

## Acoustical Science

---

**science:** a methodical approach to the acquisition of knowledge

**acoustics:** the science of sound

**pitch:** how low or high the sound is; the frequency of a sound wave determines the pitch: the higher the frequency, the higher the pitch

**control:** an individual or group used as a standard of comparison for checking or verifying the results of an experiment

**variable:** something that is prone to variation or change

**instrument family:** the orchestra is divided into different instrument families with each family of instruments having specific characteristics in common; the instrument families are string, brass, woodwind, and percussion

**vibration:** a periodic motion of the particles of an elastic body or medium in alternating opposite directions from the position of equilibrium when the equilibrium has been disturbed as when a stretched cord produces musical tone or particles of air transmit sounds to the ear

**frequency:** the number of complete waves per unit of time. The higher the frequency, the higher the pitch

**hertz:** a unit of frequency equal to one cycle per second

**resonance:** the ability of an object to vibrate by absorbing energy of its own natural frequency. Every medium has its own natural vibration frequency

**music:** sound with a pleasing quality, a identifiable pitch, and a definite repeated rhythm

**noise:** sound with no pleasing quality, definite identifiable pitch, or definite repeated rhythm

**hypothesis:** an educated guess; an answer to the question

**prediction:** Example: If my hypothesis is true then \_\_\_\_\_ should happen when \_\_\_\_\_ is manipulated.

**pizzicato:** a note or passage played by plucking strings