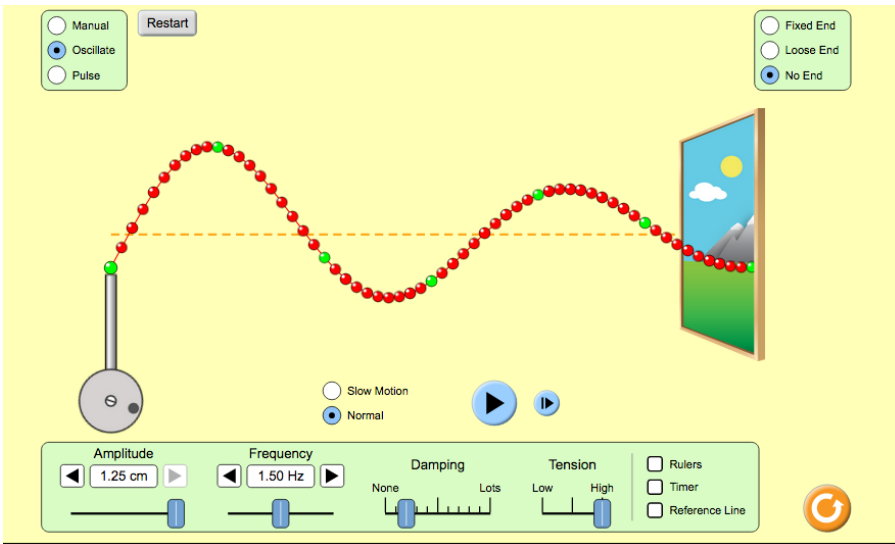


## Wave Basics with PHET

Before we get any further into splashing around in a tub full of bath toys, we need to understand how and why we can move things through water. In fact we must understand how we can even move things through empty space with the remarkable, yet simple WAVE!

Waves can be generated in different types of medium (substances). We can make waves in water, air, and even light!

For this activity you will be using a string to model waves on the simulation on PHET. (Waves on a String)



Make sure that the green box in the left corner is set to Oscillate and the box to the right has a NO end.

1. Play with the Amplitude in the bottom box. What do you see happen to the wave on the string when you increase the amplitude?

2. Play with the Frequency in the bottom box. What do you see happen when you increase the frequency?

3. Click on the Rulers button on the bottom box. Then set the amplitude and frequency to the numbers below. After the numbers are set, play the wave and pause it after 5 seconds. Measure the distance between the top of one wave to the next wave. Record that as the Wavelength.

Amplitude	Frequency	Wavelength
1.25 cm	2.05 Hz	cm
1.25 cm	3.00 Hz	cm
0.75 cm	2.05 Hz	cm

4. Based off of Your Observations, create a definition for each of the terms below. You can draw a picture, or if on your iPad take a screenshot.

Term	Definition	Picture
Amplitude		
Frequency		
Wavelength		