

Make Musical Instruments!

What you'll need

- | | |
|---|-----------------------------------|
| <input type="checkbox"/> Popsicle sticks | <input type="checkbox"/> Straws |
| <input type="checkbox"/> Rubber bands | <input type="checkbox"/> String |
| <input type="checkbox"/> Clean cans, bottles, and other recycled containers | <input type="checkbox"/> Tape |
| <input type="checkbox"/> A piece of paper or wax paper | <input type="checkbox"/> Marker |
| | <input type="checkbox"/> Scissors |

Introduction

In this activity, you and your child will learn about the science of sound, and then create some of your own musical instruments!

Discuss: what is sound?

Discuss these questions with your child. Answers are in parenthesis.

- What's a musical instrument? (Something we use to make music)
- What are some kinds of instruments? (Piano, drums, flute, guitar, etc.)
- What do we use them for? (Making music)
- What is music? (A collection of sounds, or notes)

Now, ask them if they know what sound is. You may want to experiment with different ways of making noise to see if they can make any guesses as to how sound is produced. (Hint: sound is vibrations!)

Watch this video with your child, to help them understand how sound is produced: "What is Sound?" by SciShow Kids on YouTube: <https://youtu.be/3-xKZKxXuu0>

(You can follow along with the video to make the example instrument if you like.)

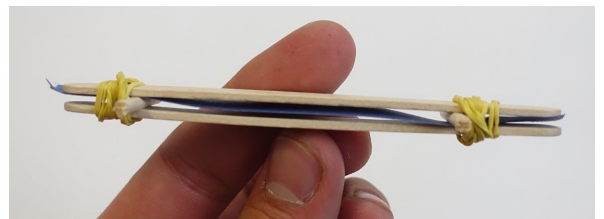
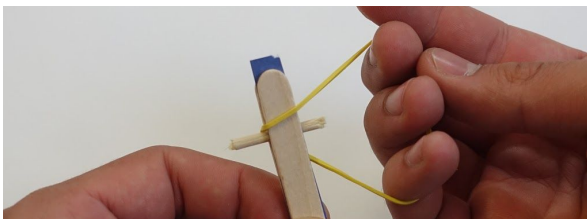
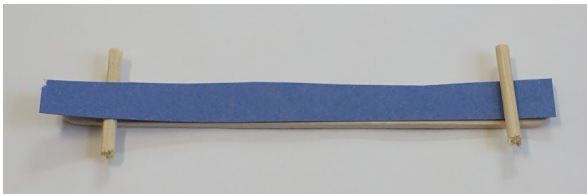
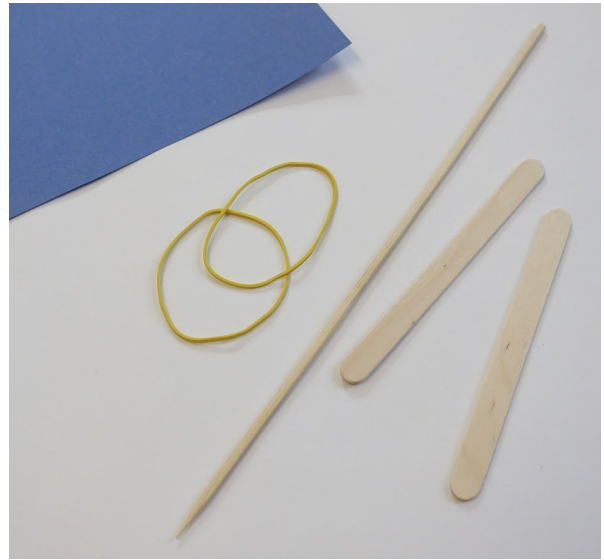
Do it!

The rest of this activity is simple: create instruments! On the next few pages are instructions for making two example instruments. If you wish, you may continue building more instruments, and they don't have to be any specific kind. Anything that makes sound goes!

Make a Buzzer

You need:

- 2 rubber bands
- 2 popsicle sticks
- 1 skewer or straw
- 1 piece of paper or wax paper



Play your buzzer by holding it up to your mouth and blowing through the popsicle sticks.

