



ACTIVITY #1: STRAW PAN FLUTE

OVERVIEW

Make your very own pan flute out of straws! Just like flutes in a symphony, this instrument produces sound when air flows over an opening.

MATERIALS

- Several plastic straws
- Masking tape
- Scissors

BACKGROUND INFO

Woodwinds are instruments that produce sound when air is blown into them. These sounds are formed in two different ways. Instruments with reeds, like the clarinet and oboe, produce sound when the air is blown through thin pieces of wood that vibrate. Other woodwinds, such as the flute, produce sound when the air is blown across an opening.

To change the pitch of a woodwind, musicians change the length or shape of the area that the air moves through. Many woodwinds have a series of holes that musicians cover and uncover with their fingers, shortening and lengthening the space that the air moves through. Other instruments, such as the pan flute, don't use holes to change the length of the instrument. Instead, the pan flute is made up of several tubes of different lengths. Each tube creates its own pitch when a musician blows into it.

You can make your own pan flute with simple materials right at home. This instrument works just like other woodwinds: as air moves through each tube, it vibrates and creates sound. Depending on the length of the tube, the pitch will be higher or lower. Try it out and see how many different pitches you can make!

Think about the musicians you saw in the **Wings and Woodwinds** video. How do each of those instruments produce sound?

INSTRUCTIONS

Check out the **Wings and Woodwinds** video for a visual tutorial. Or, follow these steps:

1. Tear off a six-inch strip of masking tape and place it sticky-side up on a flat surface.
2. Line up five or six straws and lay them across the masking tape so that they are parallel to each other. Leave a small gap between each straw.
3. Tear off another strip of masking tape and place it sticky-side down on the straws, right on top of the first piece of tape. Your straws should now be inside of a masking tape sandwich. Fold over the excess tape edges so your pan flute is secure.
4. Use scissors to trim the straws on one end of your pan flute so that each straw is a different length. Keep one side of your flute untrimmed—you'll want the ends of the straws on that side to line up so that you can play it.
5. You now have your very own woodwind instrument! To play it, blow across the tops of the straws. What pitches do you hear?

EXTENSIONS

- Practice with your pan flute and see what you notice. Are there any patterns? What do you notice about the shorter straws? What about the longer ones? Can you play a melody?
- Is your pan flute missing any pitches? Maybe there are some sounds you want to make but don't have the right length straw for. Try adding straws to your pan flute—or maybe even making a whole new one—with different pitches!
- If you've ever tried to make music by blowing over the top of a glass or plastic drink bottle, you have already discovered a common household woodwind instrument! Now that you know about making different pitches with your pan flute, try this: Gather several bottles, line them up in a row, and fill them with different amounts of water. What happens when you blow across the tops? Can you change the pitches? Play a melody?