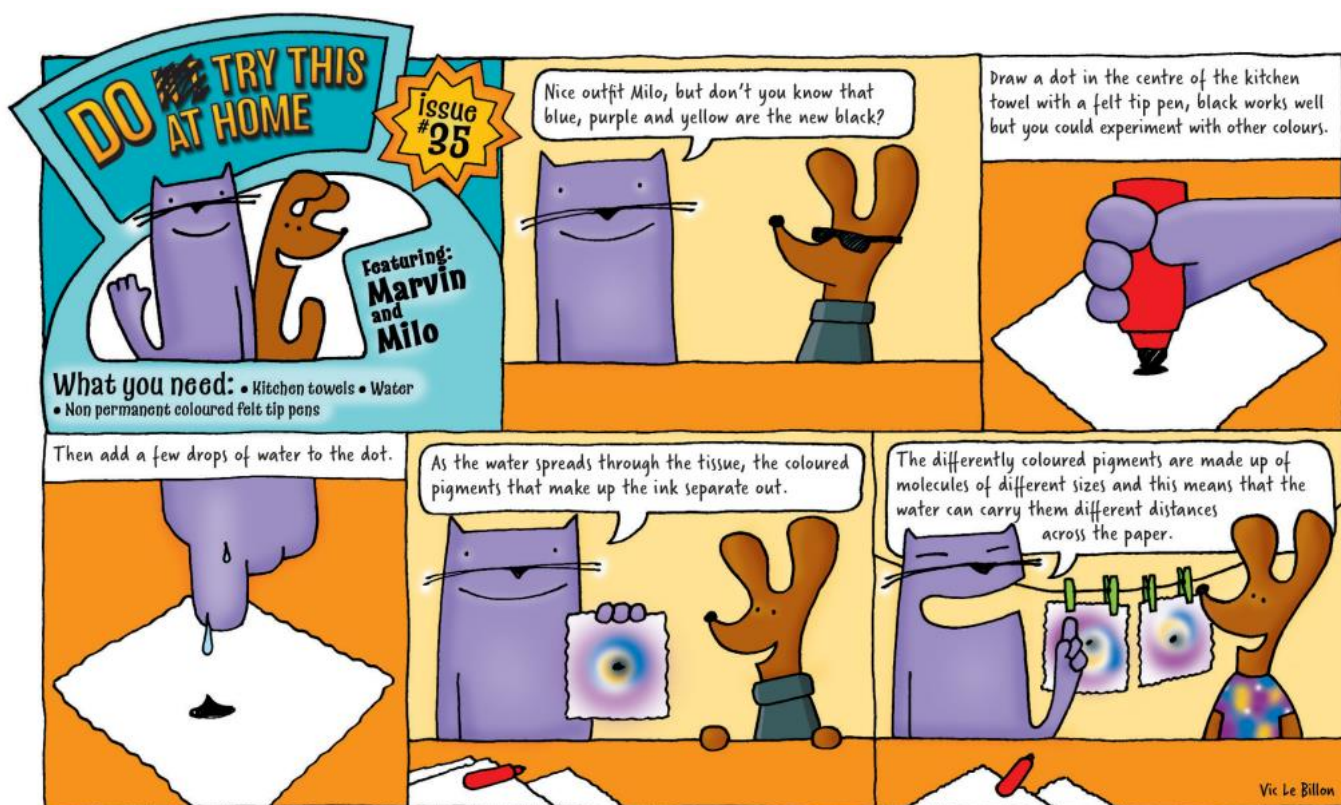


## Chromatography for Y6

Chromatography means colour writing and is a way that you can separate substances based on how well they dissolve. For example some colours in a felt tip pen dissolve better than others. The simplest version only needs some paper and some water. Kitchen paper or coffee filter paper work best. There are more complicated versions of chromatography that use expensive machines and can show if someone is trying to cheat at the Olympics.

### Experiment:

You can do chromatography at home, using food colouring, felt tip pens (check they don't say permanent, as these will not dissolve in water) and either kitchen roll or a coffee filter. Make sure you get permission from an adult, especially if you want to use a coffee filter! You can even use the colours on the outside of smarties or M&Ms, but they are quite faint. I personally recommend eating the chocolates and using a pen for chromatography.



Example instructions:

- <https://spark.iop.org/diy-chromatography#gref>
- <https://www.wikihow.com/Do-Simple-Chromatography>
- <https://rainydaymum.co.uk/paper-towel-chromatography/>

How it works:

- 1) Read this page to see pictures: (you can click through the animation of the practical) <https://www.bbc.co.uk/bitesize/guides/zgvc4wx/revision/5> Chromatography uses a solid support (usually paper) and a liquid (often water) to separate mixtures based on how well different parts of the mixture dissolve and how well they stick to the solid. The better a substance dissolves, the further it travels. Substances that do not dissolve at all in that solvent stay on the start line.

- 2) Watch this video which shows you how to carry out paper chromatography  
<https://www.youtube.com/watch?v=dBb0aWXhArk&list=PLyf3QQ9ddzgngBzZiwWcEBuRoKUYaXS6N&index=28&t=0s> (3 minutes)
- 3) This video shows what paper chromatography really looks like:  
<https://www.youtube.com/watch?v=AlGbh6-39KE> (1 minute)

**Other fun chemistry you can do at home (some will need a parent, check first!):**

<https://www.sheffield.ac.uk/chemistry/schools/edible-experiments>

<https://edu.rsc.org/resources/collections/kitchen-k-mistry> - podcasts