

Guiding Question: How do we measure the wavelength and amplitude of a wave?

Learning Goal: Measure the wavelength and amplitude of a wave.

Agenda

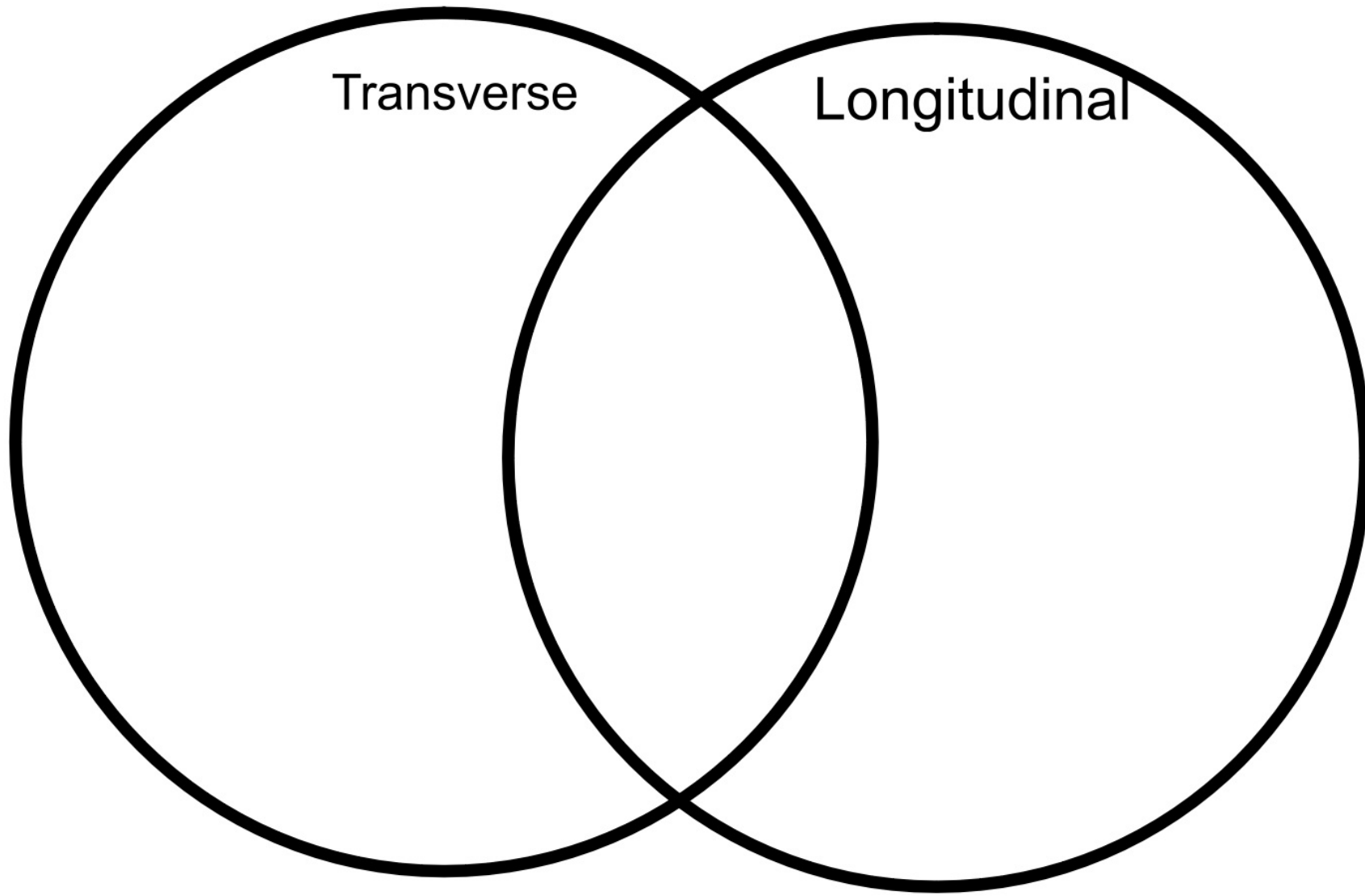
- 1) DSR-Wave parts
- 2) Words of the day-Venn Diagram
- 3) Data collection of Waves Lab
- 4) Practice Wavelength and amplitude

Words of the day

Transverse wave

Longitudinal Wave

Types of Waves



Draw to take up ALL of the paper

Measuring Waves Lab

Transverse Waves

Describe what you changed	Quick Sketch	Wavelength	Amplitude

Describe how your changes to the waves you made affected the amplitude and wavelength of the wave.

