

# Drumming Up Science

Kindergarten



## Testable Question:

How do we change the sound of a snare drum?

## Prediction:

I think if we use the lever switch on the side of the drum then it will change the sound.

# Procedure:

1. Open the oscilloscope app on a phone.
2. Lower the lever on the side of the drum.
3. Hit the drum 3 times quick.
4. Take a picture of the oscilloscope waves.
5. Put the lever back up.
6. Hit the drum 3 more times quickly.
7. Take another picture of the waves.
8. Do these again 2 more times.

Lever down



Lever up



# Background:

I chose this project because drums are very cool. I started playing drums when I was 1 and wanted to do my project on them.

I found out that a drum is a musical instrument. You can use drumsticks or your hands to beat on them slow or fast. To make a drum you stretch a drumhead over a circle shell. When you hit a drum the drumhead vibrates.

The lever on the side of the snare is called the strainer. When the lever is down the snares aren't touching the drum, but when the lever is up the snares do touch the drum.

# Constant Conditions:

Independent Variable: Whether the drum lever (strainer) is up or down

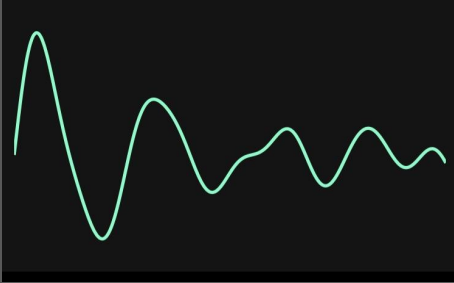
Dependent Variable: Oscilloscope waves

Constant Conditions: hit 3 times, same drum, same stick

# Data - Oscilloscope Waves

Lever Down

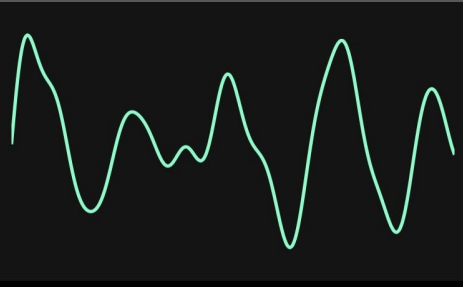
Trial 1



Trial 3

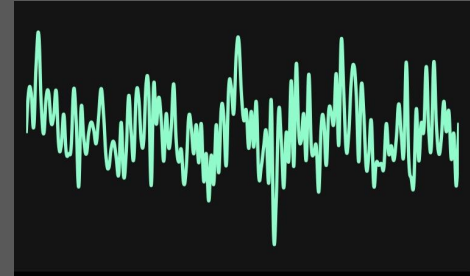


Trial 5

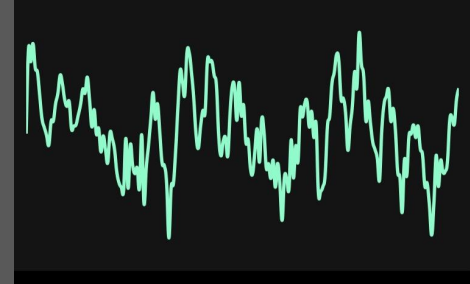


Lever Up

Trial 2



Trial 4



Trial 6



## Conclusion and Reflection:

I found out that when the lever is down the waves are spread apart, but when the lever is up the waves are close together. When waves are spread apart it means there is a low sound. When waves are close together it means there is a high sound.