



Separating Colours

Equipment

- Transparent beakers or water cups
- Filter paper
- Assorted felt-tip pens with deep colours
- Wax crayons
- Smarties (optional extension)
- Water



1 Cut a piece of filter paper about 2 centimetres wide, and about the height of the glass.

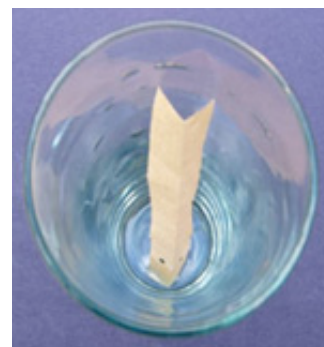


2 Fold the paper along its length, crease it and unfold it so that it looks like the photo.



3 Using a felt-tip pen, put one or two small spots of ink about 2 cm from one end of the filter paper, as shown. Make sure the spots are no more than a few millimetres across. Use two different colours or brands of pen.

4 Put 1 cm depth of water into the cup - no more. Stand the filter paper in the cup, with the ink-spotted end in the water at the bottom. The ink spots themselves should be out of the water.



5 Wait!



As the water soaks up the filter paper, you should see coloured bands appearing on the paper. For some inks there may be two or three different coloured bands, for others only one. The photo on the left shows an example of what you might see. One ink spot has separated into blue, green and red bands, and the other has not separated at all. When the bands are clear and distinct, take the paper out of the cup and let it dry.

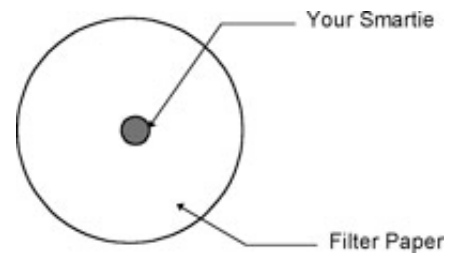


Take a Smartie and place it in the centre of a piece of filter paper



Using a straw, add a drop of water to the Smartie and wait. As the water spreads out across the paper it carries the different colour dyes with it, and these separate into bands. The three colours I can see are:

- 1
- 2
- 3



These are called primary colours. With these three you can make any other colour. Do you know what happens when you mix these colours, or can you guess?

- red + yellow =
- blue + red =
- yellow + blue =
- red + blue + yellow =