

Water Knot

In this project you will tie three strands of water together and find out how they stick.

Materials

- Water
- Lidded bottle (Milk or juice)
- Ice pick or sharp nail



Process

1. Ask an adult to help you prepare your bottle by using an ice pick (or sharp nail) to poke three small holes near each other on the bottle's lid.
2. Fill the bottle with water
3. Put the lid on your bottle
4. Turn the bottle upside down, there should be three small streams of water pouring out of the bottle.
5. Pinch the streams together, they should stick together as though they were tied

So What's Happening?

This "water knot" is caused by the high surface tension of water. Water molecules are cohesive or stick together. The water molecules are in a state of lower energy when they are in contact with each other, so once joined, the water streams tend to run together rather than separate again.

Vocabulary

- **Surface tension** - is a force present within the surface layer of a liquid that causes the layer to behave as an elastic sheet.
- **Molecules** - A molecule is a group of two or more atoms that stick together. Molecules are so small that nobody can see them, except with an electron microscope.

For More Information

Kids.net.au. "Surface Tension." Last Modified 2011.

http://encyclopedia.kids.net.au/page/su/Surface_tension