

Sound Worksheet

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1. True or False: Sound is a form of energy.
2. What are the vibrations in the air around an object called?
3. True or False: Sound travels through vibrating air particles.

4. How do humans hear sound?

Put in order from 1 to 6 how sound reaches our brains.

- ___ Sound waves enter the ear drum
- ___ Sound waves cause the eardrum to vibrate
- ___ The eardrum makes tiny bones in the ear move
- ___ Tiny bones send sound to the cochlea
- ___ In the cochlea sound makes tiny hairs bend
- ___ Bending hairs cause nerves to send signals to the brain

5. Why does sound travel faster through solids and liquids than through air?

6. Why is there no sound in space?

7. What are some ways people absorb sound?

8. What is an echo?

9. What types of animals use echo to navigate and hunt?

10. How do humans use echolocation?

11. Explain sound waves in your own word.

12. What is amplitude?

13. Fill in the blanks:

Loud sounds have _____ amplitude. Soft sounds have _____ amplitude.

14. What makes sound high or low?

15. Fill in the blanks:

The _____ an object vibrates, the _____ its frequency.

High pitched sounds have a _____ frequency than low pitched sounds.

16. Give an example of a high pitched sound and a low pitched sound.

17. How do hearing aids help people?

ANSWERS:

1. True
2. Sound waves
3. True
4. (1) Sound waves enter the ear drum (2) Sound waves cause the eardrum to vibrate (3) The eardrum makes tiny bones in the ear move (4) Tiny bones send sound to the cochlea (5) In the cochlea sound makes tiny hairs bend (6) Bending hairs cause nerves to send signals to the brain
5. Particles in solids and liquids are closer together than particles in the air.
6. There is no air in outer space so there are no particles to vibrate.
7. Curtains, cushioned seats.
8. When sound reflects.
9. Bats, dolphins and whales.
10. Sonar systems help humans find objects under water. Ultrasound helps detect movement and is also used to look inside your body.
11. See page 18.
12. Amplitude is the amount of energy in a sound wave.
13. Loud sounds have more amplitude. Soft sounds have less amplitude.
14. Frequency
15. The faster an object vibrates, the greater its frequency.
High pitched sounds have a higher frequency than low pitched sounds.
16. High pitched: a bird. Low pitched: Lion's roar
17. Hearing aids help people hear frequencies that they may have lost.