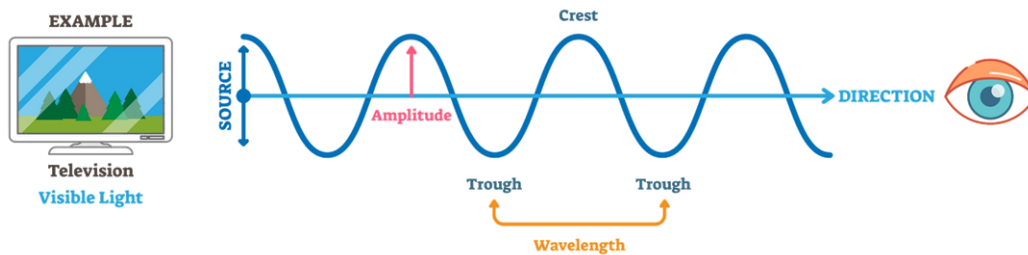


# Waves & the Electromagnetic Spectrum

## Section 2: Features of Waves

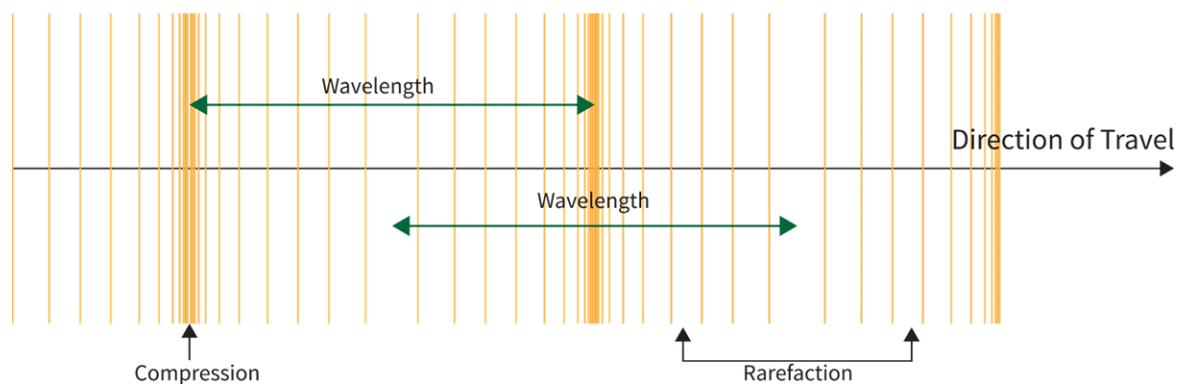
### TRANSVERSE WAVES



Waves have certain features and characteristics that make them different from each other. Each **wavelength** is the distance between a point on a wave and the nearest point just like it, for example from crest to crest. The wavelength of a wave decreases as the frequency increases. Transverse waves have **crests**, which are the highest points, and **troughs**, which are the lowest points. The crests and troughs can be seen where water is displaced above or below the normal water level. The **amplitude** of a wave is the measure of energy at the height of the wave. The more energy a wave carries, the greater the amplitude. The amplitude decreases as the wave travels outward.

When a certain number of wavelengths pass a fixed point in a second, that is how wave **frequency** is measured. The frequency of a wave is the number of wavelengths that pass a fixed point each second, and it is measured in hertz.

Compressional waves have dense regions called **compressions** where their coils are close together and less dense regions called **rarefactions**.



#### Review:

1. Define amplitude.
2. The frequency of a wave is measured in \_\_\_\_\_.
3. Explain the difference between compressions and rarefactions.