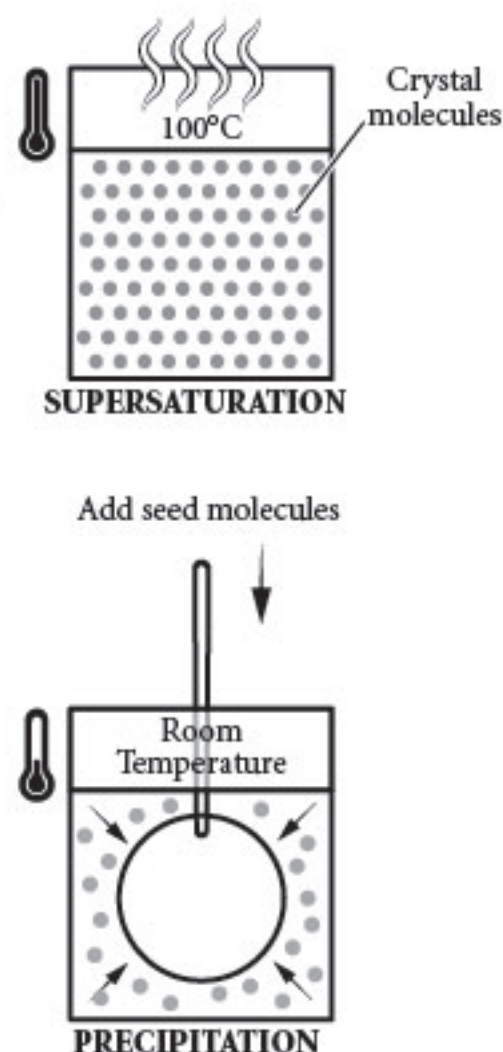


HOW DOES IT WORK?

When you add the crystal powder to hot water, it breaks up into tiny crystal molecules in the water. These crystal molecules are far too small to see (unless you use a microscope). When you add the crystal powder to the right amount of hot water, a 'supersaturated' solution is formed (if you stir in more powder, no more can dissolve). Because hot water can dissolve more crystal molecules than cold water, the water cannot contain all the crystal molecules when it cools down, so some crystal molecules fall back out of the solution into solid form. We have a special word for this — we say molecules 'precipitate' out of solution. As they precipitate, the crystal particles join with the crystal molecules on the growing body. The crystals on the coating are called 'seed' molecules and the crystal particles coming out of the solution attach themselves to the seed molecules.

Meanwhile, the water in the solution has been evaporating into the air (drying up), leaving a stronger and stronger crystal solution behind (*cold, humid conditions slow growing down because they slow evaporation down). So more and more crystal molecules gradually join (fuse) with the ones already on the body, forming larger crystals. Because all the solution molecules are the same kind (all from the same crystal powder), they all form crystals of the same shape, which all stick together, making a big chunk of crystals that are beautiful and interesting to look at!

And best of all — YOU MADE THEM!



SAFETY RULES:

- Read these instructions before use, follow them and keep them for reference.
- Keep young children, animals away from the experiment area.
- Store this experimental set and the final crystals out of reach of children under 8 years of age.
- Clean all equipment after use.
- Make sure that all containers are fully closed and properly stored after use.
- Ensure that all empty containers and/or non-reclosable packaging are disposed of properly.
- Wash hands after carrying out experiments.
- Do not use any equipment which has not been supplied with the set or recommended in the instructions for use.
- Do not eat or drink in the experiment area.
- Do not allow chemicals to come into contact with the eyes or mouth.
- Do not apply any substances or solutions to the body.
- Do not grow crystals where food or drink is handled or in bedrooms.
- Take care while handling with hot water and hot solutions.
- Ensure that during growing of the crystal the container with the liquids is out of reach of children under 8 years of age.
- Make sure that all containers are fully closed and properly stored after use.

INGREDIENT LIST:

Crystal Growing Powder:

Name	% by weight
Aluminium potassium sulfate CAS: 7784-24-9 EINECS: 233-141-3	100


Please observe the following statements (Risk and Safety advice).

Aluminium potassium sulfate
CAS: 7784-24-9 EINECS: 233-141-3
S24 Avoid contact with skin.
S25 Avoid contact with eyes.

