



ACROSS

- 4 A _____ is a mode of energy transfer from one place to another, often with little or no permanent displacement of the particles of the medium, but through oscillations around nearly fixed positions.
- 6 A _____ wave is a type of propagating disturbance characterized by an abrupt, nearly discontinuous, change in the characteristics of the medium.
- 7 In acoustics, a _____ is an interference between two sounds of slightly different frequencies, perceived as periodic variations in volume.
- 8 A _____ wave is a wave that travels through the Earth, most often as the result of a tectonic earthquake, sometimes from an explosion.
- 10 The _____ of sound describes how much distance a sound wave travels in a given amount of time.
- 12 _____ is the superposition of two or more waves that results in a new wave pattern.
- 13 _____ is the branch of physics concerned with the study of sound
- 15 _____ is the change in direction of a wave due to a change in its speed when a wave passes from one medium to another.
- 18 A _____ or harmonic is a natural

resonance or vibration frequency of a system.

- 21 A _____ or overtone of a wave is a component frequency of the signal that is an integer multiple of the fundamental frequency.
- 23 _____ is the distance between repeating units of a propagating wave of a given frequency.
- 24 _____ is the change in direction of a wave front at an interface between two dissimilar media so that the wave front returns into the medium from which it originated.
- 25 _____ waves are waves that have vibrations along or parallel to their direction of travel.
- 26 A _____ is the point on a wave with the greatest positive value or upward displacement in a cycle.
- 27 _____ radiation, or light, is a self-propagating wave in space with electric and magnetic components.

DOWN

- 1 _____ refers to various phenomena associated with the bending, spreading and interference of waves passing by an object or aperture that disrupts the wave.
- 2 _____ refers to a shortening of a transmitted signal's wavelength.

- 3 A _____ wave is a wave that causes vibration in the medium in a perpendicular direction to its own motion.
- 5 The _____ of an oscillation or wave is the fraction of a complete cycle corresponding to an offset in the displacement from a specified reference point at time $t = 0$.
- 9 _____ is the measurement of the number of occurrences of a repeated event per unit of time.
- 11 A _____ or stationary wave is a wave that remains in a constant position.
- 14 The sound _____ is defined as the sound power per unit area.
- 16 The _____ tone is the lowest frequency in a harmonic series.
- 17 _____ is a disturbance consisting of vibrations traveling through matter as a longitudinal wave.
- 19 The _____ effect is the change in frequency and wavelength of a wave as perceived by an observer moving relative to the source of the waves.
- 20 The _____ series refers to the natural frequencies of an oscillator, limited to integer multiples of the lowest possible frequency.
- 22 The _____ is a logarithmic unit of measurement that expresses the magnitude of a physical quantity relative to a specified or implied reference level.