

Name _____ Class _____ Date _____

Study Guide Sound Quiz –What Does It Sound Like?

1. Describe the factors that affect pitch and loudness of sound produced by vibrating objects.
 - a. _____ is the highness or lowness of a sound.
 - b. _____ is the speed of the vibration in a sound wave.
 - c. Changing the _____, _____ and _____ of an object affects the pitch of the sound when it vibrates.
 - d. The smaller items usually have a _____ pitch than a larger item.
 - e. _____ is the loudness of a sound.
 - f. Changing the _____ in the vibration affects the loudness of the sound.
 - g. The more _____ in the vibration, the _____ the sound.
2. Describe how you can produce different pitches with a rubber band.
3. Describe how you can produce different volumes with a xylophone.
4. Describe how you could produce a loud, low-pitched sound with a recorder.

5. Describe how sound is transmitted, reflected and absorbed.

Sound travels differently through solids, liquids and gases.

- a. Sound travels fastest through _____ and slowest in _____.
- b. Smaller, softer, more irregular materials _____ sound better.
- c. Harder, more regular, and larger objects _____ sound better.
- d. Sound that is reflected can be heard as an _____.
- e. A sound is _____ when it hits a wall.
- f. _____ is used by boats to locate objects below the surface of the water.
- g. _____ is used by bats to “see”.
- h. _____ is used to see organs inside the body.
- i. Explain why you will hear echoes when you bounce a basketball in an empty gymnasium, but not in a crowded gymnasium.

6. Name the three types of musical instruments and how they produce sound.

a. _____ instruments produce sound when

b. _____ instruments produce sound when

c. _____ instruments produce sound when

_____.

7. a. Loudness is measured using _____.

b. Frequency is measured using

_____.

c. _____ are frequencies that are too high for the human ear.

d. The apparent change in pitch of a sound caused by the relative motion between the source of the sound and the observer is the

_____. (Think of fire truck siren as it moves towards you and moves away.)