DISPOSAL OF CHEMICALS:

The used chemicals can safely be flushed down the drain with plenty of water.

Grow Your Own CRYSTAL SOLAR SYSTEM

 **WARNING** – This set contains chemicals and apparatus that may be harmful if misused. Read cautions on individual containers carefully. Not to be used by children except under adult supervision.

WARNING – Not suitable for children under 8 years. For use under adult supervision. Contains some chemicals which present a hazard to health. Read the instructions before use, follow them and keep them for reference. Do not allow chemicals to come into contact with any part of the body, particularly the mouth and eyes. Keep small children and animals away from experiments. Keep the experimental set out of reach of children under 8 years old. Eye protection for supervising adults is not included.

ADVICE FOR SUPERVISING ADULTS:

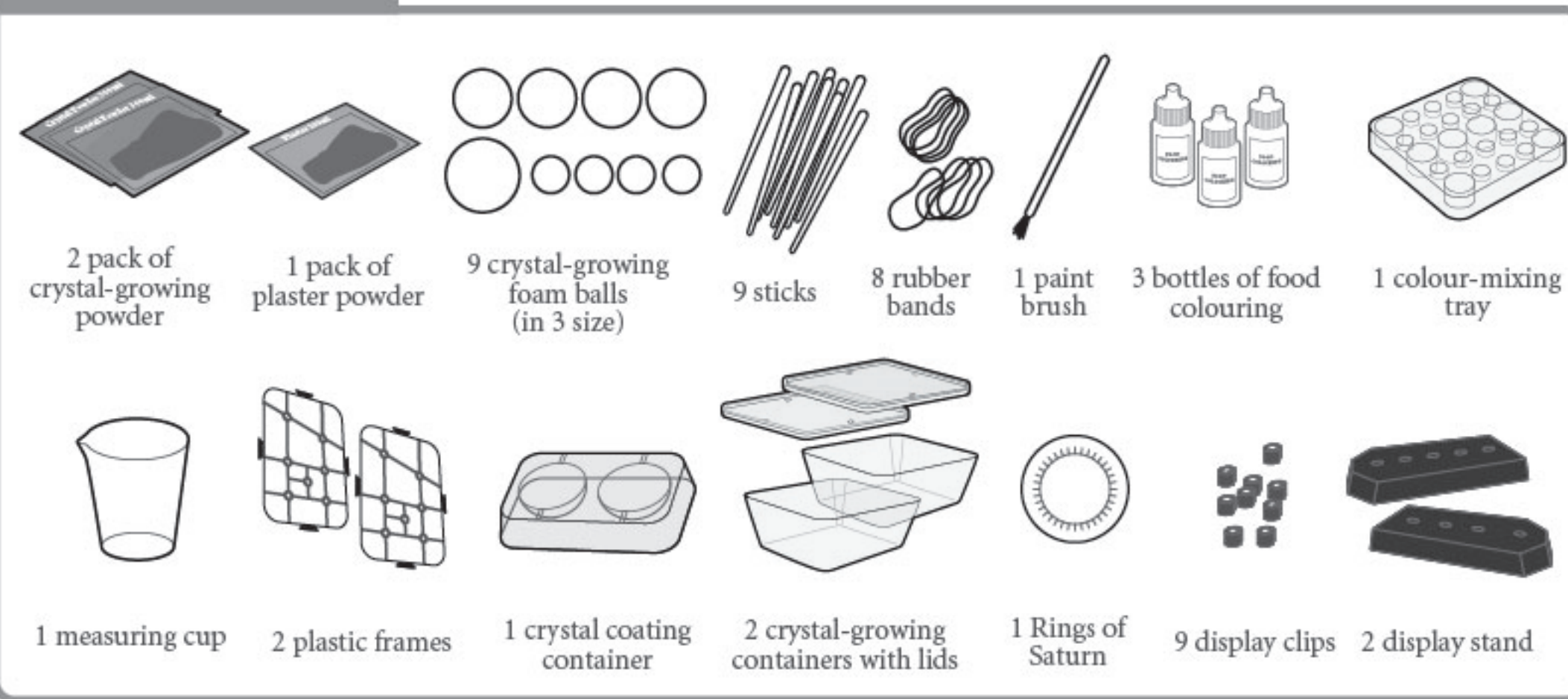
1. Read and follow these instructions, the safety rules and the first aid information and keep them for reference.
2. The incorrect use of chemical can cause injury and damage to health. Only carry out these experiments which are listed in instructions.
3. This experimental set is for use only by children over 8 years.
4. Because children's abilities vary so much, even within age groups, supervising adults should exercise discretion as to which experiments are suitable and safe for them. The instructions should enable supervisors to assess any experiment to establish its suitability for a particular child.
5. The supervising adult should discuss the warnings and safety information with the child or children before commencing the experiments. Particular attention should be paid to the safe handling of acid, alkalis and flammable liquids.
6. The area surrounding the experiment should be kept clear of any obstruction and away from the storage of food. It should be well lit and ventilated and close to a water supply. A solid table with a heat-resistant top should be provided.
7. Substances in non-reclosable packaging should be used up (completely) during the course of one experiment, i.e. after opening the package.

