

Meter Stick Vibrations

1. Hold one end of a meter stick down firmly on a table so that 20 centimeters of the meter stick extends past the edge of the table. Pluck the end of the meter stick that extends past the table to produce a vibration and a sound. Observe the vibration and sound of the meter stick.
2. Repeat Step 1, but this time allow 40 centimeters of the meter stick to extend past the edge of the table.
 - a. How did the longer length affect the pitch of sound produced by the vibrating meter stick?
3. Repeat Step 1, but this time allow 60 centimeters of the meter stick to extend past the edge of the table.
 - a. How did the longer length affect the pitch of sound produced by the vibrating meter stick?
4. Finally, try shortening the length of meter stick extended off the table as it is vibrating. Describe the change in pitch observed during this event.
5. Observe the picture below. The fingers are placed at different lengths all on different strings. The string of a guitar vibrates very similarly to the meter stick in this lab. Write an essay describing how the different finger positions change the frequency of sound heard as a guitar is played.

