

# Be the Vibration!

Name: \_\_\_\_\_

1

**Step 1** Make sure you have all your supplies. Your experiment set-up should look like this:

Tie the rope at one end, or have someone hold it still.

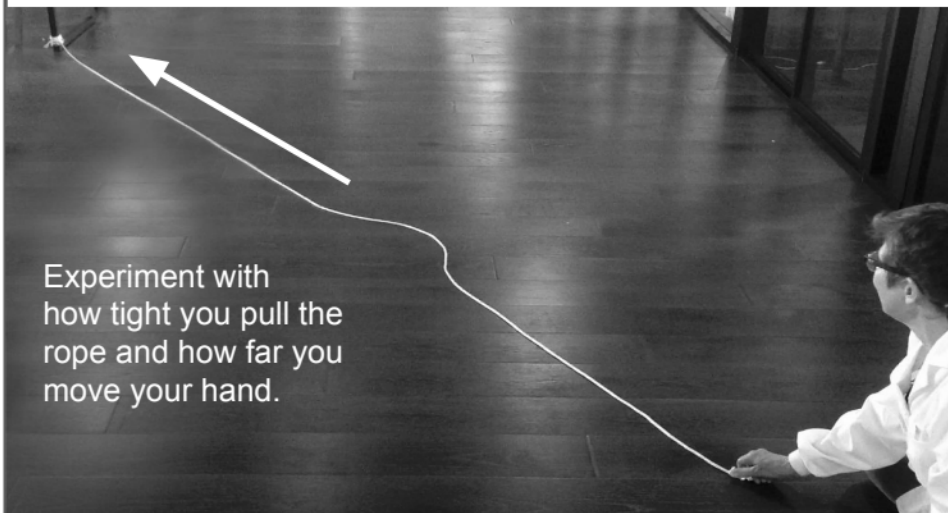
Be sure you're on a smooth, hard floor.



2

**Step 2** Make a vibration by jerking your hand to the side and back. Try to make a wave that travels to the end of the rope.

Experiment with how tight you pull the rope and how far you move your hand.



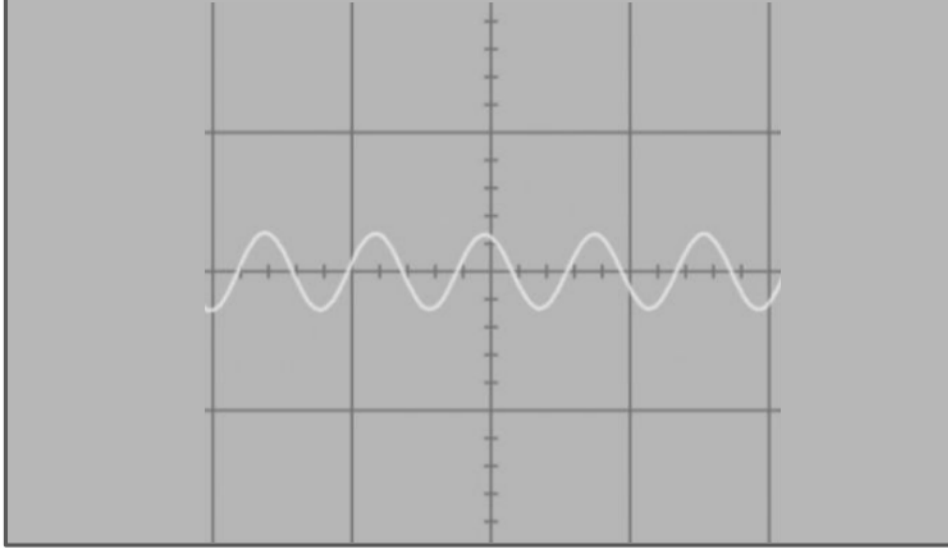
**mystery science**

Why are some sounds high and some sounds low?

3

**Step 3**

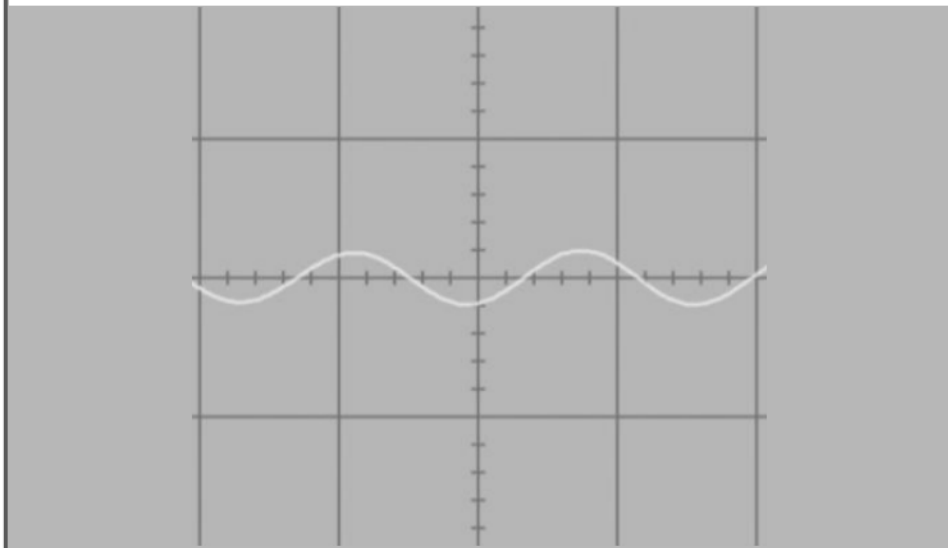
Challenge! Make waves that look like this oscilloscope picture of a **high**-pitched sound:



How do you have to vibrate your hand to make waves that are squished together like this?

**Step 4**

Challenge! Make waves that look like this oscilloscope picture of a **low**-pitched sound:



How do you have to vibrate your hand to make waves that are spread out like this?

**mystery science**

Why are some sounds high and some sounds low?