

Assessment

Quiz**Section: Types of Waves**

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- _____ 1. Sound waves from a radio generally travel in which medium?
a. air
b. earth
c. light
d. water
- _____ 2. If a transverse wave is moving from right to left, the individual particles in the medium are moving
a. right to left.
b. left to right.
c. up and down.
d. None of the above
- _____ 3. Waves are often caused by
a. potential energy.
b. mechanical energy.
c. colliding objects.
d. vibrating objects.
- _____ 4. The _____ of a longitudinal wave radiates outward from its source, while the particles vibrate back and forth about their original positions.
a. medium
b. wave front
c. crest
d. kinetic energy

In the space provided, write the letter of the term or phrase that best matches each description.

- _____ 5. a wave in which particle motion is perpendicular to wave motion
a. mechanical wave
b. transverse wave
c. longitudinal wave
d. electromagnetic wave
e. crest
f. surface wave
- _____ 6. a term that refers to the high point of a wave
- _____ 7. a disturbance at the boundary between two media
- _____ 8. a wave that requires a medium in which to travel
- _____ 9. a wave in which particle motion is parallel to wave motion
- _____ 10. a wave that consists of oscillating electromagnetic fields, radiating outward at the speed of light

Assessment

Quiz**Section: Characteristics of Waves**

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- _____ 1. Our eyes can detect light only within a range of _____ called visible light.
a. frequencies
b. speeds
c. mediums
d. periods
- _____ 2. The maximum displacement of a particle by a wave is called
a. amplitude.
b. wavelength.
c. frequency.
d. period.
- _____ 3. The _____ is the distance between two crests of a wave.
a. amplitude
b. wavelength
c. frequency
d. period
- _____ 4. The _____ is the time it takes for one full vibration of a particle in a medium.
a. period
b. frequency
c. amplitude
d. wave speed
- _____ 5. _____ is the inverse of period.
a. Wavelength
b. Crest
c. Frequency
d. Amplitude
- _____ 6. Calculate the wave speed for a wave with a wavelength of 2 m and a frequency of 0.3 Hz.
a. 0.6 m/s
b. 1.67 m/s
c. 0.15 m/s
d. 2.3 m/s
- _____ 7. What is the period of a wave with a wave speed of 50 m/s and a wavelength of 10 mm?
a. 2 s
b. 0.2 s
c. 0.02 s
d. 0.0002 s
- _____ 8. The speed of a sound wave
a. depends on wavelength.
b. depends on the medium.
c. depends on amplitude.
d. None of the above
- _____ 9. Waves travel quickly in a _____ because the molecules are closely packed and physically bonded together.
a. liquid
b. gas
c. solid
d. None of the above
- _____ 10. The Doppler effect is an observed change in a wave's
a. wavelength.
b. period.
c. amplitude.
d. frequency.

Assessment

Quiz**Section: Wave Interactions**

In the space provided, write the letter of the term or phrase that best matches each description.

- | | |
|--|-------------------------------|
| _____ 1. the combination of two or more waves that results in a single wave | a. diffraction |
| _____ 2. the change in direction of a wave when it encounters an obstacle or edge | b. refraction |
| _____ 3. interference that decreases amplitude | c. standing wave |
| _____ 4. a pattern of vibration that resembles a stationary wave | d. reflection |
| _____ 5. points in a standing wave that have no vibration due to destructive interference | e. constructive interference |
| _____ 6. the bouncing back of a wave when it meets a surface or boundary | f. destructive interference |
| _____ 7. interference that increases amplitude | g. principle of superposition |
| _____ 8. sounds produced by the interference of sound waves that are used to tune piano strings | h. beats |
| _____ 9. the bending of waves as they pass from one medium to another at an angle | i. interference |
| _____ 10. method of adding crests and troughs of interfering waves together to describe a new wave | j. nodes |