

**YEAR 7 SCIENCE
EARTH AND SPACE SCIENCES
CRYSTALS**

AIM: To investigate the formation of crystals.

BACKGROUND:

Many rocks have crystals, both large and small, in them. Diamond is a crystal of carbon, formed under intense heat and pressure.

Crystals can be formed from **saturated solutions** - formed when no more solute is able to enter the liquid or solution.

By making a **super-saturated solution** using hot to very hot water, better crystals can be formed.

EQUIPMENT: 1 x 100 mL beaker

1 x teaspoon

1 x stirring rod

1 x popstick

1 x small piece of string

Samples of copper sulphate, alum (potassium aluminium sulphate), potassium chloride, table salt, sugar.

METHOD:

- Choose one of the crystals to make. If you choose salt or sugar, use some food colouring to add to the effect.
- Place about 60 mL of water in a small beaker and heat gently over a Bunsen until nearly boiling.
- Remove the Bunsen and add a teaspoonful of the solute. Stir until dissolved.
- Add more solute and stir each time until no more will dissolve.
- Tie a small piece of string around the popstick. Place the popstick over the beaker and dangle the string into the solution.
- Allow to cool slowly overnight.
- Photograph the crystals and observe them under a stereo-microscope or hand lens.

OBSERVATIONS:

1. Look at your crystals and describe the following. Include a photograph.

- Colour of crystal.
- Shape of crystals.
- Size of crystals.

2. Look at 2 other crystals and record your observations here under the same headings.

CONCLUSION: