

Kitchen roll chromatography

Is the ink in your pen really just one colour? You can find out using this simple experiment with some basic kitchen equipment.

Watch the video here: <https://bit.ly/3hUFbD2>

In this video, education coordinator (<https://rsc.li/2EVZq4m>) Ross demonstrates how to do ink chromatography with kitchen roll and felt tip pens. This simple activity can be set for students to try at home with a responsible adult or used as a classroom experiment.

Equipment list

- Felt tip pens (non-washable)
- Kitchen roll
- A bowl or cup
- Water
- Scissors

Health and safety

- Make sure that you thoroughly clean any equipment after the experiment before using for food

Activity instructions

Method 1

1. Take a sheet of kitchen roll and draw a simple picture with a non-washable felt tip pen.
2. Place the sheet over an empty bowl. This is to keep the paper from getting too wet.
3. Carefully add a few drops of water using your fingertips or a small paintbrush onto the drawing.
4. Once slightly damp, watch the picture on the kitchen roll for a few minutes and see the different colours separate out.

Method 2

5. Cut a long strip of kitchen roll. Draw a single coloured dot with a non-washable felt tip pen about 2–3 cm from the bottom of the strip.
6. Add a small amount of water to the bottom of a bowl.
7. Carefully place the dot-end of the strip into the water, without submerging the dot in the water (the water level should be lower than the dot on the strip) and let the rest of the strip hang over the edge of the bowl.
8. Watch as the water absorbs up the paper strip and through the coloured dot. See what happens to the ink.

Explanation

Coloured inks are often made up of several different inks. Each colour of ink will get carried a different distance by the water, allowing you to see all of the different inks. Try this with different colours to see what actually goes into a colour. This technique is called chromatography and can be used in chemistry to find out what is in an unknown mixture.

Also check out

- How black is a black pen? (<https://rsc.li/3jX5ysp>) – Instructions for a similar experiment that includes a handout and further teaching notes.
- More simple experiments using everyday equipment which your learners can try at home or you can bring to the classroom on our YouTube playlist (<https://bit.ly/2YZ7kRN>).
- Read the CLEAPSS guidance on practical activities for pupils at home during extended periods of school closure, GL339 (<https://bit.ly/32Q8wli>).
- Read the SSERC guidance for primary home learning (<https://bit.ly/3bhG0Dn>).

This resource was downloaded from here: <https://rsc.li/3lAX3V7>