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 definiitons twice.

____ **Low Frequency**	A. Waves in the air caused by vibrations	____ **Low note**
____ **Longitudinal Waves**	B. Waves that move in one direction, but "wave" in another direction	____ **Pitch**
____ **Frequency**	C. Waves that move and "wave" in the same direction	____ **Dynamic level**
____ **High Amplitude**	D. The distance between one wave and the next wave	____ **Soft note**
____ **White Noise**	E. How often a single wave goes by	____ **Music**
____ **Amplitude**	F. How big the difference is between the high points and the low points of the waves	____ **High note**
____ **Sound Waves**	G. Big difference between highs and lows	____ **Sounds**
____ **Standing Waves**	H. Small difference between highs and lows	____ **Loud note**
____ **Transverse Waves**	I. Lots of short waves	
____ **Wavelength**	J. Very few long waves	
____ **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?