Compressional Waves

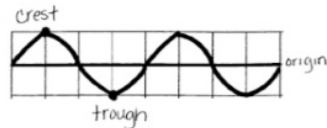
Describe what you changed	Quick Sketch	Wavelength	Amplitude (describe) NO NUMBERS

Describe how your changes to the waves you made affected the amplitude and wavelength of the wave.

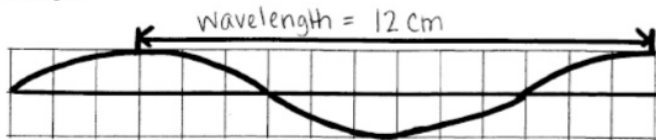
Practice Identifying Wavelength and Amplitude

Wave Measurement Worksheet

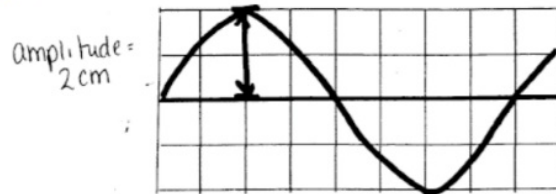
The **rest position** (origin) of the wave is the line where the wave would be at rest.
 The **crest** is the highest point of the wave.
 The **trough** is the lowest point of the wave.



The **wavelength** of a wave can be measured from one crest to the next crest or from one trough to the next trough.

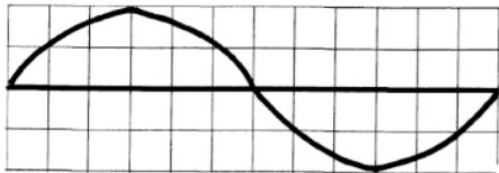


The **amplitude** of a wave can be measured from the origin to the crest or from the origin to the trough.



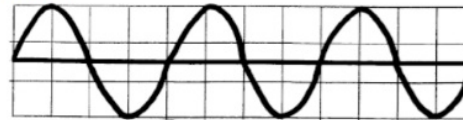
In each of the following, the gridlines are 1 cm apart so that a ruler is not necessary.

Wave 1



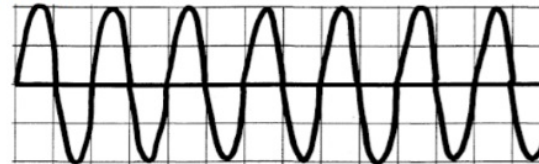
a) wavelength _____ cm b) amplitude _____ cm

Wave 2



a) wavelength _____ cm b) amplitude _____ cm

Wave 3



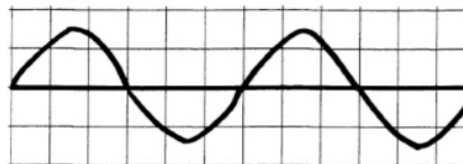
a) wavelength _____ cm b) amplitude _____ cm

