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| **Activity title** |
| **Acids and alkalis - Rocket Rudolph** |
| **Stay safe** |
| Whether you are a scientist researching a new medicine or an engineer solving climate change, safety always comes first. An adult must always be around and supervising when doing this activity. You are responsible for:    • ensuring that any equipment used for this activity is in good working condition  • behaving sensibly and following any safety instructions so as not to hurt or injure yourself or others    Please note that in the absence of any negligence or other breach of duty by us, this activity is carried out at your own risk. It is important to take extra care at the stages marked with this symbol: ⚠ |
| **Time required** |
| 5 minutes |
| **Activity summary** |
| See Rudolph blast off into the air with his very own pop rocket. |
| **By the end of this activity, you will be able to:** |
| See the result of the chemical reaction between an alkali (bicarbonate of soda) and an acid (white wine vinegar) when you try and trap the gas that is produced. |
| **What equipment will you need?** |
| A plastic camera film canister, bicarbonate of soda (or an effervescent tablet), white wine vinegar, paper, scissors colouring pencils, a red nose, sticky tape. |
| **How to do it** |
| We would recommend doing this activity outside if possible.  **Step 1**  Cut out a piece of paper so that it is tall enough and wide enough to wrap around your plastic canister.  **Step 2**  On the paper draw your very own Rudolph and colour it in.  **Step 3**  Stick the red nose on Rudolph.  **Step 4**  Take the lid off your plastic canister and turn it upside down so that the open end is face down on the table.  **Step 5**  Wrap the picture around the plastic canister and stick in place.  **Step 6**  Turn the canister the other way up so the opening is facing upwards (Rudolph should now be upside down.  **Step 7**  Fill the canister halfway with white wine vinegar.  *Now this is where you need to be super speedy:*  **Step 8**  Drop an effervescent tablet into the canister, put the lid on tightly then turn it upside down (Rudolph will now be the right way up).  Wait for him to take off! |
| **You could also** |
| For more content from Marvellous Marthy have a go at our Snow blizzard in a jar activity which can be found in Santa’s STEM Workshop. |
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