

Small Science Learning Tasks

<p>Making a homemade rocket.</p> <p>Please ask an adult to help you. You will also need a space outside to safely launch your rocket!</p> <p>You will need:</p> <ul style="list-style-type: none"> • An empty plastic bottle (1 litre) • White vinegar • Bicarbonate of soda • 3 x pencils for the rocket's legs • A cork that fits in the top of the bottle • Sticky tape • A piece of kitchen roll • A spoon <ol style="list-style-type: none"> 1. Stick with tape your 3 pencils around the bottom of the bottle. When you turn the bottle over, the pencils should have a stand on which to sit with the bottle at least 2cm above the ground. 2. Add 2 x spoons of baking soda onto the sheet of kitchen towel. Roll up the kitchen towel and twist the ends to hold the soda (like a sweet). 3. Fill the bottle 1/4 with vinegar. 4. Take the bottle outside. Now work quickly. Add the paper with soda into the bottle. Pop the cork into the top. Turn the bottle over. Place it down flat on the floor and run and stand a good distance back from the bottle. What happens? Why does this happen 	<p>How to get the shiniest coins! Getting a brand-new shiny coins is always great but the older the coin gets the duller it looks. This chemical reaction should make old coins look like new!</p> <p>You will need:</p> <ul style="list-style-type: none"> • A glass or plastic bowl (not metall!) • 60ml vinegar • 5ml salt • Plastic spoon • an even amount of old, dirty 1p or 2p coins (try to find your oldest coins by looking at the date!) <p>Pour the vinegar into the bowl, add the salt and stir with the plastic spoon until the salt dissolves.</p> <p>Put in the pennies and leave for 5 minutes.</p> <p>Take half of the pennies and rinse them under water, then let them dry.</p> <p>Leave the other half to dry without rinsing. Leave them for 1 hour.</p> <p>Which look the shiniest? Why do you think there is a difference? Does this work on silver coins? Why? Did you notice any difference between when the coins were made?</p> <p>Can you try it with coins that are not from the UK – any differences?</p>	<p>Create your own chemical reaction!</p> <p>What you'll need</p> <ul style="list-style-type: none"> • Bicarbonate of soda • A powder that looks similar to bicarbonate of soda e.g. flour or icing sugar • Vinegar • A plastic drinks bottle (approx. 500ml) • A balloon or plastic bag • A hair tie (if you're using the plastic bag) • Spoon <p>Step 1 Pour vinegar into the plastic drinks bottle until it is around 2-3cm full.</p> <p>Step 2 Make a funnel with a piece of paper and use it to put two spoons of bicarbonate of soda into the balloon/ plastic bag.</p> <p>Step 3 Fasten the neck of the balloon around the rim of the drinks bottle, or the plastic bag using the hair tie, careful to not let any of the powder fall into the vinegar yet.</p> <p>Step 4 Upend the balloon/plastic bag quickly to let all of the powder fall into the vinegar, whilst keeping it sealed around the rim of the bottle.</p> <p>Step 5 Watch the balloon start to inflate!</p> <p>Step 6 Try this experiment again with another powder which look similar to bicarbonate of soda e.g. flour or icing sugar. Does the balloon still inflate?</p>	<p>The Exploding Lunch Bag</p> <p>You will need</p> <ul style="list-style-type: none"> • One small (sandwich size) zip-lock bag – freezer bags work best. • Baking soda • Warm water • Vinegar • Measuring cup • A tissue • What to do: <p>Go outside – or at least do this in the kitchen sink. Put 1/4 cup of pretty warm water into the bag. Add 1/2 cup of vinegar to the water in the bag.</p> <p>Put 3 teaspoons of baking soda into the middle of the tissue.</p> <p>Wrap the baking soda up in the tissue by folding the tissue around it.</p> <p>You will have to work fast now – partially zip the bag closed but leave enough space to add the baking soda packet. Put the tissue with the baking soda into the bag and quickly zip the bag completely closed. Put the bag in the sink or down on the ground (outside) and step back. The bag will start to expand, and expand, and if all goes well...POP!</p> <p>Video</p>
---	--	--	---

