

Sound and Music Worksheet

Match both the science/engineering terms on the left and the music terms on the right with the definitions in the middle. You will use some of the definitions twice.

 J Low Frequency

 C Longitudinal Waves

 E Frequency

 G High Amplitude

 L White Noise

 F Amplitude

 A Sound Waves

 K Standing Waves

 B Transverse Waves

 D Wavelength

 I High Frequency

 H Low Amplitude

A. Waves in the air caused by vibrations

B. Waves that move in one direction, but "wave" in another direction

C. Waves that move and "wave" in the same direction

D. The distance between one wave and the next wave

E. How often a single wave goes by

F. How big the difference is between the high points and the low points of the waves

G. Big difference between highs and lows

H. Small difference between highs and lows

I. Lots of short waves

J. Very few long waves

K. Waves that can keep vibrating in or on something for a long time because they "fit"

L. A sound that is a mixture of all wavelengths

M. Sounds that are organized by people

 J Low note

 E Pitch

 F Dynamic level

 H Soft note

 M Music

 I High note

 A Sounds

 G Loud note

Give short answers:

1. Can sound travel through empty space? Why or why not?

No; there can be no sound vibrations where there is nothing to vibrate.

2. How are sound waves like water waves? How are they not like water waves?

Both can have frequency and amplitude, but water waves are transverse and sound waves are longitudinal.

3. Name 2 ways a player of a musical instrument can change the sound of the instrument.

They can make the pitch higher or lower or make the sound louder or softer.

4. How can an instrument with only 4 strings get more than 4 different pitches?

You can make the vibrating part of the string shorter, and the pitch higher, by holding the string down with one finger.

5. When a trumpet player pushes down a valve, she opens an extra loop of tubing. What does this do to the trumpet? To the sound?

This in effect makes the trumpet longer, so the sound is lower.