FOOD DYE COLOURS

Creating A Colourful Life

THE STORY SO FAR

Timmy was a lively kid. He enjoyed all the normal things that kids enjoy doing. However one day his mother, Mandy, noticed that whenever he ate fairy cakes with his favourite yellow coloured icing on top he was more lively than normal. She mentioned this to one of her friends, who said that some children are sensitive to some types of food. Yellow food colouring is known to cause some children to become hyperactive.

This made sense to Mandy, so she decided to avoid yellow food colouring. It was Timmy's birthday, and so to stop him becoming hyperactive when she made his birthday cake she decorated it with red, green and blue icing. However on his birthday Timmy was still hyperactive after eating the cake.

Being a scientist, Mandy knew that colours could be mixed to make new colours. She decided to find out if yellow food colouring was used in other food colourings. This is the experiment she carried out. What results did she find?

You Will Need:
- 4 strips of filter paper
- 4 glass sample vials
- Samples of red, green, blue and yellow food colouring
- Plastic pipettes
- Beaker of water
- Beaker of ethanol
- Pencil

Instructions:
1. Using the plastic pipette, squeeze the 'rugby ball' end and place into the water. Release your grip on the rugby ball to draw water up into the pipette.

2. By squeezing gently on the rugby ball, place 10 drops of water into each of the 4 glass vials.

3. Using another pipette, place 20 drops of ethanol into each of the 4 vials.

4. Label each piece of filter paper at the top in pencil with the food colour to be tested.

5. **Use separate pipettes each time** (to avoid contamination). Place one drop of food colour approximately 1.5cm from the bottom of each of the labelled filter papers.

6. Place each filter paper upright into a different vial (see diagram).

7. Wait at least 10 minutes and examine the colours.

Questions

- ✓ **Which other food colourings is Timmy sensitive to and how do you know?**

- ✓ **Can you identify which substance Timmy is sensitive to?**

pencil label — glass sample vial — BLUE — filter paper — food dye drop — 1.5 cm — 20 drops of ethanol — 10 drops of water