Wave 4



a) wavelength _____ cm b) amplitude _____ cm

Wave 5



a) wavelength _____ cm b) amplitude _____ cm

WOD

Waves

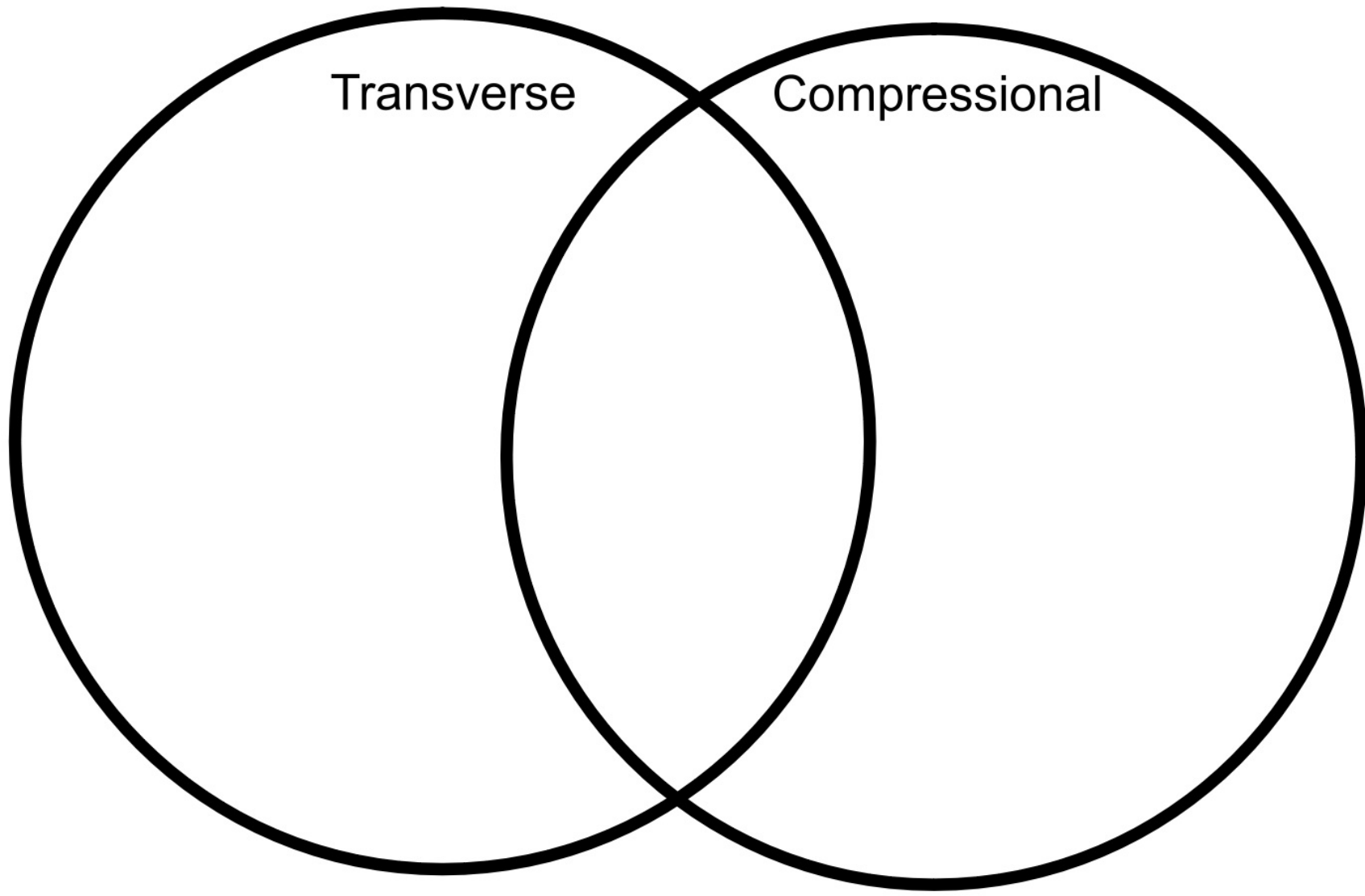
Carry energy from one place to another

DSR Today





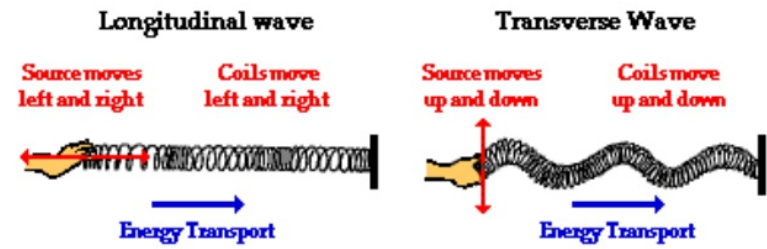
Types of Waves



Types of Waves Venn Diagram

1. Draw a picture of each wave type (p. 294)
2. Write a definition of each wave type including the direction of the matter (p. 290)

