



Let's Turn the Windmill Using Snow



Try to spin a windmill with cold air made by snow and salt.

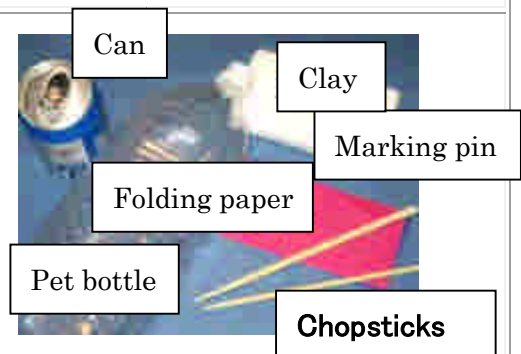


Point

Cold air will makes a descending air current

Materials

- PET bottle (2L)
- Snow (60g)
- Salt (20g)
- Aluminum can (350ml)
- Folding paper •Clay •Marking pin
- Disposable wooden chopsticks •Cutter
- Eyeleter •Can opener



✿Make the equipment for the experiment✿

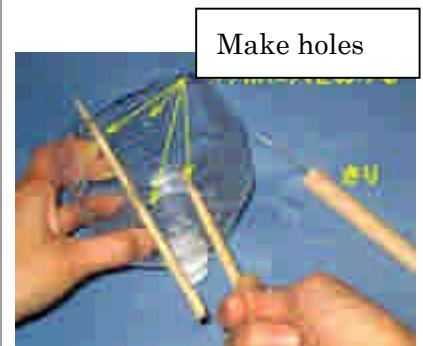
1

•Cut the PET bottle and separate A and B like in the picture.



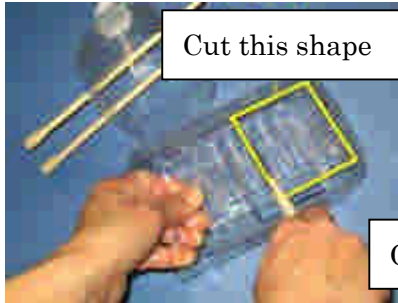
2

•Open four holes near the mouth to 10cm and insert the choopsticks to be parallel.



3

•Cut a square (7cm × 7cm) in both sides of the bottom half.



Cut this shape

Chopsticks

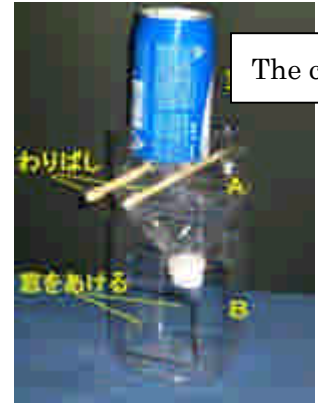
Open the window

4

•Open the top of the can with can opener



Open the top



The can

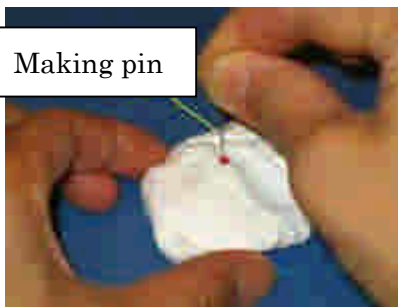
5

•Put A on the B like in the picture. Then put the can on it.

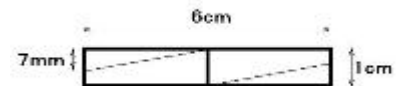
✿Make the windmill✿

1

•Put the marking pin to the clay and turn the needle upward.



Making pin

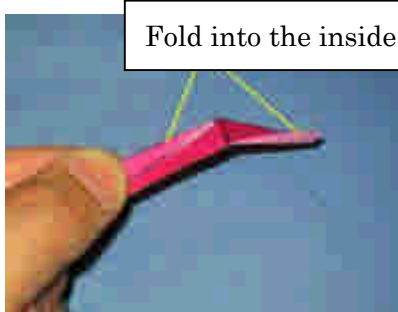


2

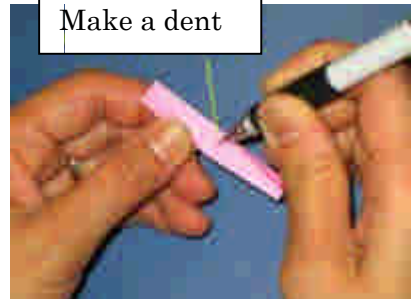
•Cut the folding paper (1cm × 6cm) and fold corner like in the figure.

3

•Fold the corner to make the wing.



Fold into the inside



Make a dent

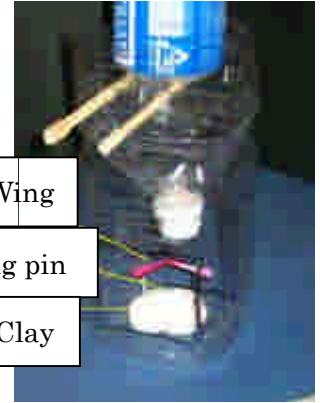
4

•Make a dent with a pen so as not to open the hole.

✿Experiment✿

1

Put snow(60~80g) and salt(20g) into the can and mix them.



2

Put the clay in the bottle through the window and put the wing on the needle. Observe whether the windmill will spin or not.

Information

If you cannot get the windmill to spin, you should change the wing shape.

The temperature in the can becomes -21°C so the cold air is heavier than the air around the can. This phenomenon is called a descending air current.

If the different temperature between the air around us and the air around the can gets bigger and bigger, the descending air current will be strong.

You can see the moving air if you introduce some smoke.

The flow of air



[たんちょう先生トップページに戻る](#)

