SCIENCE ACTIVITY BAG!

Find YouTube tutorials at:

FundemoniumToys.com/shop/science-experiment-bag-with-online-video/

Hello and thank you for supporting Fundemonium by purchasing this science activity bag!

Our goal is to brighten your family's day by guiding you through three simple yet exciting science projects. We've included everything you'll need to complete the experiments <u>EXCEPT</u> for the following:

- Scotch tape
- food coloring
- Flash light/light source (to shine through a water bottle from the bottom)
- Bowl/bottle and hot water for mixing slime activator
- (Optional) glitter

Paper towels and cleaning supplies highly recommended! You will need to gather these to complete the projects! You should find the following items in the bag:

- Length of string
- balloon
- straw
- paper clip
- water/oil in bottle
- Alka-Seltzer tablets
- glue
- borax powder
- plastic spoon
- paper bowl
- plastic bag

You can follow along with the steps here and/or the YouTube tutorials!

1. BALLOON POWERED ROCKET

This project demonstrates the power of air pressure to send your "rocket" flying across the room! Make sure you do this in a space where you can stretch out the string all the way.

MATERIALS:

- · Length of string
- balloon
- straw
- paper clip
- scotch tape
- 1. Feed the string through the straw. Straightening the paper clip and tying it to the end of the string going into the straw first makes this easier.
- 2. Tie and/or tape down one end of the string to a sturdy piece of furniture or surface on one side of the room.
- 3. Walk across the room holding the other end of the string and the straw until the string is stretched out and tight.
- 4. While holding the string, blow up the balloon, pinch the end and tape it to the straw so that the pinched end is parallel with the straw and string.
- 5. Let the balloon go, and the straw "rocket" will fly along the string!

2. HOMEMADE LAVA LAMP

This project lets you create a simpler version of a groovy '60s icon while also exploring liquid density! Find a dark space for the best results.

MATERIALS:

- Water/oil bottle
- Alka-Seltzer tablets
- Food coloring
- Light source
- 1. Shake up the bottle to mix the water and oil. Notice what happens? Eventually the oil and water separate themselves again. This is because the water has more density, therefore the oil floats on top. This is the same reason ice floats in your drinks, as frozen water has less density than liquid water!
- 2. Carefully add a small amount of your favorite color of food coloring. You want the color to be mainly translucent so light can shine through. Take caution if you mix more than one color, for example red and blue to make purple, to use very little of each. You may notice the drops forming little bubbles through the oil. This is because food coloring is mainly made of water so it won't mix in the oil. Screw the cap back on tightly and shake to mix.
- 3. Find a dark space and shine a light through the bottom of the bottle. Phone lights can work well for this. It should be glowing!
- 4. Break one of the Alka-Seltzer tablets into pieces and place them all in the bottle. Leave the cap off or loosened so the gases can escape. Alka-seltzer is an effervescent tablet, which is a fun way to say it makes bubbles in water helping you feel better when you're ill! These bubbles will go up into the oil but not mix, making a groovy lava lamp effect for a few minutes until the tablet runs out. You can keep the bottle and recreate this with your own Alka-seltzer at any time!

3. SLIME

We're here to help you with the infamous polymer that has captivated millions! Be ready to wash your hands and have some paper towels handy just in case.

MATERIALS

- Glue
- Borax Powder
- Bottle/bowl for mixing borax with hot water
- plastic spoon
- paper bowl
- plastic bag
- (optional) glitter

PART ONE: THE ACTIVATOR

This part should be done ahead of time by an adult. Borax is a type of soap and can irritate the face and skin if prolonged contact is made, though in small amounts it can simply be washed away with water. It is hazardous if swallowed; if this happens please contact the National Number for Poison Control at 800-222-1222 immediately.

Mix the borax powder with hot water in a bottle or bowl until dissolved. We have found using plastic water bottles with resealable lids to be very effective, but once they've been used to mix borax you can't drink from them anymore. Simply screw the cap tight and shake the borax and hot water until dissolved. At the store we have bottles dedicated for this purpose, and once the mixture is made it doesn't go bad or expire. If you choose to do this mark the bottle! The activator looks like water when it's mixed. We've provided enough for a few batches of slime, as a little goes a long way. If it sits unused for a while you may notice some clumps of borax in the bottle; simply shake it back up to mix again. If a bowl or other items from your home are used be sure to wash thoroughly before standard use again, preferably in a dish washing machine after rinsing well in the sink. Let your activator cool down before using.

PART 2: THE MIXING

- 1. Pour the glue into the paper bowl.
- 2. Add your favorite color of food coloring and mix with the spoon evenly. We suggest starting with a small amount and adding more if desired, as too much can make the color dark and unappealing and it can't be undone. Furthermore, mixing too many different colors can result in a muddy brown or gray color, we recommend mixing no more than 2 colors and using very little of each one. If you happen to have glitter, it can also be added at this time for sparkly slime!
- 3. Once you've mixed a color that you like, stir the glue while a grown-up slowly adds a small amount of the activator. Keep slowly adding more as it becomes less sticky and more slimy. You can also mix with your hands at this point; the borax is well dissolved into the water at a low concentration and shouldn't cause any issues unless it remains on your skin for a long time or you touch your face. The borax water activator works by "breaking" the sticky bonds in the glue, making them slimy! Different amounts of activator will change the consistency of the slime, so keep mixing until you like the way it feels.
- 4. Scoop the slime into the plastic bag for safe keeping. Throw out the spoon and bowl, and everyone wash their hands! Any excess activator is okay to go in the garbage or down the drain.