



PAN STRAW FLUTE

WHAT YOU NEED:

- 8 PLASTIC STRAWS
- STICKY TAPE
- SCISSORS
- RULER

INSTRUCTIONS:

1. Take your straws and ruler. Measure 1 straw per below length measurement (cm = centimeters).
 - Straw 1 = 17.5 cm
 - Straw 2 = 15.5 cm
 - Straw 3 = 13.5 cm
 - Straw 4 = 12.5 cm
 - Straw 5 = 11 cm
 - Straw 6 = 10 cm
 - Straw 7 = 9 cm
 - Straw 8 = 8 cm

* Save your extra pieces of straw just in case of holes or breakage!

2. Line the straws up based on height- from tallest to shortest. Make sure that the ends are as straight as possible.



3. Lay a piece of tape down with the sticky side facing up. Begin placing the straws along it starting with the shortest straw so you make sure you have enough of it above and below the tape. Then line the rest up in order of length, being sure to keep the top edge as straight as possible.



3.) Once the straws are placed, wrap the ends of the tape up and around the other side of the straws until the ends meet. Wrap it around a second time for extra strength, but this time in the opposite direction.



4.) Have fun playing your pan flute! You can blow across the opening or down into the straws, but don't put your mouth on the straws or it won't work! Notice how each straw has a different pitch based on its length.

THE SCIENCE BEHIND PLAYING A STRAW PAN FLUTE:

Sound is simply vibrations that move through a medium that our brains interpret into noise we hear. In this case, sound is produced by the vibration of air blowing across the open holes of the straws.

Air blowing through a shorter straw moves quickly in one end and out the other. These vibrations move quickly and have a high frequency, which produces a high pitch.

Similarly, the same amount of air moving through a longer straw takes longer to come out the other end. These vibrations move more slowly, have a low frequency, and produce a low pitch.