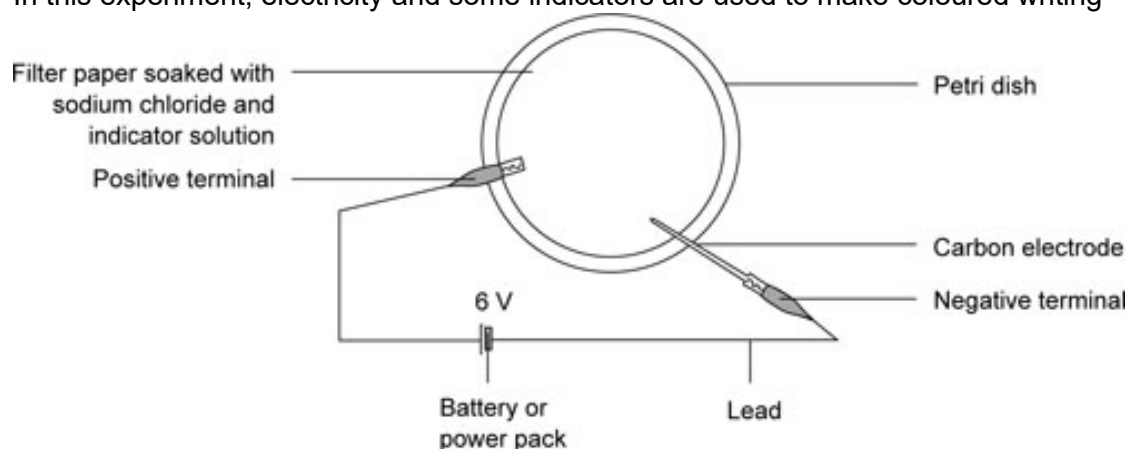


## Chemistry and electricity – student sheet

### Introduction

In this experiment, electricity and some indicators are used to make coloured writing



### Equipment

#### Apparatus

- Plastic petri dish
- Filter papers
- 6 V battery or power pack
- Leads and crocodile clips
- Carbon electrode
- Dropping pipette

#### Chemicals

- Sodium chloride
- Universal indicator
- Methyl orange

#### Health, safety and technical notes

- Read our standard health and safety guidance here <https://rsc.li/3u7uaFY>
- Universal indicator is flammable, see CLEAPSS Hazcard [HC032](#).
- For more information on sodium chloride, see CLEAPSS Hazcard [HC047b](#).
- Use of electrical charges is always of risk, use protective equipment where the charge is high.

#### Procedure

1. Dissolve a spatula measure of sodium chloride in 2 cm<sup>3</sup> of water. Add three drops of methyl orange indicator.
2. Lay a filter paper inside a plastic petri dish. Drop the solution onto the paper using a dropping pipette, until the paper holds no more solution.
3. Attach the positive end of a 6 V battery to a lead ending in a crocodile clip. Use the crocodile clip to grip one end of the paper.
4. Attach the negative end of the battery to a carbon electrode.
5. Write lightly on the wet paper, using the carbon electrode.
6. Repeat the experiment using Universal Indicator.

## Questions

1. What would happen if the lead were attached to the positive electrode using universal indicator?
2. Explain what reactions have occurred to produce the colours.