

## SPLENDID STRAWS

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A drinking straw is a short tube intended for transferring a beverage from its container to a person's mouth by use of suction. The earliest drinking straws were hollow stems of grass, literally made of straw.

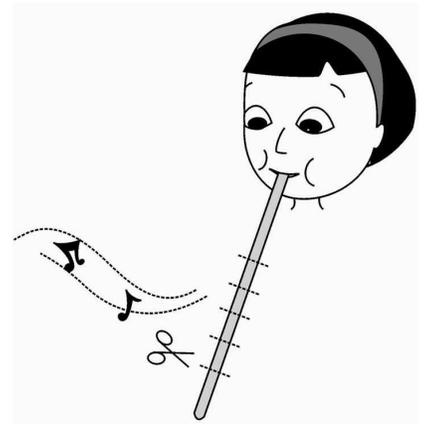
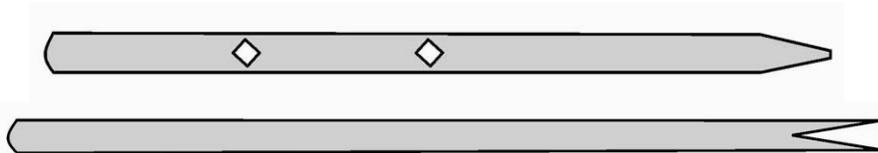
In 1888, Marvin Stone patented the spiral winding process to manufacture the first paper drinking straws. Stone made his prototype straw by winding strips of paper around a pencil and gluing it together. He then made paraffin-coated Manila paper, so the straws did not become soggy while someone was drinking. Marvin Stone decided the ideal straw was 8 1/2-inches long with a diameter just wide enough to prevent things like lemon seeds from being lodged in the tube.

Early paper straws had a narrow bore and it was common to use two of them, to reduce the effort needed to take each sip. Modern plastic straws are made with a larger bore, and only one is needed for ease of drinking. A bendable straw or "bendy straw" has a concertina type hinge near the top for convenience. This variation was invented by Joseph Friedman in 1937

One particular advantage of using straws when drinking is the reduction of tooth decay. Many soft drinks have acidic properties, and using a straw reduces the liquid contact with the teeth, reducing tooth decay and the risk of cavities

Being commonplace straws have become indispensable in science activities. Here are some multifarious uses of straws.

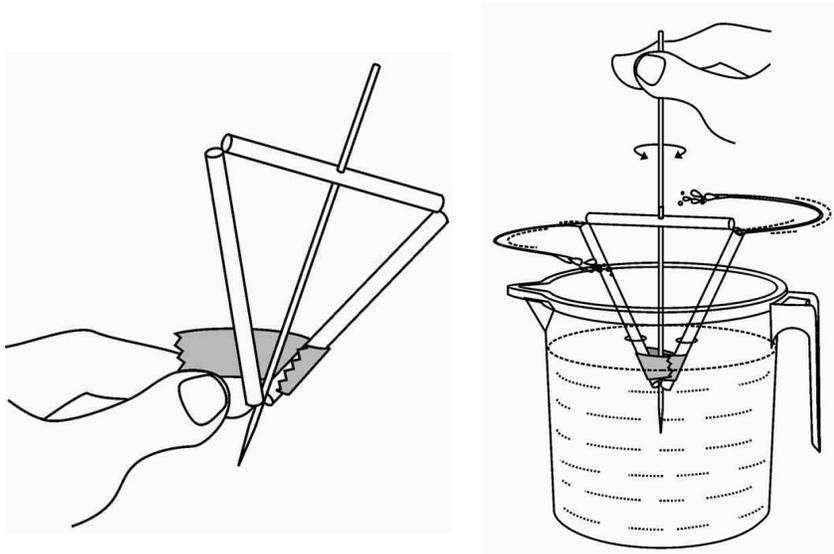
### STRAW FLUTE



Take a medium stiffness straw and flatten one end by pressing it with your thumb and index finger. Then cut two slants to make a sharp pencil like point – a reed. When you put this end in your mouth and blow out sound will come out. Now, place the reed out and suck-in from the other end. You will be able to both hear the sound and see the reed “vibrate”.

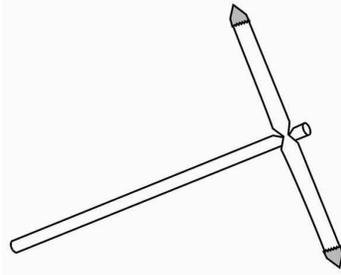
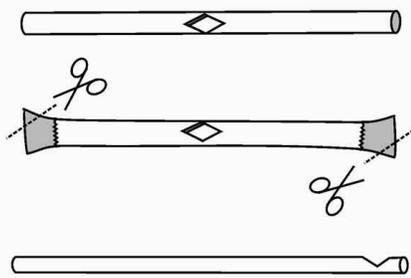
Now keep the reed in your mouth. Keep blowing and simultaneously keep cutting the other end and you will hear the whole range of musical notes – Sa, Re, Ga, Ma...

