SUMMER

Grab-N-Go SCIENCE KIT 2020

WEBER STATE UNIVERSITY | College of Science Ott Planetarium

SCIENCE IN THE PARKS

r.a.m.p. WEBER COUNTY

Magical Science

Check out all the instructional videos at our websites:

scienceintheparks.org

www.weber.edu/ottplanetarium

Join us for a Virtual Science Saturday and Magic Science Demos on August 15th. Check out the Ott Planetarium Facebook page for more information!

#RandomActOfScience

Be sure to tag your experiments with @WeberScience (Facebook) or @WeberStateScience (IG)

Make a Rainbow

Materials

- White plate or white open container
- Skittles
- Water

Instructions

1. Place Skittles on a white plate or open container, try to alternate the colors.

2. Carefully and slowly pour room temperature water onto the plate, if the Skittles move, push them back into place quickly.

Explanation

Skittles have a candy shell of sugar and food coloring. When water is poured over the Skittles the colored coating dissolves and the color is then transported along with the water.

Experiment Extension

Try this experiment with other coated candies. Does the same thing happen with the coloring?

Is there any way to speed up or slow down this experiment?

Floating Paperclip

Materials

- Paperclip
- Cup or bowl of water

Instructions

1. Fill a cup of bowl with at least 2 inches of water

2. Place a paperclip between flat your fingers (long end to long end)

3. Very slowly and carefully, lay the paperclip flat on the water. What do you observe? Can you do this with any other object?

Magical Growing Beads

Materials

- 5 jelly beads
- Test tube
- Skittles
- Salt
- Water

Instructions

1. Take the jelly beads out of the test tube and place in a secure place (plastic bag or small cup).

2. Using one jelly bead in the test tube per experiment, fill out the following chart. Make sure to answer the following questions when making your observations:

Test	Item(s) to add to test tube	How long?	Change color?	Grow? Shrink? Split?	Disappear?	Notes
1	1 Jelly bead 1 Tablespoon water					
2	1 Jelly bead 1 Tablespoon water 1 Skittle					
3	1 Jelly bead 10 drops of water 1 Pinch of salt					
4	1 Jelly bead 10 drops of water 1 pinch of sugar					
5	1 Soaked jelly bead (end of test 1)					

	1 Pinch of salt					

Magical Moving Stick

Materials

- 1 popsicle stick (or any flat stick)
- 2 fingers

Instructions

1. Balance the popsicle stick (or any flat stick) on two fingers, with one finger on each end of the stick.

2. Without grabbing the stick, slowly slide your fingers toward each other (heading for the middle of the stick).
3. Where your finger meet is the perfect balance point of that stick.

Experiment Extension

4. Place a weight at the end of the stick (clip or tape a coin) on only one end and repeat the above experiment.

Shrinking Balloon

Materials

- 1 balloon
- 1 long piece of string
- Freezer

Instructions

1. Blow a balloon up as large as you can.
2. Take a piece of string and measure how large the diameter of the balloon is.
3. Place the balloon in the freezer. Take it out at different time intervals and measure is the balloon got larger or smaller. Fill out the following chart to record your observations.

Time	Measurement	Notes

0 minutes		
15 minutes		
30 minutes		
1 hour		

Invisible Ink

Materials

- Half a lemon
- Water
- Spoon
- Small bowl
- Qtip
- White paper
- Lamp or other light source

Instructions:

1. Squeeze some lemon juice into the bowl and add a few drops of water, mixing with a spoon.
2. Dip the Qtip into the mixture and write a message onto the white paper.
3. Wait for the juice to dry so it becomes completely invisible.
4. When you are ready to read your secret message or show it to someone else, gently heat the paper by holding it close to a light bulb (do not burn the paper, only heat it slightly).

What's happening?

Lemon juice is an organic substance that turns brown (oxidizes) when heated. Straight lemon juice would be visible on white paper. By diluting the lemon juice in water, it makes it very hard to notice when you apply it the paper, no one will be aware of its presence until it is heated, and the secret message is revealed.

Experiment Extension

Try this same experiment with the following mixtures: orange juice, honey, milk, onion juice, vinegar and wine. Invisible ink can also be made using chemical reactions or by viewing certain liquids under ultraviolet (UV) light.

Create Your Own Magic Trick!

Can you create your own magic trick using the materials from your kit? Draw your trick below and share with #WeberScience and #randomactofscience

#RandomActOfScience

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