7: Ink Chromatography

Inks come in many colours, but usually these are made by mixing different coloured chemicals. These different chemicals may have different solubilities, and this can be used to separate them from the mixture. By allowing a solvent to move through a piece of paper that has the ink on it, the different coloured chemicals will move at different rates when the solvent reaches the coloured ink. If the solvent continues to move through the paper, the chemicals will separate more and more.

**Instructions:**

1. Take a piece of paper cut from the coffee filter, and draw a line about 1cm from the bottom using one or more of the coloured textas (if you only use one colour, the darker ones are more likely to have more than one coloured chemical in them)
2. You are going to place a skewer cross the container of solvent, with the paper attached to it. The end of the paper should just dip into the liquid – if the liquid covers the line, then the ink will just wash off, so make sure the coloured line will be ABOVE the level of the liquid when the bottom of the paper is getting wet.
3. Use a piece of sticky tape to attach the top of the paper to a skewer (the coloured line should be near the free end of the paper)
4. Let the liquid soak up the filter paper until it continues past the coloured line – the further the liquid goes, the more the colours will separate.
5. How many different coloured chemicals were in your pen?
6. When you are finished, put the wet paper and the skewer into the bin (or you can take it home)