

Prisoner of Echo Glossary

AMPLITUDE

is the fluctuation or displacement of a wave from its position of equilibrium. With **sound** waves, amplitude is the extent to which air particles are displaced: *the bigger the amplitude, the louder the sound.*

COMPRESSION

An area where the air molecules around a sound wave are pushed together.

CONSTRUCTIVE INTERFERENCE

Occurs when the compressions and the rarefactions of two waves line up, strengthen each other, and create a wave with a higher intensity.

DESTRUCTIVE INTERFERENCE

Occurs when the compressions and rarefactions of two waves are out of phase and their interaction creates a wave with a lower intensity.

ECHO

A sound or series of sounds caused by the reflection of sound waves from a surface back to the listener.

ECHOLOCATION

The ability to locate objects by reflected sound; used by animals such as dolphins and bats.

FREQUENCY

The number of wavelengths passing a fixed point per second.

INFRASOUND

Sounds with frequencies below the lowest limit of human hearing (20 hertz).

INTENSITY

A sound's loudness.

MEDIUM

The matter through which sound travels.

PITCH

The highness or lowness of a sound as determined by the frequency of the sound wave.

RAREFACTION

An area where the air molecules around a sound wave are spread apart.

REFLECTION

Occurs when a wave bounces back after hitting a boundary; sound waves can be reflected, usually resulting in an echo.

SONAR

A navigation system that uses echoes to determine the locations of objects.

SOUND

Vibrations that travel through the air or another medium and can be heard when they reach a person's or animal's ear.

SOURCE

The starting point of a wave.

ULTRASOUND

Sounds with frequencies above the highest limit of human hearing (20,000 hertz).

WAVE

A disturbance that carries energy through matter or space; sound travels in waves.

WAVE SPEED

How fast a wave moves.

WAVELENGTH

The distance between the centers of two compressions of sound waves.