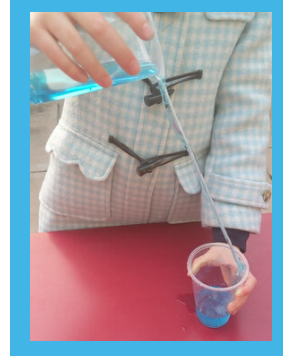


Magical String Experiment



Items you need

- Water
- Food coloring (optional)
- 2 cups
- A long string - NOTE: Use cotton twine or strings that can absorb water. Do not use polyester strings!
- Sticky tape / Scotch tape
- Adult supervision

Steps

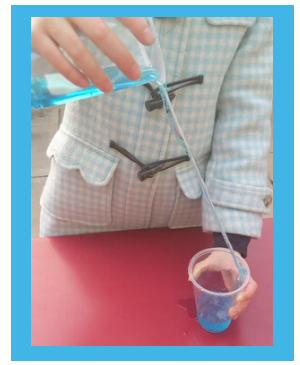
1. Place each cup down and fill one with 1/3 cup of water.
2. Place the piece of string into the water. Let it absorb a little and take the string out.
3. Tape one end of the string to the inside of each cup.
4. With the cup of water, you can add some food colouring. Put the free end of the string into the cup but do not stick with tape.
5. Carefully lift up the cup filled with water. Make sure it is far enough from the empty cup with string and that the string is taut between the cups. Be careful not to pull the string out of either cup.
6. Now, slowly pour the water out of the cup filled with water onto the string. Remember to keep it taut at all times. Watch the magic of string science before your eyes!
7. This can be repeated again and again. You should be able to pour the water straight from the top cup to the bottom cup through the string.

Interested about the science behind the string? See the next page...





Magical String Experiment



So what was the science that happened behind this experiment?

What you witnessed was two important properties of water.

1. Adhesion

Adhesion causes two different materials to stick together. Water is adhesive which means it attracts to other substances, in this experiment it was the the string. As long as you pour slowly enough, the adhesive power of the water sticking to the string will be stronger than the force of gravity so the water won't fall off the string and will travel all the way down to the second cup.

2. Cohesion

Water is cohesive which means it sticks to itself. For example water attracts water. This means that when the first water molecule flows down the string, the other water molecules start to follow it.

The two processes, adhesion and cohesion worked together and prevented the water from dripping straight down.

