

AT HOME!

PROJECT NO.17

Felt Tip Chromatography

As family days out are put on hold, we've been thinking how we can make your family days in as much fun as possible.

Eureka! is the UK's only hands-on museum just for children aged 0-11. Full of exhibits to explore, helpful staff to engage with, activities to do and buttons to press. Based in West Yorkshire, we have brought smiles to the faces of over 8 million visitors since 1992. As families can't come to us, we are keen to bring a sample of the Eureka! experience to you.

Our expert staff have come up with a series of experiments that can be done at home, all designed to inspire children to get hands-on, have fun, and learn about themselves and the world around them.

Get experimenting and send us or share your pictures and videos using #EurekaAtHome and we'll share on our social media feeds too.

WE'RE ALL IN THIS TOGETHER!

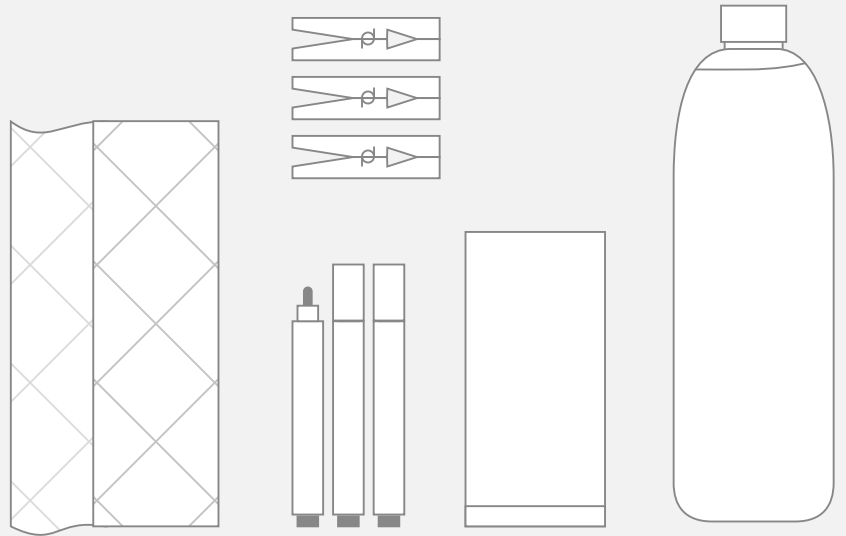


FELT TIP CHROMATOGRAPHY

A chance to mix science and art.
A great hands-on and colourful
experiment for all ages.

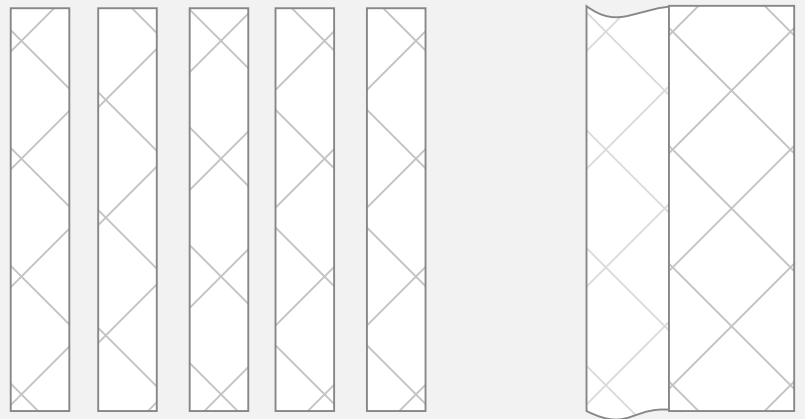
YOU WILL NEED:

