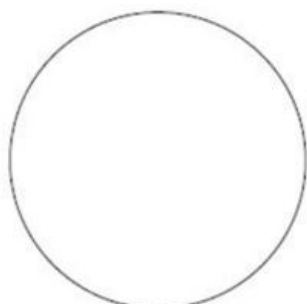


Using a microscale conductivity meter – student sheet

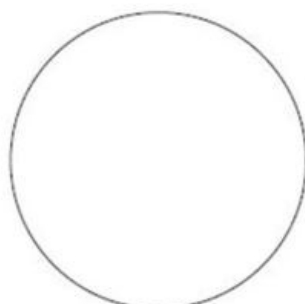
In this experiment you will be using a conductivity meter to test which solids and solutions/liquids conduct electricity.

Procedure

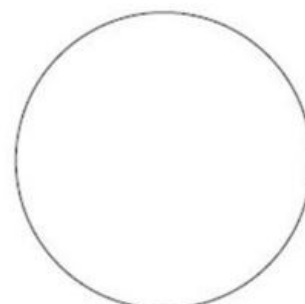
1. Cover the worksheet with a clear plastic sheet.
2. Add three drops of each of the solutions to the circles indicated below.
3. Place a small amount of each of the solids in the circle indicated below.
4. Test for conductivity by carefully placing just the tip of the electrodes in each of the substances in turn.
5. Make a table of your results.
6. Give explanations for your results trying to link the conductivity of a substance with its structure.



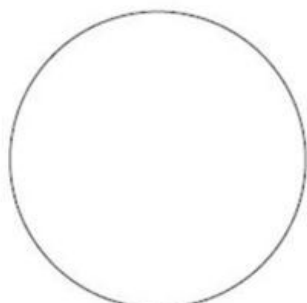
Copper sulfate
solution



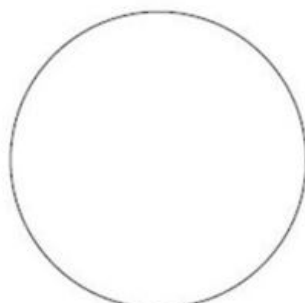
Sodium chloride
solution



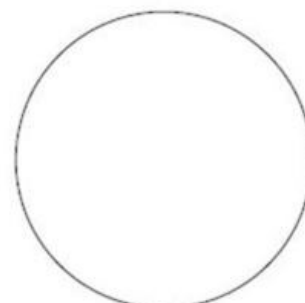
Sugar solution



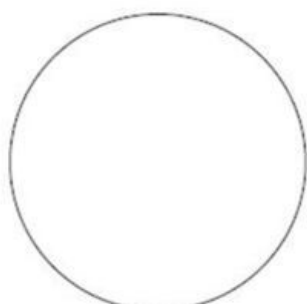
Tap water



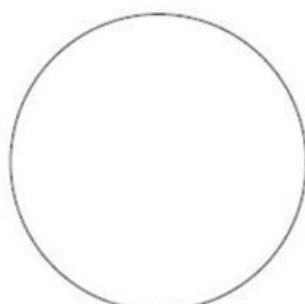
Deionised water



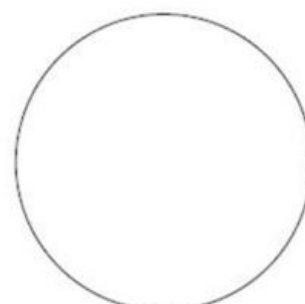
Copper foil



Iron nail



Aluminum foil



Pencil 'lead'

Health, safety and technical notes

- Read our standard health and safety guidance here <https://rsc.li/3LNbkfo>
- Students must wear suitable eye protection (Splash resistant goggles to BS EN1663).
- Copper(II) sulphate solution, CuSO_4 (aq) causes eye damage (above 0.12 mol dm^{-1}), is harmful if swallowed and HAZARDOUS to the aquatic environment.