

Science Activities Book

Vinegar and Bicarb

Ingredients:	Materials
<ul style="list-style-type: none">- Food Colouring- White Vinegar- Bicarb Soda	<ul style="list-style-type: none">- Plastic Cup- Spoon- Tub/Large Container

Method:

1. Choose colour using chart.
2. Add colour and vinegar into a plastic cup.
3. Mix the cup.
4. Add 2-3 spoons of Bicarb to the cup.
5. Watch the reaction take place.

Note:

Put a tub under the plastic cup before adding the Bicarb in.

It will foam over and make a mess.

Example:



Non-Newtonian Fluid

Ingredients:	Materials
<ul style="list-style-type: none">- 2 cups corn starch- 1 cup water- Food Colouring	<ul style="list-style-type: none">- Plastic Cup/ Bowl- Spoon

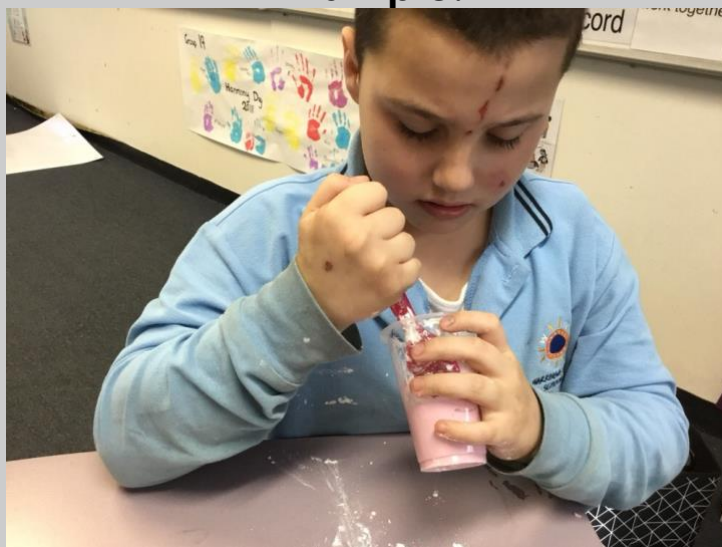
Method:

1. Choose colour using chart.
2. Add water and colour into a cup/bowl.
3. Mix.
4. Add corn starch into the cup/bowl.
5. Mix.

Note:

You should be able to pick up the mixture in your hands, however it will then begin to ooze.

Example:



Milk and Soap Reaction

Ingredients:	Materials
<ul style="list-style-type: none">- Food Colouring- Milk- Dish Soap	<ul style="list-style-type: none">- Plastic Container

Method:

1. Pour milk into container to fill the base.
2. Add drops of food colouring on top of the milk.
3. Choose multiple colours using the chart.
4. Add some dish soap to the middle of the container and watch the colours move.

Note:

This is a really quick and easy experiment.

Example:



Bouncy Balls

Ingredients:	Materials
<ul style="list-style-type: none">- 1 tbsp of borax (found in the laundry section)- 1/2 cup of hot tap water- 2 tablespoons of PVA glue- 1 tbsp of cornstarch- Food Colouring	<ul style="list-style-type: none">- Plastic Containers/bowls x 2- Spoon

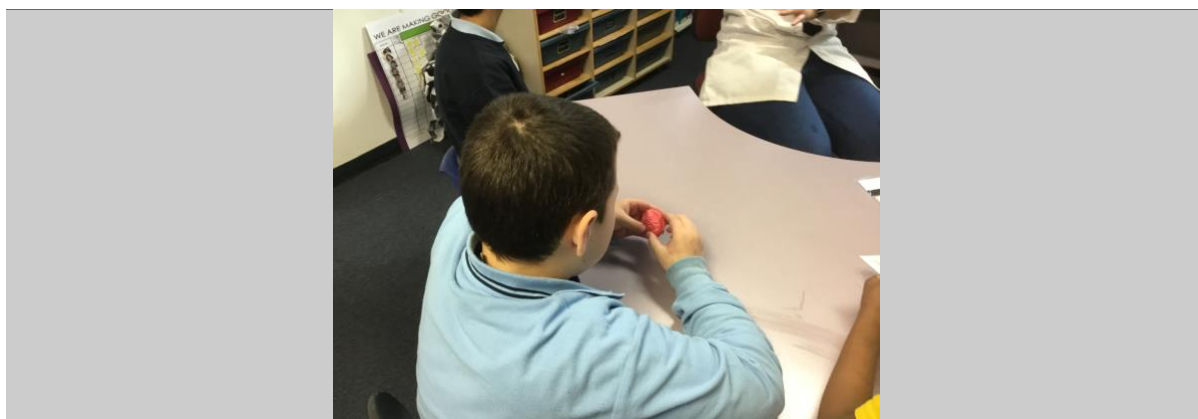
Method:

1. Mix the water and borax together.
2. In a separate bowl mix the glue and corn starch together.
3. Choose a colour using the colour chart.
4. Add food colouring to the glue mixture.
5. Mix.
6. Put the glue mixture into the water mix and wait 1 minute.
7. Pull out the hardened glob and roll it into a ball.