- Some felt tip pens
- Kitchen roll paper
- Clothes pegs
- A large glass
- Water



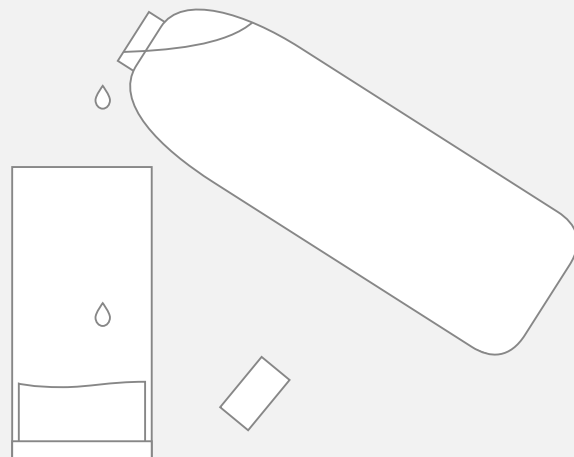
STEP 1:

Separate the kitchen
roll into long thin
strips of paper about
5cm across



STEP 2:

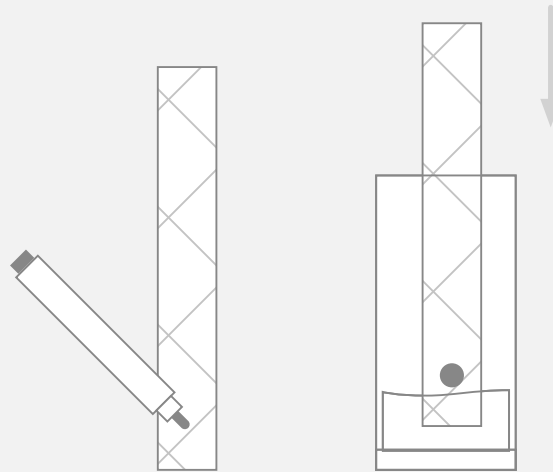
Fill the glass with
a small amount of
water on the bottom
about 30 ml



FELT TIP CHROMATOGRAPHY

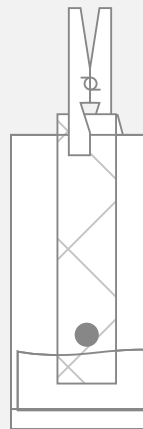
STEP 3:

Make a dot with a felt tip pen near the bottom on a strip of paper and dip the paper in the water so the bottom just touches the water (don't put it all the way in otherwise the experiment won't work)



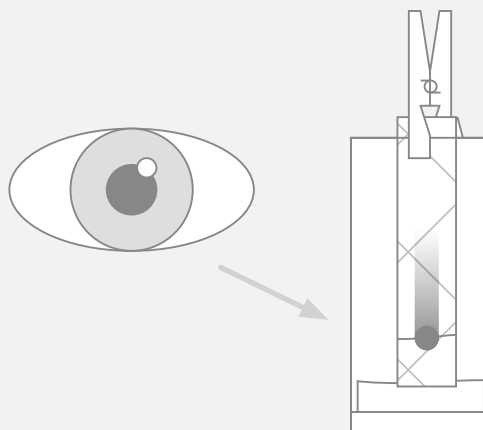
STEP 4:

Use the clothes peg to attach the paper to the top of the glass



STEP 5:

Watch as the water is absorbed by the kitchen roll. When it reaches the felt tip dot, watch as it pulls the ink apart. Watch as different colours are revealed



Top Tips!

You can use any colour, but black or purple are good ones as they are usually made up of lots of different colours in it.

FELT TIP CHROMATOGRAPHY

Why does this happen?

The colours of ink in felt tip pens are made by combining lots of different colours together. As the water travels up the paper the different colours are revealed. Some colours will separate faster than others because of the different chemicals that make up different colours of ink.

Chromatography is a technique that is used in science to separate components in a mixture and can be used to partially identify the components.

What other activities can I do?

Try experimenting with different colours, different brands of pens. How are they different, how are they similar?

Try experimenting with different shapes of kitchen roll. Try starting with a circle and put dots around the outside and dip the middle of the kitchen roll in the water and watch as the water is spread to the edges.

Could you make a pattern or a picture – we'd love to see how you get on. Please share your chromatography creations with us at #EurekaAtHome.