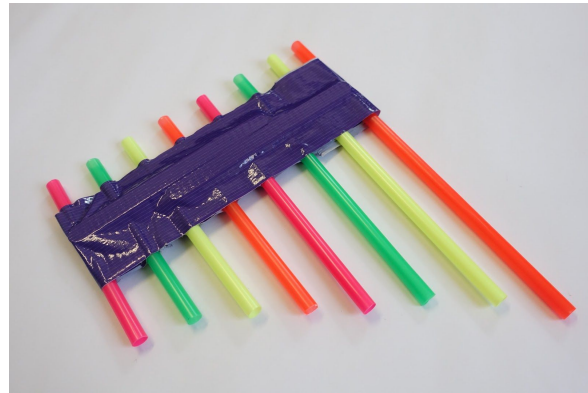
Note: The rubber bands have to be on the outside of the skewer/straw pieces, otherwise they will keep the paper from vibrating!

Which part is vibrating to make the sound?

Pan Pipes

You need:

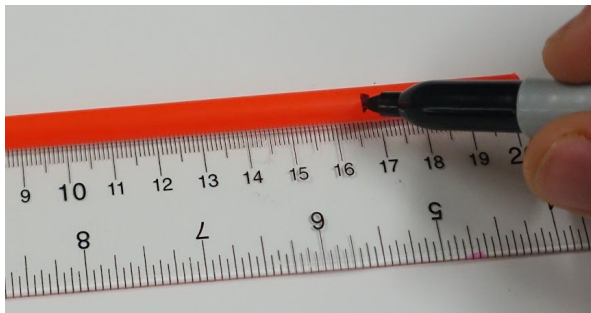
8 straws
Tape
2 popsicle sticks
Scissors



First, try this:

Blow across the top of a straw. It will make a faint note. If not, move the straw around until it does.

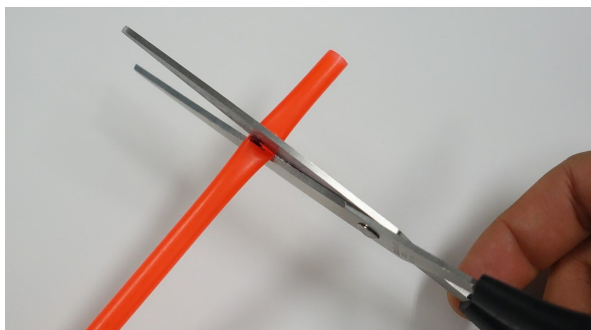
Put your finger over the hole on the bottom and try again.



Cut straws

Using a ruler, mark your first straw at 16.5 CM (that's halfway between 16 and 17 CM).

(There is a printed ruler two pages ahead!)



Then, cut it at the mark.

Straw Number	Length
1	16½ cm
2	14½ cm
3	13 cm
4	12½ cm
5	11 cm
6	10 cm
7	9 cm
8	8 cm

Mark the next 7 straws to the lengths shown in the table to the left.

Then, cut each one on the mark.

Can you guess why we're cutting the straws to different lengths?

Try blowing on the different lengths and see what happens...



When you're done, your straws should look like this.



You can use some tape to make your pan pipes, and some popsicle sticks to make them sturdy.

Try playing a simple song on your new pan pipes!



There are other types of instruments you can make, too!

Here are some ideas:

- Rattler/Shaker
- Guitar-like instrument
- Simpler pan pipes
- Drum or maracas

Cm Ruler:



Adaptations

For Younger children

Help them with building the instruments. If it's too difficult, you can skip making extra instruments.

For An Extra Challenge

Challenge your child to play a song on their instrument!

Vocabulary

Sound: A wave of vibration that our ears can detect.

Fun facts

Cup phone: Another good example of how sound travels is the classic cup phone. To make, take two paper or plastic cups, poke a hole in the bottom middle of each one, and tie a string in between. Hold the cups apart so the string is stretched tightly between, and then speak into one cup while your child listens. Experiment to see how to get the sound clearest!

Example cup phone



Image credit: [DAIMANdald](#) via Wikimedia Commons