

## 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.

- |                        |   |                   |
|------------------------|---|-------------------|
| ___ Low Frequency      | A. Waves in the air caused by vibrations  |                   |
| ___ Longitudinal Waves | B. Waves that move in one direction, but "wave" in another direction                    |                   |
| ___ Frequency          | C. Waves that move and "wave" in the same direction                                     | ___ Low note      |
| ___ High Amplitude     | D. The distance between one wave and the next wave                                      | ___ Pitch         |
| ___ White Noise        | E. How often a single wave goes by  | ___ Dynamic level |
| ___ Amplitude          | F. How big the difference is between the high points and the low points of the waves    | ___ Soft note     |
| ___ Sound Waves        | G. Big difference between highs and lows  | ___ Music         |
| ___ Standing Waves     | H. Small difference between highs and lows  | ___ High note     |
| ___ Transverse Waves   | I. Lots of short waves  | ___ Sounds        |
| ___ Wavelength         | J. Very few long waves  | ___ Loud note     |
| ___ High Frequency     | K. Waves that can keep vibrating in or on something for a long time, because they "fit" |                   |
| ___ Low Amplitude      | L. A sound that is a mixture of all wavelengths   |                   |
|                        | M. Sounds that are organized by people  |                   |

### Give short answers:

1. Can sound travel through empty space? Why or why not?
2. How are sound waves like water waves? How are they not like water waves?
3. Name 2 ways a player of a musical instrument can change the sound of the instrument.
4. How can an instrument with only 4 strings get more than 4 different pitches?
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?