?