**SOUND JENGA QUESTIONS**

**S1.** Sound energy travels through the air in waves.

**TRUE –** Sound must have a medium in which to travel. The air molecules transfer the energy by compression waves from one molecule to its neighbor.

**S2.** Sound travels faster in water than in air.

**TRUE –** The particles are closer together in a liquid, than a solid thus the energy is more quickly transferred to its neighboring molecule.

**S3.** Sound can travel in outer space.

**FALSE –** Sound must have a medium in which to travel.

**S4.** Loud sounds can damage your ear drum.

**TRUE –** Loud sounds can vibrate your each drum so much that it can rupture your ear drum and can cause damage to you auditory nerves**.**

**S5.** Refraction happens when a sound wave hits a solid flat surface.

**FALSE –** When a sound wave hits a solid flat surface, it is reflected (an echo).

**S6.** To increase the loudness of a wave, you would increase the pitch.

**FALSE –** To increase the loudness, you would increase the amplitude**.**

**S7.** A sound wave is a type of kinetic energy.

**TRUE –** Sound is the transfer of kinetic energy in the form of vibrations from one particle to the next.

**S8.** Sound is produced by vibrating objects.

**TRUE –** If nothing is vibrating, there is no sound.

**S9.** The pitch of a sound on a guitar can be altered by changing the length of a string.

**TRUE** – If you shorten the wavelength, you raise the pitch.

**S10.** Unlike light, sound waves cannot be reflected.

**FALSE –** A sound reflection is an echo.

**S11.** Sound can travel in all directions from a source.

**TRUE –** You can still hear my voice if you turn around.

**S12.** Loud sounds can alter an ecosystem.

**TRUE –** Predators and prey will not have the same advantages if their hearing is altered by human sounds such as traffic, construction, etc.

**S13.** Sound only travels through liquids and solids.

**FALSE –** Sound travels through liquids and solids, but also through gases. The sounds you usually hear are passing through a gas-the air around us.

**S14.** The amplitude of a sound (loudness of a sound) is measure in decibels.

**TRUE –** A whisper is 10 decibels (dB), a vacuum cleaner is 80 dB, and a jet take-off if 140 dB.

**S15.** The hammer, nail and screwdriver are bones in our ear that vibrate transferring sound waves to signal our brain.

**FALSE –** The bones in our ear are the hammer, anvil and stirrup.