

8th Standard- Science

Sound

Sound plays an important role in our daily life. It helps us to communicate with one another and express yourself.

Sound is produced by vibrating the objects and it is carried in all directions with the help of a medium.

Sound needs a medium to travel. It cannot travel in a vacuum.

We hear sound through our ears.

The eardrums of our ears sense the vibrations produced by a vibrating object and send them to the brain as the stimulus. This process is called a hearing.

Frequency: The number of oscillations or vibrations per second is called the frequency of oscillation.

Noise Pollution: The presence of excessive or unwanted sound in the atmosphere is called noise pollution.

Major causes of noise pollution are sounds of vehicles, explosions including the bursting of crackers, machines, loudspeakers etc.

Presence of excessive noise in the surroundings may cause many health-related problems e.g., lack of sleep, hypertension and anxiety etc.

Plantation on the roadside and elsewhere is the best source to reduce the noise pollution.

The loudness is expressed in a unit called decibel (dB). It also depends on the amplitude of the sound.

Amplitude: The maximum distance to which a vibrating body moves on either side of its mean position is called the amplitude of vibration.

Audible Frequencies: For human ears, the range of audible frequencies is roughly from 20 to 20,000 Hz.

Eardrum: A thin membrane which is stretched tightly to receive the waves of sound at the end of ear canal.

Hertz: The frequency is expressed in hertz (Hz).

Larynx: In humans, the sound is produced by the larynx.

The loudness of Sound: Larger the amplitude of vibration, louder is the sound.

Noise: Unpleasant sounds are called noise.

Oscillation motion: The to and fro motion of an object is called oscillation motion.

Pitch of the Sound: Higher the frequency of vibration, the higher is the pitch, or shrill of the sound.

Shrillness: The frequency determines the shrillness or pitch of a sound. If the frequency of vibration is higher we can say that sound is shrill.

Time Period: The time taken by a pendulum to complete one oscillation is called the time period.

Vibration: The to and fro or back and forth motion of an object is termed as vibration.

Voice Box: Upper end of the windpipe, below the hard part on the throat is called the voice box.

Windpipe: It is the passage for the inlet and outlet of air in the lungs.