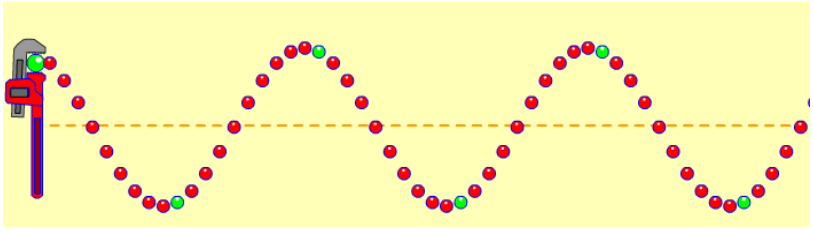
Name: _____
Grade: _____

Sound Waves

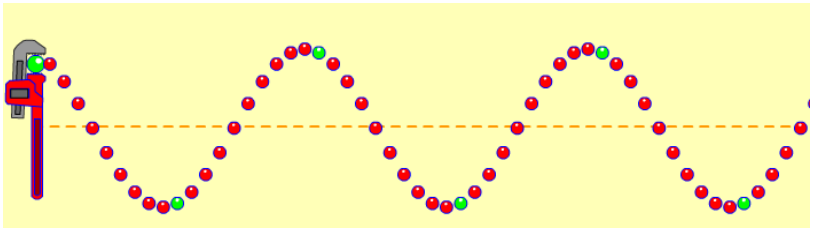
Pre-lab

A wave is created on this string by moving the wrench up and down.



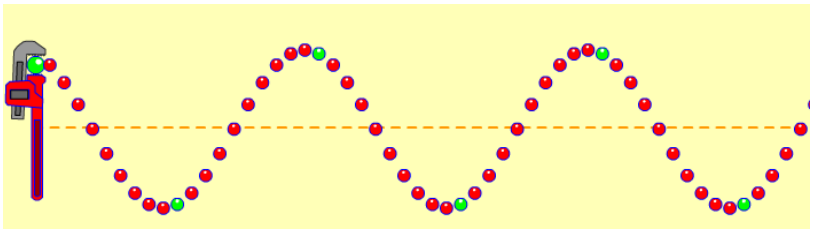
1. What would change if the wave had a higher frequency and smaller amplitude?

   Draw how the string would look for a higher frequency, smaller amplitude wave over this picture of the wave:

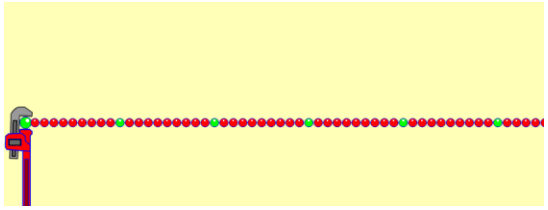


2. What would change if the wave had a lower frequency and larger amplitude?

   Draw how the string would look for a lower frequency, larger amplitude wave over this picture of the wave:



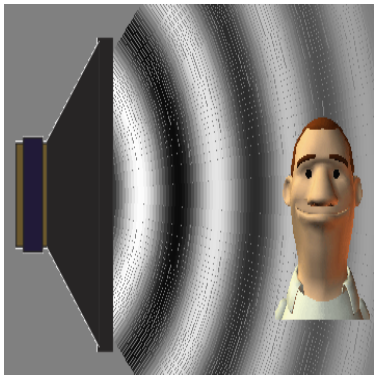
3. If you were to **create this wave by moving the wrench up and down,** describe how you would **move the wrench differently** to make the high frequency, small amplitude wave compared to a low frequency, large amplitude wave?



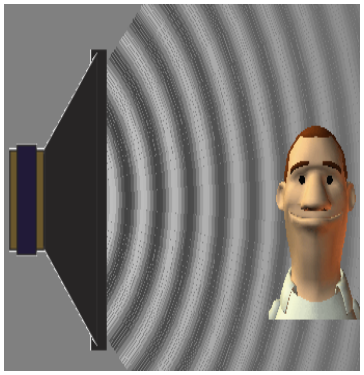
Motion to make a high frequency, small amplitude?

Motion to make a low frequency, large amplitude?

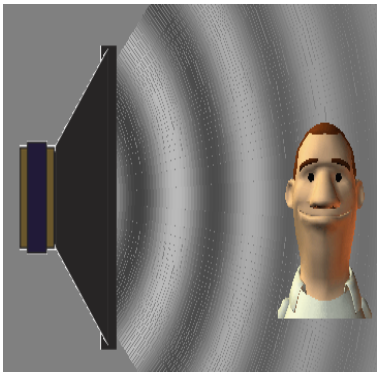
4. A student is listening to some pure notes that are produced using an electronic piano:



A



B



C

a. Which picture or pictures (A, B, or C) would best show the student listening to a high-pitched sound?

Why do you think so?

b. Which picture or pictures would best show the student listening to a loud sound?

Why do you think so?

c. Which picture or pictures would best show the student listening to a low frequency sound?

Why do you think so?