### STRAW SPRINKLER



Poke a broomstick in the middle of a straw and make two half-cuts from the top at about 2-cm from the centre. Bend these legs in a triangle and wrap sticky tape like a belt to keep them together. Place it in a mug of water and spin. Water will sprinkle all over! This is actually a simple centrifuge. When you spin – water climbs up the slant straws and flies out.

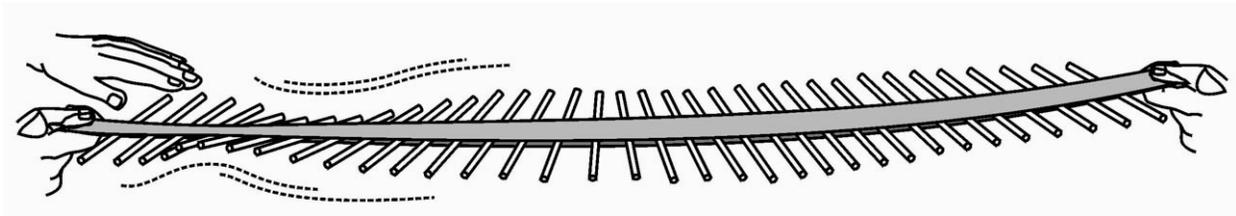
## STRAW SPINNER

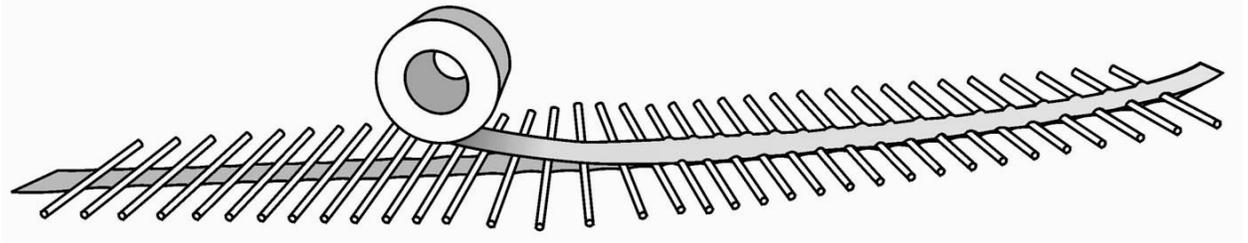
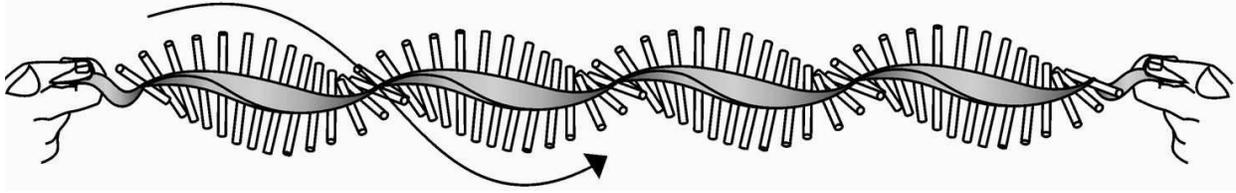


Seal both ends of 8-cm long straw with stick tape. Then nip two diametrically opposite corners to make small holes. Fold the straw in half and nip both corners to make a diamond shape hole as shown. This will be the Spinning straw.

Take a 10-cm long straw thick enough to go smoothly into the hole of the Spinner. Make a “V” cut near one end. Now slip the Spinner on top of this hole. Shut that end of the blowing straw with your finger and blow from the other end. This will make the Spinner go round-and-round. Air comes out from the holes and gives the straw a spin, validating Newton’s Third Law of Motion – that every action has an equal and opposite reaction.

## STRAW WAVES





Stretch a 2-metre tape on the floor with its sticky side up. Stick 60 straws each 2-cm apart. Leave 5-cm of the tape on both ends as a handle. Stick another long tape on top so that all the straws are sandwiched between the two tapes.

Ask a friend to hold one end of the tape. You hold the other end tightly and give it a tap. A wave will travel along and will be reflected from the other end.

Induce “standing” waves by twisting the end tapes a few times. Now you can clearly see “troughs” and “crests”. On twisting more the wavelength will decrease and the frequency will increase.