

5 fun, kid-friendly science experiments

Due to the cold weather outside, your kids are probably home quite a bit. And they might be getting a little stir crazy—and who isn't! But, instead of turning to trusty cartoons and tablets when they get bored, consider helping them do experiments that are not only fun, but will also teach them a little about science! The best part - all of these activities can be done with household supplies!

Oobleck

Oobleck-- a name coined by Dr. Seuss in his book, *Bartholomew and the Oobleck*-- is a fascinating mixture and your kids will have a blast with it. A word of warning-- it can be messy, so you might want to have your kids play with it over the bowl or a tray!

What you need:

- 2 cups cornstarch
- 1 cup water
- Mixing bowl
- Food coloring (optional)



Instructions:

1. Pour cornstarch into a mixing bowl.
2. Slowly pour water into pour while mixing into the cornstarch. Once the mixture is thick, don't add any more water. If the mixture is too runny, slowly add in more cornstarch.
3. Mix in food coloring
4. Enjoy and play!

The Science:

When your kids move their hands slowly through the mixture, it will flow through their fingers, acting like a liquid. But if they hit the mixture, it will feel hard and like a solid. A substance like this is called a non-Newtonian fluid-- similar to quicksand, its form (whether it is a liquid or a solid) depends on pressure.



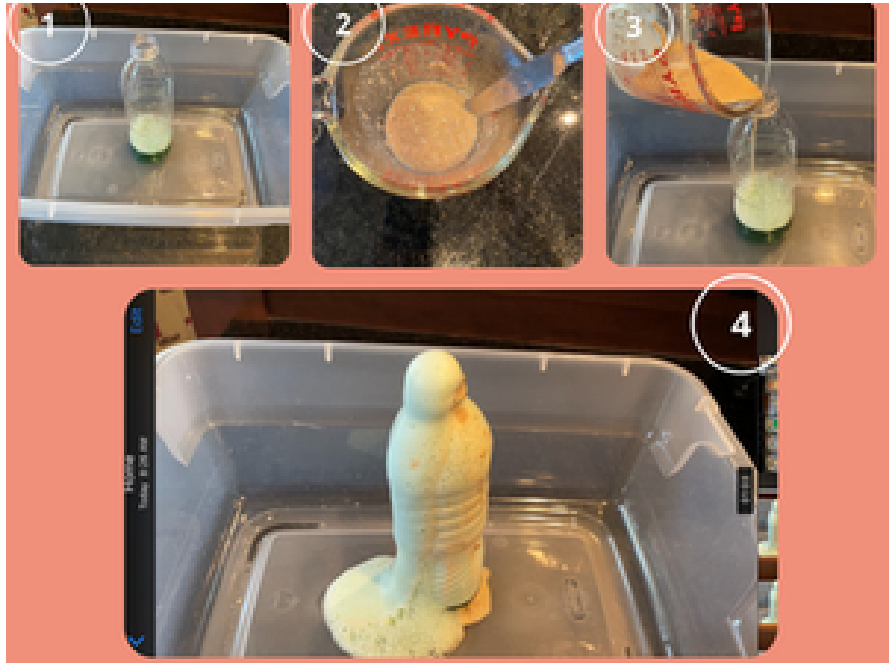
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Elephant Toothpaste

This fun demonstration results in an eruption of foam that bears resemblance of toothpaste large enough for elephants. Warning: hydrogen peroxide can irritate eyes, so be careful—consider wearing safety glasses.

What you need:

- 2 tbsp. Dishwashing soap
- Packet of yeast
- ½ cup 3% hydrogen peroxide
- Food coloring (optional)
- 3 tbsp. warm water
- Empty bottle
- Tray or Tupperware
- Small bowl



Instructions:

1. Place the bottle in the middle of a tray or a large Tupperware (to avoid messes).
2. Pour hydrogen peroxide, dishwashing soap, and food coloring into the bottle.
3. In the small bowl, mix yeast with warm water and stir gently for 30 seconds.
4. Pour yeast into the bottle-- the reaction should occur immediately!

Enjoy the eruption!

The Science:

The eruption is caused by the mixing of yeast and hydrogen peroxide. The combining of the two releases water and oxygen gas, forming bubbles which then turn into foam due to the dish soap.

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Ice Cream in a Bag

This experiment provides a very yummy treat as a result. Science and snacks—what more could you ask for?

What you need:

- 1 cup half and half
- ½ tsp pure vanilla extract
- 2 tbsp. granulated sugar
- 3 cup ice
- ½ kosher salt
- 1 big ziplock bag
- 1 small ziplock bag



Instructions:

1. Pour half and half, pure vanilla extra, and granulated sugar into the small ziplock bag. Press out excess air before sealing.
2. Place ice and salt into the big ziplock bag.
3. Place the small ziplock bag into the large ziplock bag, then seal. Make sure the small bag is surrounded by ice as much as possible.
4. Shake well for 7-10 minutes until the mixture has hardened into ice cream.
5. Eat and enjoy!

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The Science:

In order for ice to melt, it has to take heat away from its surroundings— in this case, the cream mixture. Normally, taking enough heat away from the cream mixture would take quite a bit of time to create ice cream. However, the salt grains actually lower the melting point of ice, which speeds up the process and creates the ice cream! This is also why we put salt on the roads in the winter.

