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**Waves on a string simulation**

https://phet.colorado.edu/sims/html/wave-on-a-string/latest/wave-on-a-string\_en.html

Should work on firefox and IE

1. Observe and describe what effect moving the wrench up and down, has on the string

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1. Select the ‘oscillate’ option, turn down damping slightly (not to zero)
2. Describe what effect changing ‘fixed end’ to ‘no end’ has on the wave (try using some of the terms we learnt last lesson). Why do you think it has this effect?

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1. Pause the wave, use the on screen ruler to measure the wavelength and record the amplitude and frequency.

Frequency: \_\_\_\_\_\_\_\_\_ Amplitude: \_\_\_\_\_\_\_\_\_ Wavelength: \_\_\_\_\_\_\_\_\_

1. Select a new amplitude (lower or higher), resume the simulation for a few seconds and observe the wave, then pause it and measure the wavelength again.
2. Frequency: \_\_\_\_\_\_\_\_\_ Amplitude: \_\_\_\_\_\_\_\_\_ Wavelength: \_\_\_\_\_\_\_\_\_
3. What effect does changing the amplitude have on the wavelength of a wave?

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1. What effect does changing the amplitude have on the frequency of a wave?

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1. Return the amplitude to 0.75 cm and change the frequency (higher or lower), resume the simulation for a few seconds and observe the wave, then pause it and measure the wavelength and amplitude again

Frequency: \_\_\_\_\_\_\_\_\_ Amplitude: \_\_\_\_\_\_\_\_\_ Wavelength: \_\_\_\_\_\_\_\_\_

1. What effect does changing the frequency have on the wavelength of a wave?

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1. What effect does changing the frequency have on the amplitude of a wave?

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1. Using the frequency from part 5, determine the period of the wave

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1. At what speed would this wave travel through a medium?

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