

Bouncy Balls



Instructions:

1. In one cup, combine warm water (4 t.), cornstarch (3 t.) and borax (1/2 tsp.) Put the glue (1 t.) in another container.
2. Add several drops of food coloring to the glue and stir with your stirring stick!
3. Give your water/borax/cornstarch mixture a good stire to combine all the ingredients. Pour the water mixture into the colored glue.
4. Keep stirring! It will clump together. Take the glob out and roll it between your palms to form a ball.

The science behind it:

The mixture of Elmer's Glue with Borax and water produces a putty-like material called a polymer. In simplest terms, a polymer is a long chain of molecules. Polymers are made out of long strands of molecules like spaghetti.

~ from pbsparents.org / stevespanglerscience.com

Elephant Toothpaste



Instructions:

1. We'll come around and put a little hydrogen peroxide into your bottles. Be careful to NOT get hydrogen peroxide on your clothes or skin! It bleaches!
2. Add food coloring for some flare!
3. Add one tablespoon's worth of dish soap to the bottle and mix by swishing it around.
4. In a separate small cup, mix your warm water and yeast together for about 30 seconds. This activates the yeast.
5. Mix the mixture with a spoon for another 60 seconds...

The science behind it:

The yeast contains an enzyme called Catalase that breaks down hydrogen peroxide (H_2O_2) into oxygen gas and water. The oxygen gas gets trapped by the soap, and you get a large foamy solution that squirts out of the top of the bottle!

This is also an EXOTHERMIC reaction that releases heat, which is why the bottle warms up! ~ from imaginationstationtoledo.com

Lemony Sudsy Eruption



Instructions:

1. In your containers are clear hand soap and warm water. Add a few drops of food coloring to give the eruptions some flare!
2. Add scoops of baking soda to your soapy water!
3. Add in a spoon of citric acid and watch the suds! Be sure to touch them—they're cool (literally).

The science behind it:

Baking soda is a **BASE**, which means that it will react with the citric acid powder and release carbon dioxide. The bubbly gas (CO_2) reacts with the hand soap and produces the super foam. This is an **ENDOTHERMIC** reaction because heat is absorbed when the acid and base react, producing the cold feeling! With no food coloring, you can also use this to clean your house! ~from blogmemom.com

Candy & Balloons



Instructions:

1. Attach your balloon to the mouth of your funnel and pour in the nerds candy.
2. Attach the balloon to the mouth of your soda bottle. **BE CAREFUL TO NOT LET ANY CANDY SPILL INTO THE SODA!**
3. With the balloon on the mouth of your soda bottle, shake the contents of the balloon into the soda!
4. Now try it with pop rocks! Is there a difference?

The science behind it:

The nerds / pop rocks produce pressurized carbon dioxide gas. Each piece of candy contains a small amount of the gas, and the soda contains much more. When the candy hits the soda, carbon dioxide escapes the high fructose corn syrup in the soda. It gets into the balloon, causing it to expand!

~ from learnplayimagine.com / stevespanglerscience.com

Sink a Marshmallow



Instructions:

1. Drop a marshmallow into the water—does it sink or float?
2. Now sprinkle some cornstarch over your flat surface.
3. Put the marshmallow on the cornstarch and squish it! Roll it, smash it, smash it between your hands—the cornstarch should keep it from getting too sticky.
4. Put it in water to see if it floats!
5. If your marshmallow didn't sink, try again!

The science behind it:

When you squish the marshmallow, it gets smaller and denser. The smaller it is, the less water it can push aside, and the lower it floats. Eventually, the marshmallow gets denser than the water and sinks!
~from www.parentinggallery.com