Note:

The water needs to be hot for this to work effectively

Example:



Flubber

Ingredients:	Materials
<ul style="list-style-type: none">- 6 tablespoons cold water- 1/2 cup PVA glue- food colouring- 1/4 cup hot water- 1/2 teaspoon borax	<ul style="list-style-type: none">- Plastic Containers/bowls x 2- Spoon

Method:

1. Choose a colour using the colour chart.
2. In bowl 1 – Mix together the cold water, glue, and food colouring. Set aside.
3. In bowl 2 – Mix together the hot water and borax, until the borax is completely dissolved.
4. Slowly add glue mixture to borax mixture.
5. Mix well.
6. Pour off excess water.

Note:

The water needs to be hot for this to work effectively

Example:



Slime

Ingredients:	Materials
<ul style="list-style-type: none">- 1 Tablespoon Metamucil- 1 cup Water	<ul style="list-style-type: none">- Microwave safe bowl- Spoon

Method:

1. In a large microwave safe bowl, mix together the Metamucil and the water for about 1 minute.
2. Microwave on high for 5 minutes. (Keep an eye on it, and pause the microwave for a few seconds if it looks like it's going to bubble over.)
3. Remove from the microwave and stir for around 3 minutes.
4. It's hot, so make sure you allow it to cool before handling it.

Note:

When you are mixing it after it comes out of the microwave, you will see it changing before your eyes.

Example:



Elephant Toothpaste

Ingredients:	Materials
<ul style="list-style-type: none"> - Squirt of Dish Soap - ½ Cup Hydrogen Peroxide - 1 tablespoon dry yeast - 3 tablespoons warm water - Food Colouring 	<ul style="list-style-type: none"> - Plastic cups/bowl - Spoons - Small soft drink bottle - Plastic tub/ large container

Method:

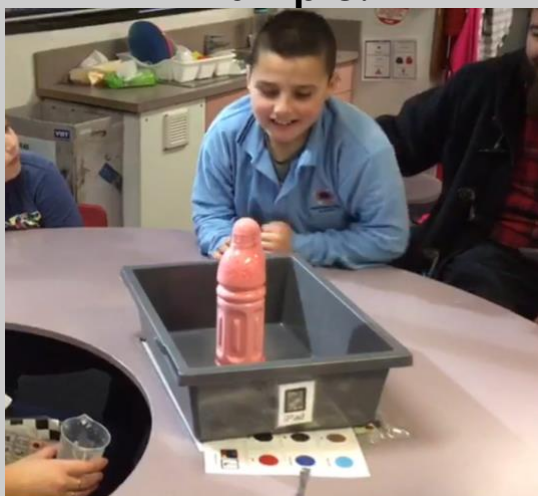
1. Choose colour using colour chart.
2. Add colour, dish soap and hydrogen peroxide into soft drink bottle.
3. Mix/swirl until combined.
4. In a separate cup/bowl, mix the water and yeast.
5. Pour yeast mix into the drink bottle and wait.

Note:

Put the drink bottle into a large tub before adding the yeast (to avoid making a mess).

The hydrogen peroxide can be bought from coles or a chemist.

Example:



Milk into Plastic

Ingredients:	Materials
<ul style="list-style-type: none">- 4 teaspoons of white vinegar- 1 cup of Milk	<ul style="list-style-type: none">- Plastic cups/bowl- Spoons- Paper towel

Method:

1. Heat milk (using saucepan, microwave or milk frother)
2. Add white vinegar into a cup.
3. Pour the milk into the vinegar.
4. Mix the cup slowly.
5. Scoop out curds onto layers of paper towel.
6. Press out all the moisture.
7. Knead the curds into a ball of dough.
8. Shape it and then let it dry (In 48 hours it will become hard plastic)

Note:

The plastic won't be hard for 48 hours.
You can add food colouring or glitter to the wet plastic dough.

When dry it can be painted or drawn on with markers.

Example:



Self-Inflating Balloon

Ingredients:	Materials
<ul style="list-style-type: none">- ½ cup of white vinegar- 2 tablespoons of baking soda	<ul style="list-style-type: none">- Balloon- Small Funnel- Small Bottle
Method:	

1. Use the funnel to put baking soda into the balloon.
2. Pour the vinegar into the bottle. (if using the funnel to pour in, wipe it out first)
3. Fit the balloon over the bottle carefully not tipping in the baking soda.
4. Hold up the balloon to allow the baking soda to drop into the bottle and watch.

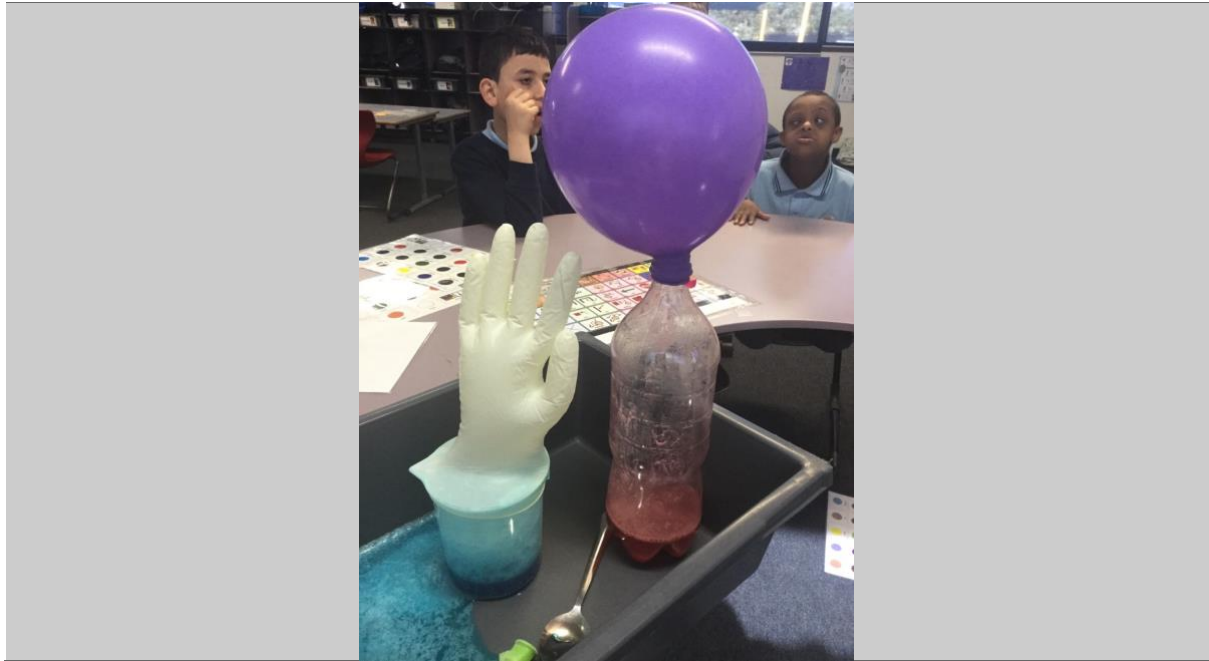
Note:

A really easy experiment.

You can add food colouring to the vinegar to make it colourful.

This can also be done with a rubber glove.

Example:



Rain Clouds in a Jar

Ingredients:	Materials
<ul style="list-style-type: none">- Water- Shaving Foam- Blue food colouring	<ul style="list-style-type: none">- Jar
Method:	
<ol style="list-style-type: none">1. Fill jar about $\frac{3}{4}$ full with water.2. Use the shaving foam to create a cloud on top.3. Let the foam settle a little bit (wait 1 minute)4. Drop food colouring onto the cloud.5. Keep dropping until the cloud fills up and it starts creating a rain like effect.	
Note:	
<p>A really easy experiment. You can use different colours and make colourful rain.</p>	
Example:	



Exploding Bag

Ingredients:	Materials
<ul style="list-style-type: none">- ½ cup of Water- ¼ cup of Vinegar- 1 ½ tablespoons Baking Soda- Food Colouring	<ul style="list-style-type: none">- Ziploc sandwich bags- Paper towel- Large tub
Method:	
<ol style="list-style-type: none">1. Tear off one piece of paper towel.2. Put baking soda in the centre of the paper towel.3. Fold paper towel into a little packet/pillow.4. Choose a colour using the colour board.5. Add water, vinegar and colouring into bag (and gently shake to mix).6. Quickly put the packet of baking soda into the bag and seal it shut.	

7. Give it a little shake and put it into the tub, then watch.

Note:

Do this experiment either outside or place it into a large tub.

