

Frequency and Wavelength w/data

Learning Target: I can visually and mathematically model the properties of waves.

1. Use this page if you don't have the original assignment.

$$Frequency = \frac{1}{Period (T)} \quad \text{- record your results}$$

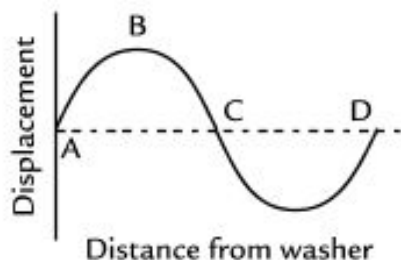
White string length	Time for 10 swings (period x 10)	Time for 1 swing (period/T)	Frequency (Hz)	Wavelength
5.0 cm	5.65 seconds	.565 s		1.5 meters
25.0 cm	10.65 s	1.065 s		3.0 meters
40.0 cm	11.88 s	1.188 s		4.2 meters

How do the size and shape of the waves compare? Draw two of the waves in relative size (scale) to each other.

Please answer the questions in detail

1. What was the relationship between the frequency of the washer and the wavelength of the wave produced in the yarn?

2. Look at the diagram of a wave below.



a. Draw what the wave would look like if the frequency were doubled.

b. Draw what the wave would look like if the wavelength were doubled.

Waves: I can show understanding of the characteristics and properties of waves

4 Highly Proficient	3 Proficient	2 Close to Proficient	1 Developing
<input type="checkbox"/> My answers are detailed and use evidence. <input type="checkbox"/> I can get correctly show the relative differences between waves with different properties.	<input type="checkbox"/> I can show strong understanding of the different properties of waves. <input type="checkbox"/> The lab is complete and answers are mostly correct. <input type="checkbox"/> My answers use actual data from the lab. <input type="checkbox"/> My work is neat.	<input type="checkbox"/> I can complete the basic parts of the lab. <input type="checkbox"/> I can show some understanding of the properties of waves. <input type="checkbox"/> My answers need more detail. <input type="checkbox"/> Some of my information may be incorrect. <input type="checkbox"/> My work is incomplete. <input type="checkbox"/> My work is rough draft quality.	<input type="checkbox"/> I show little to no understanding of the properties of waves. <input type="checkbox"/> Not attempted or mostly incomplete..