

Name _____ Date _____ Class Period _____

Waves: Sound & Light Unit Study Guide

1. Waves transfer _____ .
2. Which of the following types of waves requires a medium: microwave, visible light, sound waves or x-rays?
3. A wave can make a leaf bob up and down on the water, but it cannot move the leaf toward the shore. This is because waves only transfer _____
4. Which of these waves do NOT require a medium? Sound, ocean, radio, or seismic.
5. Which of the following is NOT a property of a wave? Amplitude, frequency, wavelength, refraction.
6. An echo is the result of a _____ sound wave.
7. A section of a longitudinal wave where the particles are crowded together is called a _____.
8. When the crests of one wave overlap the crests of another wave or waves, this is called: _____
9. Part of a longitudinal wave where the particles are spread apart is called is called a _____.
10. Which of the following waves is an example of a mechanical wave: light, x-ray, radio or ocean wave?
11. What happens when sound waves travel around corners? _____
12. A substance through which a wave can travel is called a _____.
13. The amplitude of a sound's waves determines the sound's _____.
14. The medium through which sound waves travel affects the _____ of the sound.

15. The electromagnetic spectrum is divided into regions by _____.
16. What wave interaction occurs when waves combine and the resulting wave has a greater amplitude than the individual waves had? _____
17. What wave interaction occurs when waves combine and the resulting wave has a smaller amplitude than the individual waves had? _____
18. What kind of waves can be used to treat some cancerous tumors? _____
19. Mechanical waves can NOT transport...
- a. energy
 - b. material
 - c. matter
 - d. answers b and c are correct
20. Compared to the speed of light, sound travels...
- a. faster.
 - b. at about the same speed.
 - c. slower.
21. Sound travels faster in water than...
- a. steel.
 - b. air.
 - c. aluminum
 - d. space
22. A singer shattering crystal glass with her voice is a demonstration of...
- a. resonance.
 - b. sound refraction.
 - c. an echo.
 - d. interference.
23. Compared to its speed in air, the speed of light in water is...
- a. slower.
 - b. the same.
 - c. faster.
24. Refraction is caused by...
- a. waves encountering a gap.
 - b. more than one reflection.
 - c. displaced images.
 - d. changing waves speeds at a boundary.
25. Refraction...
- a. can occur when a wave changes speed.
 - b. cannot occur at a boundary
 - c. only occurs with mechanical waves
 - d. only occurs with light waves