# **Sound**

**Sound: is created when matter vibrates from some kind of disturbance. If there is no matter present then there is nothing to vibrate to create the noise and that is why sound cannot travel in space (or a vacuum).**

**Sound is a compressional wave, which means that the particles move parallel to the motion of the wave.**

**Compressional waves are made of areas where the particles come together (called compressions) and areas where the particles spread out (called rarefactions).**

**Example:**

Compression Rarefaction

**Loudness: of a sound depends on the size of the force that creates the sound and the size of the object that is creating the noise. As both of these get larger the sound does as well.**

**Pitch: of a sound depends on the frequency of the sound. As the frequency of the sound gets larger so does the pitch.**