3. For a transverse wave label:
 - Wavelength (p. 294)
 - Amplitude (p.299)

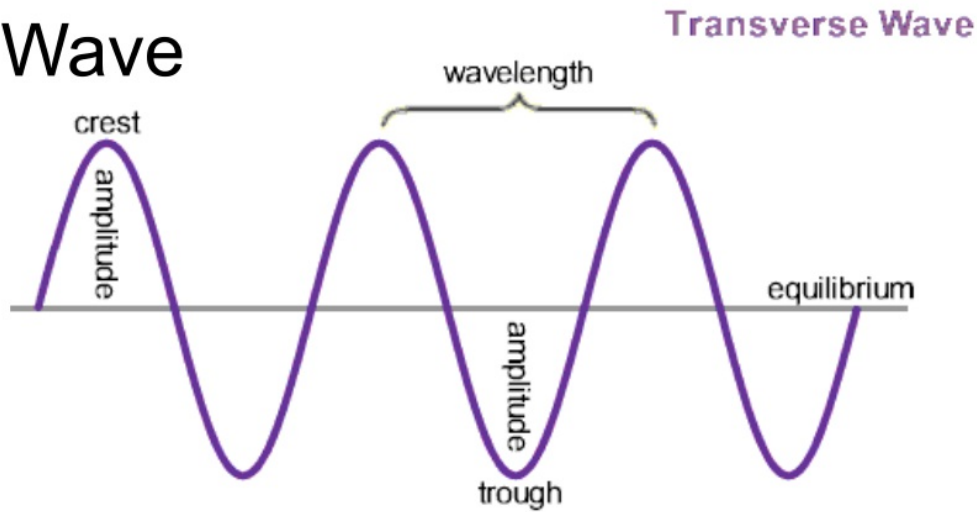


The subsequent direction of motion of individual particles of a medium is the same as the direction of vibration of the source of the disturbance.

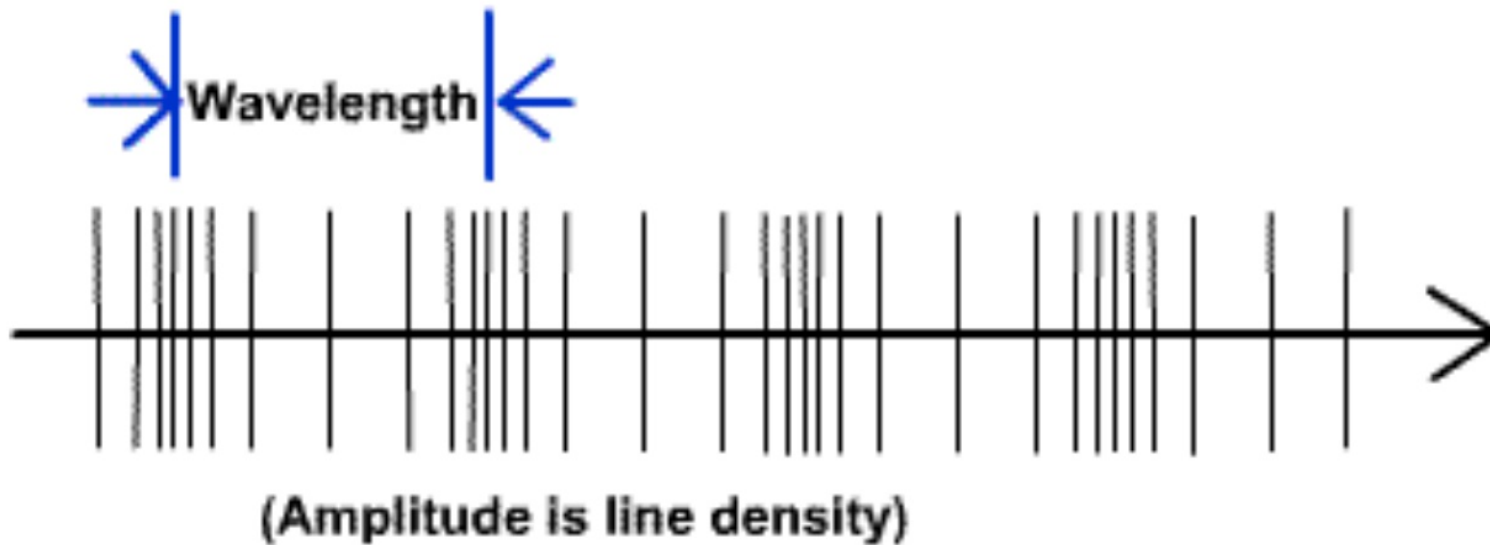
4. For a Compression Wave label
 - Wavelength (p. 295)
 - Draw 2 different amplitudes (p. 298)
 - Compression and Refraction
5. What type of wave? (google search)
 - Sound wave
 - P-waves

