

NAME _____

DATE _____

CLASS _____

Chapter

REINFORCEMENT

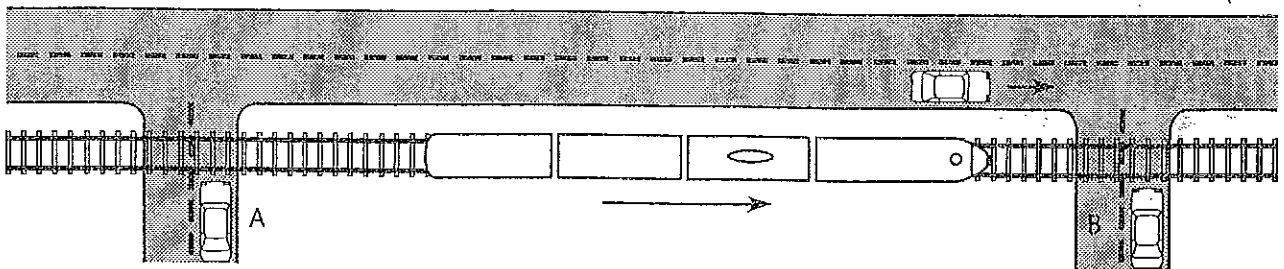
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The Nature of Sound

Determine whether the italicized term makes each statement true or false. If the statement is true, write the word "true" in the blank. If the statement is false, write in the blank the term that makes the statement true.

- _____ 1. A *rarefaction* is the area of a sound wave where particles are less dense.
- _____ 2. Sound travels more slowly through *gases* than it does through liquids.
- _____ 3. The *amplitude* of a sound is its highness or lowness.
- _____ 4. As the amplitude of a wave decreases, its *intensity* also increases.
- _____ 5. The Doppler effect is an apparent change in the *resonance* of a sound.
- _____ 6. As energy is added to a wave, its amplitude and *intensity* increase.
- _____ 7. The speed of a sound wave depends partly on the *temperature* of the medium.
- _____ 8. The pitch of a sound depends on the *frequency* of the waves that produce it.
- _____ 9. Air and water are examples of *media* through which sound travels.
- _____ 10. A high musical note has a higher *wavelength* than a low note.
- _____ 11. In a *transverse* wave, matter vibrates in the direction the wave travels.

In the drawing below, the freight train and the sports car are traveling beside each other at the same speed and the train whistle is blowing.



12. Compare the frequency of the sound waves produced by the whistle and the pitch of the whistle to each of the following:
 - a. Michael, who is waiting to cross the tracks at point A _____
 - b. Sandra, who is driving the sports car _____
 - c. Tony, who is an engineer on the train _____
 - d. Jane, whose car has stopped at position B _____

Chapter

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STUDY GUIDE

● The Nature of Sound

Match the items in Column II with the phrases in Column I. Write the letter of the correct item in the blank to the left of each phrase in Column I.

Column I

- _____ 1. Sounds move fastest in these media.
- _____ 2. apparent change in pitch of a sound caused by the motion of the object making the sound
- _____ 3. sounds with frequencies too low for the human ear to hear
- _____ 4. area of a sound wave where particles are squeezed close together
- _____ 5. human perception of loudness
- _____ 6. condition of a medium that affects the speed at which a sound wave travels
- _____ 7. produce sounds
- _____ 8. Matter vibrates in the same direction as these waves travel.
- _____ 9. vibrate when you talk
- _____ 10. unit of sound intensity
- _____ 11. area of a sound wave where particles are less dense
- _____ 12. frequencies too high-pitched for the human ear to hear
- _____ 13. the highness or lowness of a sound
- _____ 14. distance between two side by side compressions of the same wave
- _____ 15. number of compressions that pass a place each second

Column II

- a. amplitude
- b. compression
- c. compressional waves
- d. crests
- e. Doppler effect
- f. frequency
- g. gases
- h. infrasonic
- i. intensity
- j. liquids
- k. decibel
- l. pitch
- m. rarefaction
- n. temperature
- o. transverse waves
- p. troughs
- q. solids
- r. ultrasonic
- s. vibrations
- t. vocal chords
- u. wavelength