

All About Sound

<http://www.physics.lsa.umich.edu/chupp/ElementaryScience>

Sound is what we hear:

VIBRATIONS shake the AIR
AIR shakes the EARDRUM
NERVES sense the SHAKE
BRAIN feels the SOUND

Different sounds:

LOUD/SOFT
HIGH/LOW pitch
SHORT/LONG

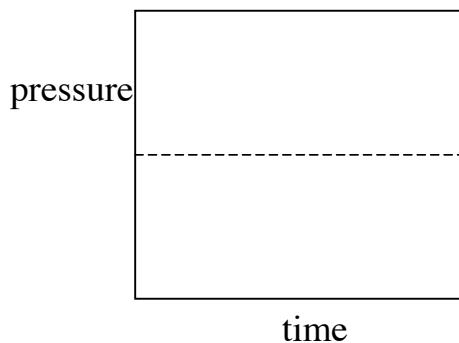
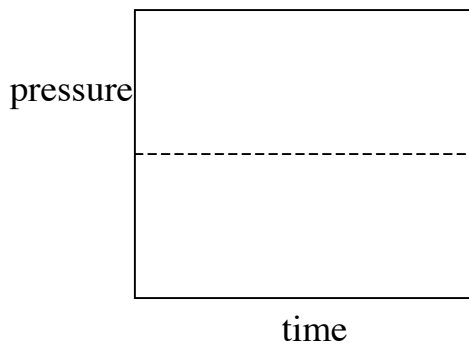
VIBRATIONS Make WAVES

Changes with TIME

FAST – Need Special Measuring Tools

OSCILLOSCOPE makes a PRESSURE vs TIME GRAPH

What did you see?



HIGH PITCH – FAST VIBRATIONS – HIGH FREQUENCY
LOW PITCH – SLOW VIBRATION – LOW FREQUENCY

SHORT THINGS – HIGH PITCH – SHORT WAVELENGTH
LONG THINGS – LOW PITCH – LONG WAVELENGTH

SOUND is FAST: 740 miles per hour in air

$SPEED = FREQUENCY \times WAVELENGTH$