How can we Measure the Wavelength and Amplitude of our waves

Transverse Wave



Compressional Wave



Making Waves on a slinky



measuring waves Lab

Transverse Waves

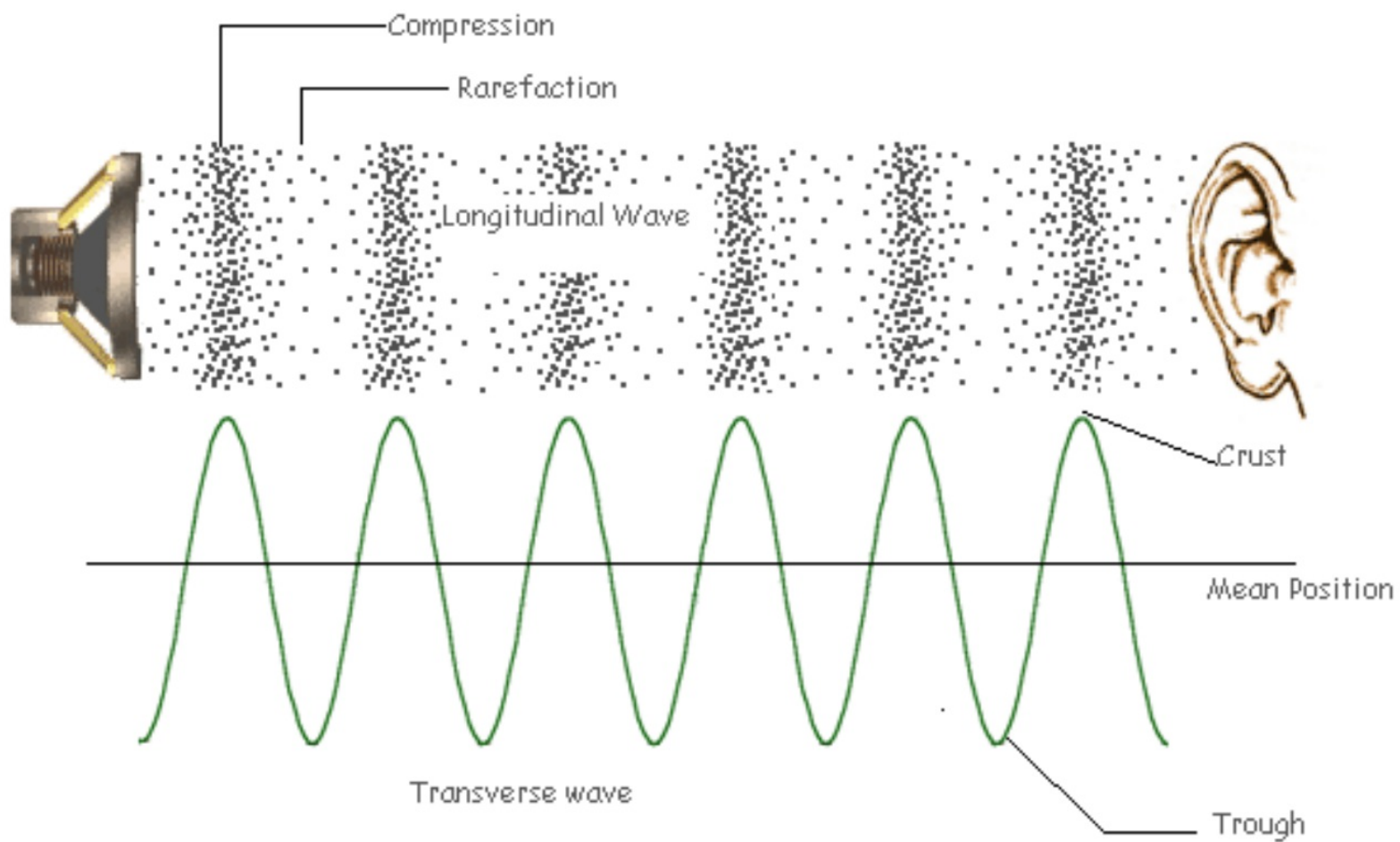
Describe what you changed	Quick Sketch	Wavelength	Amplitude

