**Waves 4-1**

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| **6.P.1.1** | **Compare the properties of waves to the wavelike property of energy in earthquakes, light and sound.** |
| **What is a wave?** | A wave is a disturbance that transfers energy from one place to another. |
| **What is a medium?** | Any substance that a wave moves through. |
| **Name different examples of waves and their mediums.** | - Water waves-- water  - Rope waves-- rope  - Earthquake waves—Earth |
| **What is a transverse wave?** | Wave in which particles of the medium vibrate at right angles to the direction that the wave travels |
| **Show a transverse wave and give example.** | - Water waves  - Rope wave |
| **What is a longitudinal wave?** | A wave the travels in the same direction as the disturbance |
| **Show a longitudinal wave and give examples.** | - Slinky wave  - Sound wave |
| **What is a crest?** | The highest point or peak of a wave |
| **What is a trough?** | The lowest point, or valley, of a wave |
| **What is amplitude?** | Maximum distance the particles of a medium move from their resting positions when a wave passes through.  \* Tells the amount of energy in the wave  \*\* In sound waves, amplitude= volume |
| **What is wavelength?** | Distance between two corresponding points of adjacent waves, such as the distance between two adjacent crests of a transverse wave |
| **Show a wave and label:**  **Crest, trough, wavelength, amplitude** |  |
| **What is frequency?** | The number of waves that pass a fixed point in a given amount of time  \*In sound waves, frequency = pitch (how high/low a sound is) |
| **What is a compression?** | A force that tends to shorten or squeeze something, decreasing its volume. |
| **What is a rarefaction?** | A decrease in density and pressure in a medium, such as air, especially when caused by the passage of a wave, such as a sound wave |
| **Show a longitudinal wave and label:**  **Compression, rarefaction and wavelength.** |  |