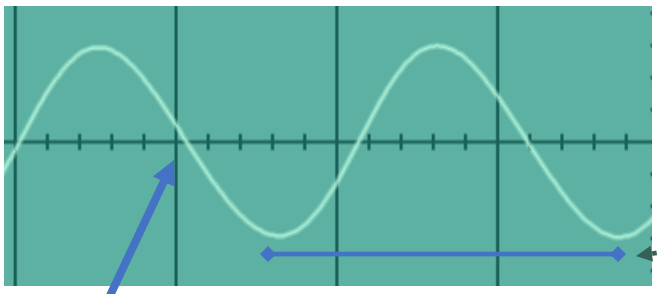
In the last lesson we explored **sound** as a type of energy that moves in **waves**.
We're going to go a little deeper into that today and explore some images of **sound waves**.

We can draw a wave as a wiggly (or wavy) line.



Notice that the wave has height
- distance from the top of the wave to the bottom

and also length
- distance from bottom point to next bottom

past ⟶ future

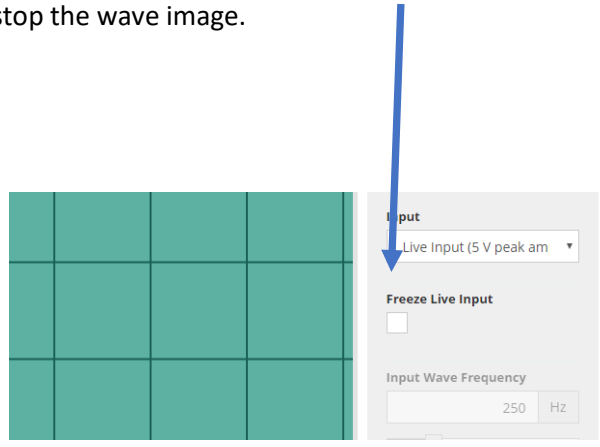
Think of the **wave** as moving across the page towards the right through time

Oscilloscope

An **oscilloscope** is a piece of equipment that takes sound waves and shows you what they look like as a moving image.

Go to https://academo.org/demos/virtual-oscilloscope/ to open up a free online **oscilloscope**. (You can also get free apps for phones from your app store.)

Once you have your virtual oscilloscope up and running try making the sounds on the next page and write down (or draw a picture) of what happens with the sound wave pictured on the oscilloscope. To do that you will probably find it helpful to tick the Freeze Live Input box on the right of the screen during your sound making to stop the wave image.



Exploring Sound 3: Picturing Sound Waves **Lesson 1**

Sing into your computer (or phone). Try to keep a steady pitch (at first) and use an "oh" vowel. Fill in the chart with a description or a picture of what happens to the wave with different sound inputs.

Sound Input	Description/Picture
Sing 'oh'	
Sing 'oh' very quietly	
Sing 'oh' very loudly	
Sing 'oh' very high pitched	
Sing 'oh' very low pitched	
Your choice: Describe:	
Your choice: Describe:	

What happens to the wave as you get louder?

What happens to the wave as you get quieter?

What happens to the wave as you get higher in pitch?

What happens to the wave as you get lower in pitch?