Walking Water

This walking water science experiment is a fun and easy activity to watch how capillary action works. Grow LOVE of science with this colourful and fun experiment!

Materials Needed:

- Food colouring
- Paper towels
- Water
- 7-8 small see through glass jars/plastic cups

Time: 30 minutes

Steps:

1. Assemble all materials required.

OKANAGAN REGIONAL LIBRARY

2. Fill alternate jars with water and add few drops of food coloring to the ones with water in them.

3. Fold the paper towels into long strips and make them into half.

4. Place one end of each paper towel rectangles in a glass with coloured water and another end into an empty glass.

OKANAGAN REGIONAL LIBRARY

5. Wait and watch

You will notice in sometime that the empty jars are getting filled with colored water and the level of water from the jars that were initially filled with water is reducing.

OKANAGAN REGIONAL LIBRARY

From the top, you can also see that the white paper towels have changed their colors.

Any idea why or how this happens?

What you have witnessed is the **capillary action** of water. What is capillary action?

Capillary action is a process during which a liquid, like water, **moves up** a solid material with lot of small holes (in this case the paper towel). This happens when three forces called cohesion, adhesion, and surface tension work together. This movement does not require the force of gravity to occur. In fact, it often acts in opposition to gravity. Capillary action is sometimes called capillary motion, capillarity, or wicking. Capillary action is what the plants and trees make use to absorb water and minerals from the soil through their roots. It is what you dip a paint brush in paint for coloring, and even why your clothes absorb sweat! Explore other places in which capillary motion comes into play.

That's all for this month! Happy experimenting.