

# Seeing Sounds Worksheet

## Tuning Fork Station

1. Strike a tuning fork and place one of its tines against a cup of water or a ping pong ball.
2. What happened to the water (or ping-pong ball)? \_\_\_\_\_

Object:	Volume Was the sound <i>loud</i> or <i>soft</i> ?	Pitch Was the sound <i>high</i> or <i>low</i> ?	Frequency Did the water/ping pong ball vibrate <i>fast</i> or <i>slow</i> ?
Tuning fork			

## Milk Container-Reflector Station

1. Cut a large hole in the side of a milk container and cover it with a piece of tissue paper.
2. Place a small mirror on the middle of the paper.
3. Talk in different voices into the end of the milk carton while another student shines a flashlight on the mirror at an angle that reflects it on the wall.
4. What happens to the light on the wall when the student is talking?

Object:	Volume Did the waves change when the student talked <i>loudly</i> or <i>softly</i> ?	Pitch Did the waves change when the student talked <i>high</i> or <i>low</i> ?	Frequency Did the sound waves vibrate <i>fast</i> or <i>slow</i> ?
Light on the wall			

## Spatula Blade Station

1. Place the tip of a spatula blade on a desk or table with the handle extending over the side.
2. Pull the handle down and let go.
3. What happens when the handle is let go? Do you hear anything? These vibrations are similar to what goes on in your vocal chords when you talk.

Object:	Volume Was the sound <i>loud</i> or <i>soft</i> ?	Pitch Was the sound <i>high</i> or <i>low</i> ?	Frequency Did the spatula vibrate <i>fast</i> or <i>slow</i> ?
Spatula			

### Rubber Bands on Doorknob Station

1. Fasten a rubber band to a doorknob, pull it taut, and pluck it.
2. What happens when the rubber band is plucked? Do you hear anything? These vibrations are similar to what goes on in your vocal chords when you talk.

Object:	Volume Was the sound <i>loud</i> or <i>soft</i> ?	Pitch Was the sound <i>high</i> or <i>low</i> ?	Frequency Did the rubber band vibrate <i>fast</i> or <i>slow</i> ?
Rubber band			

### Boom Box Station

1. Hold a blown-up a balloon in front of a boom box speaker and turn up the volume.
2. Place a paper plate with small pieces of paper on it on top of the boom box.
3. What happens to the balloon when the volume is turned up? What happens to the pieces of paper as you turn up the volume?

Object:	Volume What happened to the object when the volume was <i>turned</i> <i>up</i> ?	Pitch Did the objects change when the sound with <i>high</i> or <i>low</i> ?	Frequency Did the object vibrate <i>fast</i> or <i>slow</i> ?
Balloon			
Paper			

### Conclusion

1. Can you see or hear sound energy? \_\_\_\_\_
2. How would this help an engineer designing something?

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