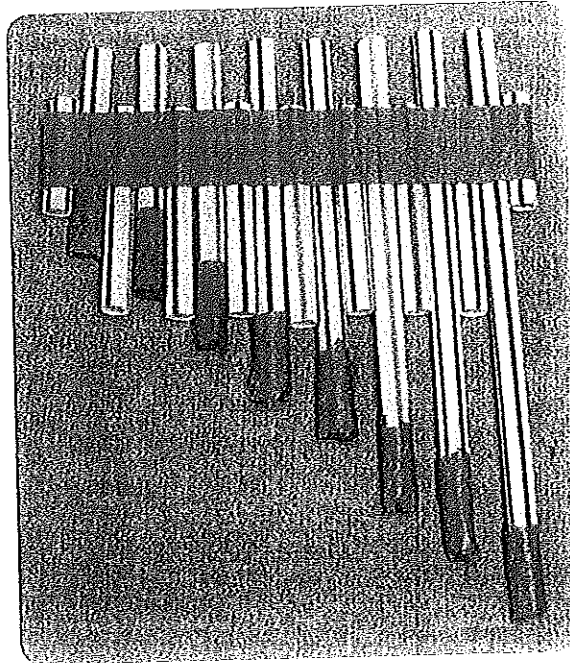


# STRAW PAN FLUTE



**Making the Straw Pan Flute incorporates and utilizes:** experimentation of length and pitch, focus, hand-eye coordination, measurement, patience, sequencing

**Playing the Straw Pan Flute utilizes:** breath control, listening, musical creativity, music fundamentals (duration, pitch, rhythm, timbre), science of sound

## Supplies:

- 8 to 10 plastic drinking straws
  - ▲ Nonbending are ideal, but bending ones can be used
  - ▲ Opening should be at least 0.25 in (0.6 cm) in diameter  
(Note: bubble tea straws work best)
- Ruler
- Scissors
- Masking tape or painter's tape
- Fine point marker (optional)

## To Make:

If the drinking straws have a bend, remove them by cutting directly below and above the bend. Use the longer pieces for the directions below. Use the shorter cuttings as the spacers.

- Straw 1: Seal one end of the straw with tape. Set it aside.
- Straw 2: Cut 0.5 in (1.3 cm) of length.
  - ▲ Discard the 0.5-in (1.3-cm) cutting.
  - ▲ Seal one end of the remaining straw with tape and set aside.
- Straw 3: Cut 1 in (2.5 cm) of length.
  - ▲ Save the 1-inch (2.5-cm) segment to use as a spacer.
  - ▲ Seal one end of the remaining straw with tape and set aside.
- Straw 4: Cut 1.5 in (3.8 cm) of length.
  - ▲ Cut 0.5 in (1.3 cm) from the 1.5-in (3.8-cm) segment and save to use as a spacer.
  - ▲ Discard the 0.5-inch (1.3-cm) piece.
  - ▲ Seal one end of the remaining straw with tape and set aside.
- Straw 5: Cut 2 in (5.1 cm) of length.
  - ▲ Save the 2-in (5.1-cm) segment to use as a spacer.
  - ▲ Seal one end of the remaining straw with tape and set aside.
- Straw 6: Cut 2.5 in (6.4 cm) of length.
  - ▲ Cut 0.5 in (1.3 cm) from the 2.5-in (6.4-cm) segment. Save the 2-in (5.1-cm) segment to use as a spacer and discard the 0.5-in (1.3-cm) cutting.
  - ▲ Seal one end of the remaining straw with tape and set aside.
- Straw 7: Cut 3 in (7.6 cm) of length.
  - ▲ Cut 1 in (2.5 cm) from the 3-in (7.6-cm) segment. Save the 2-in (5.1-cm) segment to use as a spacer and discard the 1-in (2.5-cm) cutting.
  - ▲ Seal one end of the remaining straw with tape and set aside.
- Straw 8: Cut 3.5 in (8.9 cm) of length.
  - ▲ Cut 1.5 in (3.8 cm) from the 3.5-in (8.9-cm) segment. Save the 2-in (5.1-cm) piece to use as a spacer and discard the 1.5-in (3.8-cm) cutting.
  - ▲ Seal one end of the remaining straw with tape and set aside.

### *Spacers*

- If the straws being used do not have bends, create 2-in (5.1-cm) spacers from the remaining straws. A total of nine spacers are needed.

## Assemble

- On a flat surface, lay an 11-in (27.9-cm) piece of tape with the sticky side up. Curl each end under a bit so that it sticks to the surface. (Curling it under aids in keeping the tape in place.)
- The first piece to go on the tape is a spacer. This is one of the short pieces of straw that is not sealed off with tape. Place a spacer at one end on top of the tape, making sure that the spacer's end is in alignment with the upper edge of the tape.
- Directly next to this spacer goes Straw 1. Place this straw with the open end 0.5 in (1.3 cm) above the tape edge.
- Next to Straw 1 is a spacer. As with the first spacer, align one end with the upper edge of the tape.
- Repeat the sequencing of spacer-straw, making sure that the tops of the spacers align with the upper edge of the tape and that all the open ends of the sealed straws are aligned with one another and are 0.5 inch (1.3 cm) above the tape line.
- Once all nine spacers and eight straws are in place, undo the tape from the surface and wrap it around the straws, making sure it wraps entirely around both sides.
  - ▲ Be careful not to wrap too tightly. The pan flute is to remain flat.

## To Play:

- Blow air across and down the open ends of the sealed-off straws.
  - Hint: Simulate playing a flute.
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## Suggestions:

- Use straws with larger/smaller diameters.
- Use different lengths of straws. For example, instead of decreasing the length of each straw by 0.5 in (1.3 cm), decrease each by 0.25 in (0.6 cm) or 0.75 in (1.9 cm). Are the pitches different?

Note: For more information about this activity, such as scientific information and mathematical calculations on length of straws and pitch, run an online search for "straw pan flute."