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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 |