Waves

Wave Encounters!
When a similar wave meets another similar wave, this can happen…

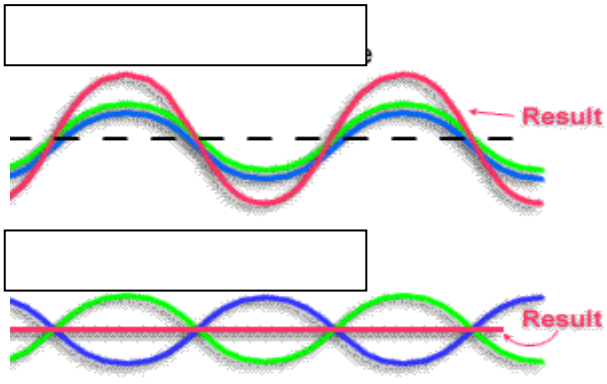
When two or more waves come together, this can cause . Interference happens when waves meet and their is added together or their is taken away.

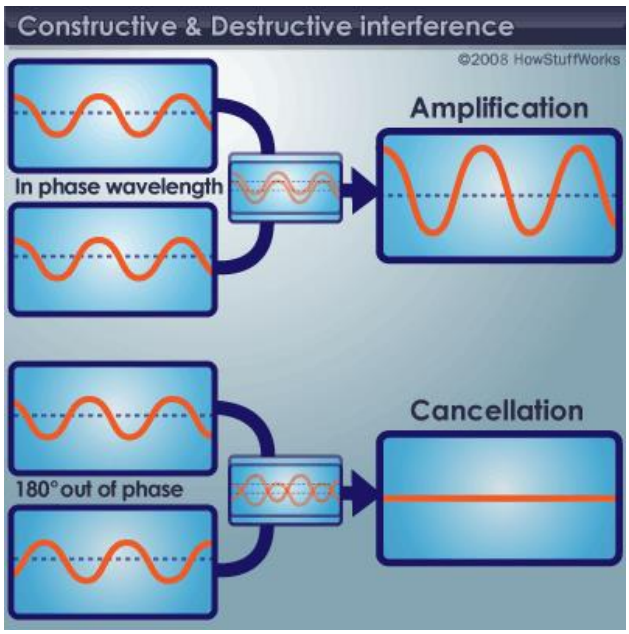
When the crests and troughs of two waves come together exactly, this can cause . When this happens the of the two waves is added together.

This means that two mechanical waves with small , can add together to make one larger wave with a greater

When the crests of one wave joins with the trough of another wave, this can cause . When this happens the of one of the waves is from the other wave.

Two identical sound waves can even cancel each other out so you cannot them.





FREQUENCY & WAVELENGTH

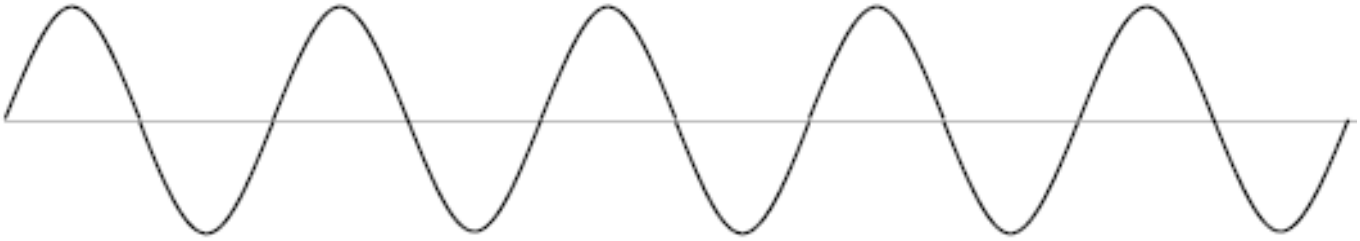
What is the relationship between wavelength and frequency?

Define Wavelength.

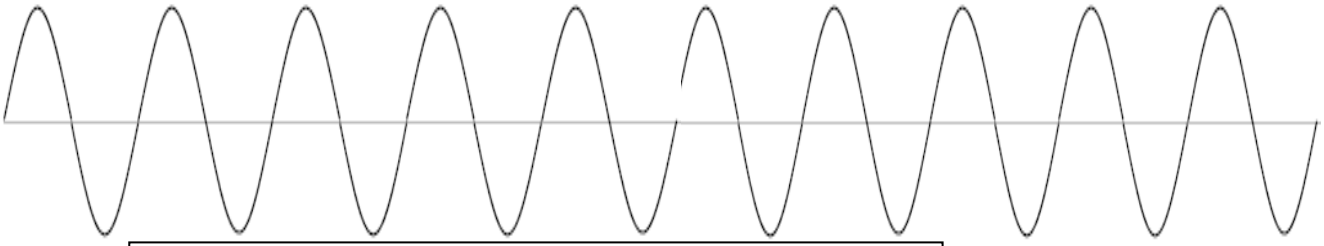
Define Frequency.

It is usually written as waves per second. (waves / second)

Below is a wave with a frequency of 5 Waves per second!



Below is that same wave with a decrease in wavelength!
What is the frequency of the wave below per second?



Answer:

When you decreased the wavelength, what happened to the frequency?

What is the relationship between wavelength and frequency?

_____ the **frequency** you _____ the **wavelength**.

-**Increase** the **wavelength** you _____ the _____

This is an _____ relationship. _____ means _____

Thinking about frequency and wavelength...When one gets _____ the other gets smaller and when one gets _____ the other gets bigger.

Link to Constructive and destructive Interference

http://earthguide.ucsd.edu/earthguide/diagrams/wave_interference/wave_interference.html

Link to Electromagnetic Waves and the relationship between Frequency & Wavelength.

http://earthguide.ucsd.edu/eoc/special_topics/teach/sp_climate_change/p_emspectrum_interactive.html

Link to the relationship between Energy and its frequency

http://amazingspace.org/resources/explorations/light/makewaves-frames.html

Link to transverse and longitudinal waves. Notice the impact waves have on particles. Waves transfer energy not matter.

https://www.acs.psu.edu/drussell/Demos/waves/wavemotion.html

All kinds of wave interactions.

https://www.edumedia-sciences.com/en/node/355-waves