

Recap of Waves

period (T) - time for the wave to travel one wavelength
 - time for one complete cycle/rotation (s)



$$T = \frac{\text{time}}{\text{cycles}}$$

frequency (f) - the number of cycles in 1 second. (Hz)

$$f = \frac{\text{cycles}}{\text{time}}$$

$$T = \frac{1}{f} \quad \text{or} \quad f = \frac{1}{T}$$

Wave speed (v) - depends ONLY on the medium
 (does not depend on the amplitude
 or frequency)

$$v = \lambda f$$

Where v is the speed (m/s)
 λ is the wavelength (m) (lambda)
 f is the frequency (Hz or s^{-1})

You can also use: $v = \frac{\Delta d}{\Delta t}$

When a wave travels into a new medium
the frequency stays the same. (the speed changes
 and as a result
 so does λ)