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Waves, Sound, and Optics

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| **Across****3.** High energy electromagnet waves that are between ultraviolet light and gamma rays in the electromagnetic spectrum**6.** Matter through which visible light is easily transmitted**7.** The emission of energy in the form of EM waves.**9.**  highest point of a wave**10.** Maximum distance the wave vibrates from the rest position**11.** how fast an object moves**12.** The apparent change in the frequency caused by the motion of either the listener or the source of the sound.**14.** Occurs when a wave bounces back after striking an object**15.** The speed at which a wave travels.**18.** The distance between any adjacent crests or compressions in a series of waves.**20.** When an object vibrates at or near the resonant frequency of the second object causes the second object to vibrate**21.** The number of waves produced in a given amount of time**23.** Waves in which the particles of the medium vibrate with an up and down motion**24.** Lowest point of a wave**25.** In a body of water, is an example of a combination of both transverse and longitudinal waves. | **Down****1.** Any disturbance that transmits energy through matter or space.**2.** Waves in which the particles of the medium vibrate back and forth along the path that the wave travels.**4.** the time it takes for one cycle**5.** The bending of waves around a barrier or through an opening**8.** The result of two or more waves overlapping**13.** Sounds with frequencies that are higher than 20,000HZ**16.** A reflected sound wave**17.**  A solid, liquid or gas that is vibrated.**19.** The transfer of energy carried by light waves to particles of matter**22.** A disturbance that transfers energy from place to place |