

Science Experiments!

Oobleck

Equipment

A bowl
A spoon
1 cup of Water
2 cups of Cornflour
Food colouring (optional)

Instructions

Mix 2 cups of cornflour to 1 cup of water into a bowl. Mix the cornflour and water until your **oobleck** is formed. Tip: If you would like to colour your **oobleck**, add your food colouring to your water and then mix with the cornflour.

After you would get this weird consistency that when you continuously play with it, it would become hard and when you play with it slowly, it will be nice and gooey

When you apply pressure to **oobleck**, it works the opposite of the previous examples: The liquid becomes more viscous, not less. At the places you apply force, the cornflour particles get mashed together, trapping water molecules between them, and **oobleck** temporarily turns into a semi-solid material

Snow fluff

Equipment

A bowl
A spoon
1 cup of shaving cream
1 cup cornflour
Food colouring (optional)

Instructions

Snow Fluff Materials: 1 cup cornflour 1 cup shaving cream Food Colouring Instructions: Pour the cup of corn starch into a large bowl. Use a spoon to scoop the shaving cream on top of it. Put 5-10 drops of food colouring on top. Stir to mix. If it is crumbly then you would have to apply a bit of pressure with your hands to get it to stick.

Your end result would be a fluffy snow like texture to play with and mould

The tiny pieces of corn starch get mixed into the shaving cream and suspended in the mixture. Shaving cream is made of tiny bubbles, and the surface tension on the surface of the bubbles helps 'float' the corn starch particles when the two mix

Milk art

Equipment

A bowl
1/2 a cup of milk
Washing up liquid
Cotton bud
Food colouring (more than one colour needed)

Instructions.

Pour a thin layer of milk into a small flat bottomed dish, plate or saucer. Add drops of food colouring (in at least 2 different colours) over the surface of the milk.

Pour a little dish soap into a small bowl

Dip the end of the toothpick into the dish soap

Now touch the soap to the surface of the milk - and be amazed!

Now watch the amazing colours all spread out!

Milk has fat in it and the food colouring floats on top of the fat. The fat is all connected with bonds. Think of it like the little pieces of fat all holding hands with each other. Dish soaps are used on greasy or oily dishes because it breaks the bonds in fats allowing them to separate. When you add the dish soap to the milk, the fat separates and moves making your magical milk art

Dancing man

Equipment

A glass bowl or plate
Dry erase marker
Water

Instructions

Draw a simple picture on the glass. A stick figure is a good one to start with
Pour water onto the plate or into the bowl slowly to lift up the drawing
Swirl the water around to make the picture dance and move
See the funny man dance around!

The marker leaves behind mixture of pigments and a type of alcohol mixed together. The alcohol dissolves and the pigments are left behind as a solid. Glass is so smooth that the solid slides right off when it gets wet

Rainbow fizzes

Equipment

Baking soda
Vinegar
Syringes or eye drops
Food colouring

Instructions

Pour vinegar into each cup and watch the colours erupt. The baking soda and vinegar will react as they come into contact to create a **fizzy rainbow** eruption! The kids will be amazed as they watch the baking soda explode and they will want to do this easy science **experiment** again and again!

Storm in a glass

Equipment

Shaving cream
A large cream
Water
Food colouring
A spoon

Instructions

Fill the glass $\frac{1}{2}$ full with water. Spray some shaving cream on top of the water to fill the glass to $\frac{3}{4}$ full. Use your finger or a spoon to spread the shaving cream evenly over the top of the water. The top of the shaving cream should be flat. Mix $\frac{1}{2}$ -cup water with 10 drops of food colouring in a separate container. Gently add the coloured water, spoonful by spoonful, to the top of the shaving cream. When it gets too heavy, watch it storm!

After this you would get this imaginary storm; but in a glass!

Clouds in the sky hold onto water. They can hold millions of gallons! The layer of shaving cream is our pretend cloud in this experiment. The shaving cream layer can also hold onto water. Clouds can't keep storing more and more water forever, eventually they get too heavy. When that happens, the water falls out (precipitates) as rain, snow, sleet, or hail.

Ice fishing

Equipment

Ice cubes
Glass of water
String (yarn or kite string works great)
Small stick
Salt

Instructions

Fill the cup or tray up with water and place it in the freezer. You can also use ice cubes from your freezer and skip this step.

When the water is frozen, remove the ice from the cup or tray.

Put the ice in the glass or bowl of water. The cube will bob up and down in the water and then float on the top.

Place one end of the string from the fishing pole on top of the ice cube and sprinkle salt on the ice where the string is touching. Watch as the water melts slightly and refreezes.

After about 10 seconds, carefully lift the ice cube out of the water with the fishing pole. You caught a fish (ice)!

Ordinary water freezes at (32° F). When you add salt to water, it lowers the water's freezing temperature-it has to get colder than 32° F to freeze. How much colder depends on how much salt is mixed in with the water. The salt you sprinkle on the ice cube lowers its freezing temperature and, since the ice cube can't get any colder than it already is, it starts to melt. A little pool of water forms on top of the ice cube and the string sinks into it. As the ice cube melts, it dilutes the salt/water mixture in the little pool; the freezing point starts to go back up again. The ice refreezes, trapping the string. As soon as the ice cube hardens, you can raise it by lifting the string. All this happens very quickly, of course.

Balloon pop! Not!

Equipment

A balloon

2 pieces of tape about 2 inches in length

A small needle or a push pin

Instructions

Blow up balloon.

Use the two pieces of tape to make an "X" on your balloon.

Carefully (with parent supervision), push needle through the middle of your "X".

Leave needle in and see how long it takes your balloon to pop

Try to aim for at least 15 seconds if you have done more than 15 seconds then you're a superstar

What causes a balloon to pop is called catastrophic crack propagation. This really complicated sounded phrase means that the hole in the balloon widening is what makes it pop, not the fact that air is slowly being let out. When the balloon's hole gets bigger, it rips and eventually the balloon pops. In this experiment, the tape slows down this process

Polishing pennies

Equipment

Lemon juice (or just squeeze a fresh lemon)

Dirty old pennies

A cup

Paper towels

Instructions

Put a dirty penny in the cup and cover it with lemon juice.

Wait about five minutes then remove the penny and wipe it off with a paper towel.

You could take a picture to see the before and after of the penny to see how well you have cleaned it.

Pennies are made out of a metal called copper. The copper mixes with oxygen, the same gas that we breathe. This causes something called oxidation and makes the penny look dirty. Lemon juice has acid in it that removes the dirty colour or oxidation and makes the penny nice and shiny again!

Fruity sweets colour mixing

Equipment

Fruit rainbow-coloured sweets (smarties, skittles etc)

Warm water

Plate

Instructions

First, place the coloured sweets around the edge of the plate in a circle shape.

Then, get some warm water in a jug.

Next, pour the warm water into the middle of the circle until it reaches the sweets

After you have done all your steps, you will get to all the colours expand into the water