Describe how your changes to the waves you made affected the amplitude and wavelength of the wave.

Compressional Waves

Describe what you changed	Quick Sketch	Wavelength	Amplitude (describe) NO NUMBERS

Describe how your changes to the waves you made affected the amplitude and

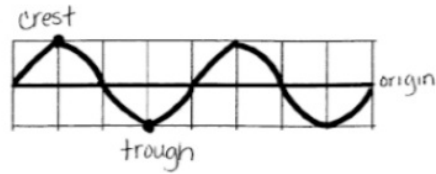


Wave Measurement Worksheet

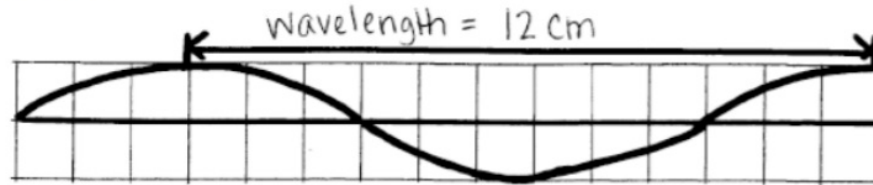
The **rest position** (origin) of the wave is the line where the wave would be at rest.

The **crest** is the highest point of the wave.

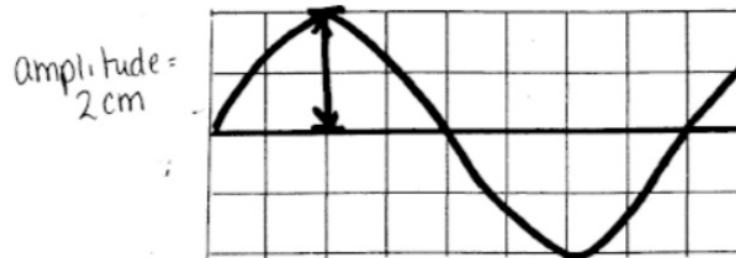
The **trough** is the lowest point of the wave.



The **wavelength** of a wave can be measured from one crest to the next crest or from one trough to the next trough.

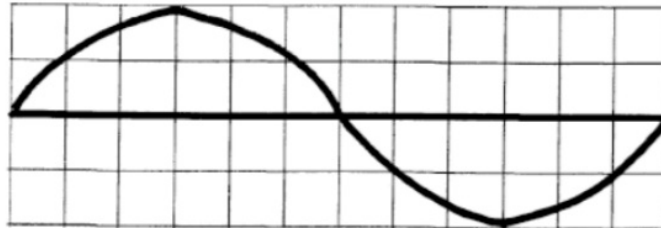


The **amplitude** of a wave can be measured from the origin to the crest or from the origin to the trough.



