

SOUND

Sound waves - compressional waves formed from vibrating objects colliding with air molecules.

* Remember compressional waves are made of two regions called compressions and rarefactions.

Speed of sound - depends on temperature and state of medium.

- sound travels faster in solids and liquids - molecules are closer together than gas molecules
- as medium temp rises, molecules move faster, conducting sound waves faster.

Human Hearing - involves 4 stages:

Stage 1: ear gathers compressional waves which vibrate a tough membrane called eardrum.

Stage 2: the middle ear has three bones called hammer, anvil and stirrup which amplify sound wave.

Stage 3: the inner ear contains the cochlea which vibrate sending auditory nerve impulses to brain.

Stage 4: brain decodes and interprets nerve impulses.

Intensity - amount of energy that flows through a certain area in a given amount of time.

Loudness - human perception of sound intensity which is measured in decibels.

Pitch - how high or low a sound seems to be which is related to frequency of sound wave.

