Name:_____ Date:_____

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

_____
_____
_____

2. Select the 'oscillate' option, turn down damping slightly (not to zero)

3. 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?

_____
_____
_____

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

Frequency: _____ Amplitude: _____ Wavelength: _____

5. 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.

6. Frequency: _____ Amplitude: _____ Wavelength: _____
7. What effect does changing the amplitude have on the wavelength of a wave?

_____
_____

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

_____

_____

9. 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: _____

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

_____

_____

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

_____

_____

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

_____

_____

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

_____

_____