After placing the packet into the bag, you need to really quickly seal it closed.

Example:



Lava Lamp Bottle

Ingredients:	Materials
<ul style="list-style-type: none">- Oil- Effervescent Antacid Tablets- Food Colouring- Water	<ul style="list-style-type: none">- Empty Bottles

Method:

1. Fill empty bottles $\frac{3}{4}$ full with oil.
 2. Fill the rest of the way with water (leaving space at the top).
 3. Choose colour using colour chart.
 4. Add 4-5 drops of food colouring.
 5. Drop a Tablet into each bottle.
 6. Watch the bubbles act like a lava lamp.
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Note:

After the bubbles have stopped, you can add another table to repeat the effect.

You can add glitter, beads and sequins for more of an effect.

Example:

Exploding Soap

Ingredients:	Materials
<ul style="list-style-type: none">- Ivory Soap Bar	<ul style="list-style-type: none">- Microwave safe plate- Microwave
Method: <ol style="list-style-type: none">1. Place bar of soap into microwave for 2 minutes.2. Watch the microwave and see the soap bubble up and grow.3. When the soap stops growing, you can stop the microwave.	
Note: <p>Must be Imperial Leather Ivory Soap or it will melt due to the way it is formed.</p>	

You can then crumble it up and whisk in a little bit of water and turn it into “Soap Paint”. It is still soap, so it can be used as a paint in the shower/bath or to paint onto a surface.

Example:



Hidden Colours

Ingredients:	Materials
<ul style="list-style-type: none">- Bicarb Soda- Vinegar- Food dye	<ul style="list-style-type: none">- Muffin Tray
Method:	

Preparation

1. Add 2-4 drops of food colouring into each space on the muffin tin.
2. Cover the food colouring with bicarb soda, so all you can see is white powder.

Experiment

3. Have students guess what colour they think is hiding underneath.
 4. Pour a little bit of Vinegar into one space to reveal its hidden colour.
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5. Repeat with remaining spaces.

Note:

Make sure you prepare in advance so it is a surprise.
Use a variety of different colours, or mix colours to make new ones.

Example:



Vanishing Colour

Ingredients:	Materials
<ul style="list-style-type: none">- Food dye- Bleach- Water	<ul style="list-style-type: none">- Clear Cups- Pippette / Dropper
Method:	

1. Choose a colour.
2. Add colour drops to cup and fill with water.
3. Slowly add one drop of bleach at a time.
4. Keep adding until the colour vanishes.

Note:

This is a really quick activity.
Allow for multiple attempts at this activity.

Example:



Making Ice-Cream

Ingredients:	Materials
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<ul style="list-style-type: none"> - ¼ milk - ¼ cream - ¼ tsp vanilla - 1 tbs sugar - 3 cups ice - 1/3 cup salt 	<ul style="list-style-type: none"> - Large zip lock bag - Sandwich sized zip lock bag
Method:	

1. In the large bag, add salt and ice.
2. In smaller bag, mix together milk, cream, vanilla and sugar. Close bag tightly.
3. Place smaller bag inside large one.
4. Shake for about 5 minutes.

Note:

Use gloves or a towel as the bag will get very cold.

Example:



Fizzing Lemon

Ingredients:	Materials
<ul style="list-style-type: none"> - Lemons - Baking Soda - 1 tsp Detergent - Food Colouring 	<ul style="list-style-type: none"> - Spoon - Knife
Method:	
1. Cut a lemon in half. (this will make 2 experiments).	

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2. Using the end of a spoon, dig into the lemon, releasing some of its juice and breaking open the membranes.
 3. Choose different colours and add food colouring drops onto the lemon. (different colours in different segments).
 4. Add detergent onto the top.
 5. Put baking soda onto the top of the lemon and watch.

Note:

Put the lemon onto a plate when doing the experiment.

Example:



Citric Foam

Ingredients:	Materials
<ul style="list-style-type: none">- 2 tsp Baking Soda (Bi-Carb)- 1 tsp Detergent- Citric Acid- Food colouring- Water	<ul style="list-style-type: none">- Spoon- Plastic cups or bowls
Method:	
1. ½ fill the cup/small bowl with water.	

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2. Add detergent and food colouring into water and mix.
 3. Add 2 teaspoons of Baking Soda and mix well.
 4. Sprinkle Citric Acid over the top and mix with a spoon. The more you mix, the more the reaction will occur.

Note:

- Citric Acid is found in the baking aisle of the supermarket.
- Place the cup/bowl into a tub before you add the citric acid to reduce the mess.

Example:

