Wat-er You Waiting For?

Saturday STEAM: Water Science

July 11

Education · Enlightenment · Enjoyment

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Supplies Needed:

Experiment #1 Magical Water Bag

1. Sharpened pencils
2. Ziplock Bag (gallon size)
3. Water

Experiment #2 Candy Color Magic

1. Water
2. Plate
3. Skittles

Experiment #3 Walking Water

1. Water
2. Clear plastic cups or mason jars of equal size
3. Food Coloring
4. Paper Towels
5. Stirrer
6. Scissors

Experiment #1 Magic Water Bag

Make sure your pencils are sharp and head outside!

1. Fill your plastic bag with water and seal tightly.

2. Take your sharpened pencil and poke through the bag! Don't hesitate or it will leak a bit.

- What happens? Try it again! How many pencils can you put through the bag? Make a guess and see what happens!

PENCIL BAG SCIENCE

- This science experiment looks like magic, but there's chemistry happening! What's going on between the water, the plastic bag, and the sharpened pencils?

The plastic bag is made up of polymers, long strands or chains of molecules. When the sharpened pencil pushes through the plastic bag, it's pushing through the polymer chains.

The chains or strands are pushed aside by the pointy pencil but then re-seal themselves around the pencil preventing water from leaking out. What happens when you try to push a dull or unsharpened pencil through?

Experiment #2 Candy Color Magic

Before you begin, make some predictions about what might happen when you mix the skittles with water.
What pattern will there be? Will the colors mix?
Will the colors meet in the middle?

1. On a shallow plate, place your skittles around in a circle.
2. Pour warm water into the center of the plate until the water is half covering your skittles.

Wait patiently and you will start to see the colors come off the candy and into the water.

Experiment #3 Walking Water

1. Fill two glasses half way with colored water. (We chose yellow and blue because mixed together they create green).
2. Place an EMPTY glass in between. Fold a paper towel three times length ways and place one end into the colored water and the other end into the empty glass. Do this again with your other glass.

What do you think will happen? Why? Watch as the water ‘walks’ up the paper towel and starts to fill the empty glass. Ours made this beautiful green water!