



ART ADVENTURE

Lesson: Kleenex Box Guitar

CURRICULUM REFERENCE: Light and Sound

LESSON OBJECTIVE

Create a guitar to watch and hear how sound can be created and changed.

THE SCIENCE BEHIND

When a guitar string is plucked, it vibrates at a specific frequency that determines the pitch of the sound that we hear. These frequencies move through the air to our ears as sound waves, which are vibrations. When the vibrations reach our eardrums, our eardrums vibrate as well at the same frequency. This sends signals to our brain to understand the sounds or music being played around us.

VIDEO: <https://youtu.be/t3jAvxEoFlo>



FOLLOW-UP QUESTIONS

1. How does this device make sound?
2. How can we change the sound it makes?

LEARNING OUTCOMES

- Assess the impacts on society and the environment of light and/or sound energy produced by different technologies, taking different perspectives into account.
- Investigate the basic properties of sound.
- Explain how vibrations cause sound.



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MATERIALS (PER PERSON)

- Empty tissue box
- Toilet paper roll
- 4 elastic bands
- Ruler
- Tape
- Scissors

INSTRUCTIONS

1. Cut a slit about the width of a ruler through one of the short ends of the empty tissue box.
2. Then, place the ruler into the slit and tape to firmly secure in place.
3. Use elastic bands across the length of the tissue box to make the sound of the guitar. TIP: If you find differently sized widths of elastic bands, this will create different sounds.

VIDEOS:

Step 1: <https://youtu.be/lHrJskdiauc>

Step 2: <https://youtu.be/L7WWx30XNUQ>