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Lava lamp

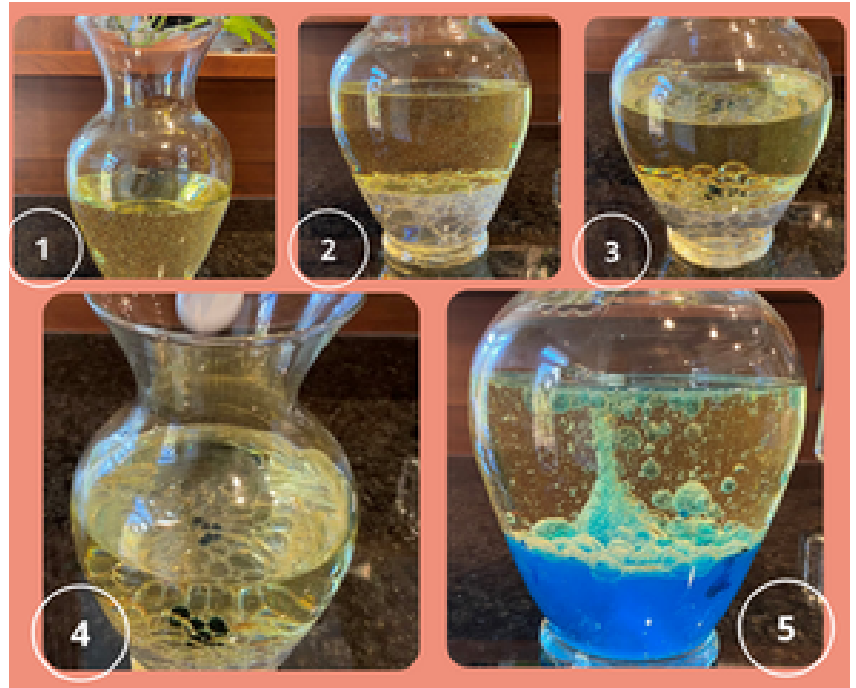
This fun experiment will turn an ordinary vase into the likes of a groovy lava lamp, but without the cost!

What you need:

- Wide vase or container
- $\frac{3}{4}$ cup vegetable oil
- Water
- Alka-seltzer tablet
- Food coloring (optional)

Instructions:

- Pour vegetable oil into the vase until the base is $\frac{3}{4}$ full.
- Pour water into the vase, making sure that there is at least 2 inches of vase empty at the top.
- Once the water has settled, add about 10 drops of food coloring.
- Once the food coloring droplets have settled between the oil and water, drop in an Alka-seltzer tablet.
- Watch the gas bubbles and enjoy your “lava lamp”!



The Science:

Notice how the water, vegetable oil, and food coloring separate themselves from each other very clearly. This is because they have different densities--the density of a substance is how closely packed the molecules that make up it are. Since oil settles on top of water, its molecules are less dense than the molecules in water. But why don't they mix, like food coloring and water do? It is due to the way the molecules in each substance are made. The water molecules are like magnets-- they have a positive end and negative end. Oil molecules, on the other hand, don't have an imbalance or charge. Because of their difference make-up, the molecules of oil stick together, and the molecules of water stick together, rather than mixing. Lastly, your kids may wonder what is happening when the Alka-Seltzer is added into the vase. When the tablet mixes with water, carbon dioxide bubbles are formed, which then attach to the food coloring droplets. After the bubbles reach the surface and pop, the food particles drift down again due to their density, and the process begins again.

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10 Ways You Can Help Prevent Child Abuse

Diet Coke and Mentos Explosion

This classic experiment creates an exciting explosion of fizz that reaches impressive heights and deservedly earns its common name: the soda geyser.

What you need:

- 2 liter Diet Coke
- 7 Mentos
- Half sheet of paper
- Index card
- Tape

Instructions:

- To create the tube channel for dropping the Mentos, take a sheet of paper and wrap it around the Mentos packet tightly.
- Tape the paper to itself so that when you take away the Mentos, the result is a tight tube.
- Unwrap the Mentos packet and set aside the 7 pieces.
- Take off the cap to the Diet Coke bottle.
- Place an index card on top of the open bottle.
- While holding the index card, place the tube channel on top.
- Add the unwrapped Mentos into the tube.
- Make sure that the tube is perfectly in line with the opening of the bottle.
- Quickly take away the index card, letting the Mentos fall into the soda.
- Get out of the way!
- Watch the explosion!



The Science:

The explosion is caused by the candies speeding up the release of carbonation in the soda.

Originally posted on the Now What? Blog on 12/11/20. The Now What? Blog served for nearly 7 years to

- 1. Normalize parents seeking support and help as a manner of child abuse prevention*
- 2. Engage community in how they can work to prevent child abuse*
- 3. Work to build resiliency in families through promotion of the 5 protective factors*

Maybe you coach a baseball team or you help care for the neighbor kids from time to time. You are investing in the safety and security of the children in our community. Because it truly does take a village to raise our children, we want to offer the tools needed to bring awareness and education to preventing child abuse.

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