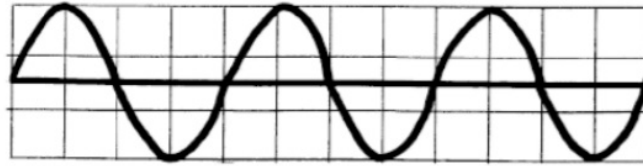
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Wave 1



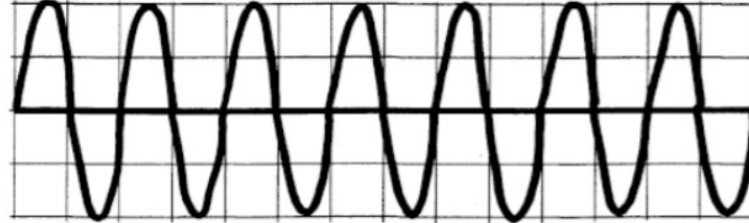
a) wavelength _____ cm b) amplitude _____ cm

Wave 2



a) wavelength _____ cm b) amplitude _____ cm

Wave 3



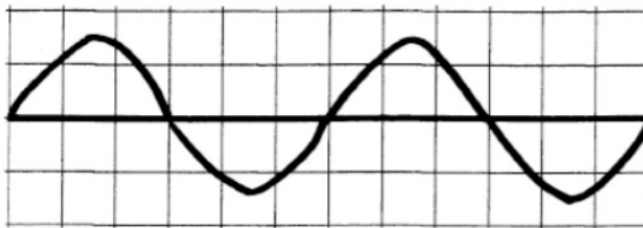
a) wavelength _____ cm b) amplitude _____ cm

Wave 4



a) wavelength _____ cm b) amplitude _____ cm

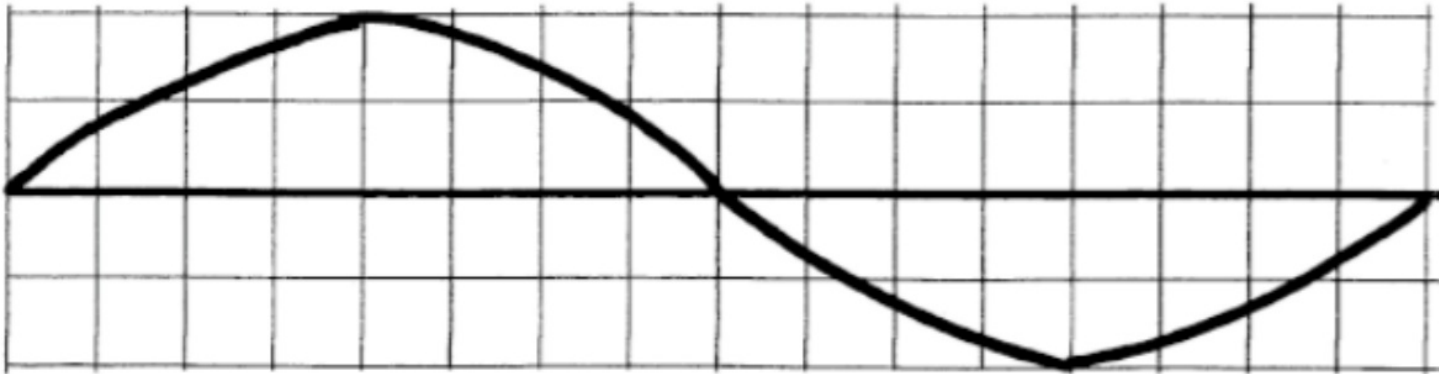
Wave 5



a) wavelength _____ cm b) amplitude _____ cm

Exit Ticket: Wavelength and Amplitude

Wave 6



a) wavelength _____ cm b) amplitude _____ cm

Wave 7



a) wavelength _____ cm b) amplitude _____ cm