FIRST AID INFORMATION

Most important: In case of injury, get medical assistance immediately.

1. In case of eye contact: Wash out eye with plenty of water, holding the eye open if necessary. Seek immediate medical advice.
2. If swallowed: Wash out mouth with water; drink some fresh water. Do not induce vomiting. Seek immediate medical advice.
3. In case of inhalation: Remove person to fresh air.
4. In case of skin contact and burns: Wash affected area with plenty of water for at least 10 minutes.
5. In case of doubt, seek medical advice without delay. Take the chemical and its container with you.
6. In case of injury always seek medical advice. Write the telephone number of your nearest Poison Control Center that can be reached in an emergency: _____

PACKAGE CONTENTS



IMPORTANT: YOU MAY ALSO NEED: a jug of steaming hot water, a stirring spoon, rubber gloves, an apron and protective goggles.

Please read all the instructions to help you understand all the procedures before you start. If there is anything you don't understand or are not sure about, please ask an adult such as one of your parents/relatives or a schoolteacher. Using this kit, you will need adult supervision at all times. Take great care when using hot/boiling water and the solutions you will produce. Also, as the crystal columns you will make can be sharp and are easily broken, be very careful when handling your crystals, so you don't hurt yourself or break your lovely crystals.

INSTRUCTIONS:

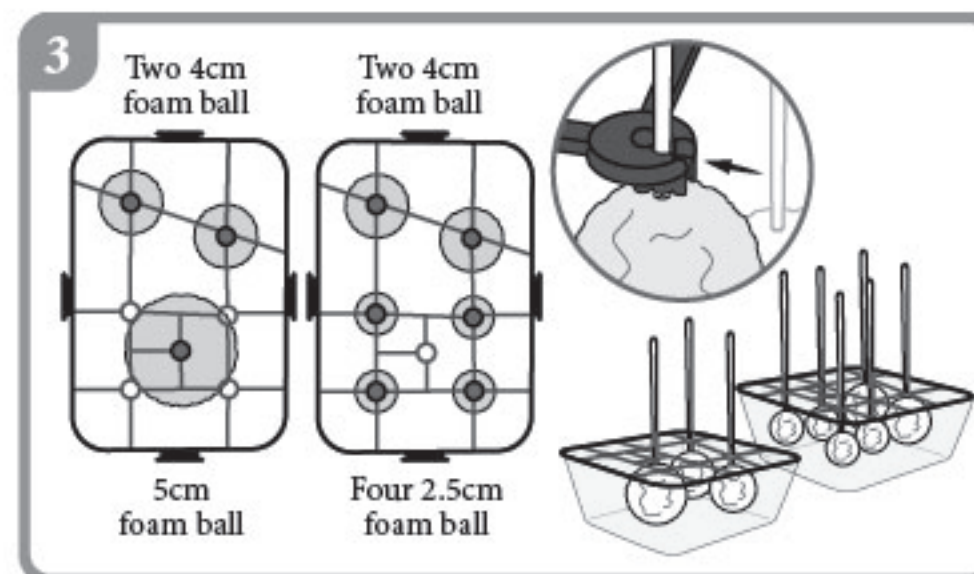
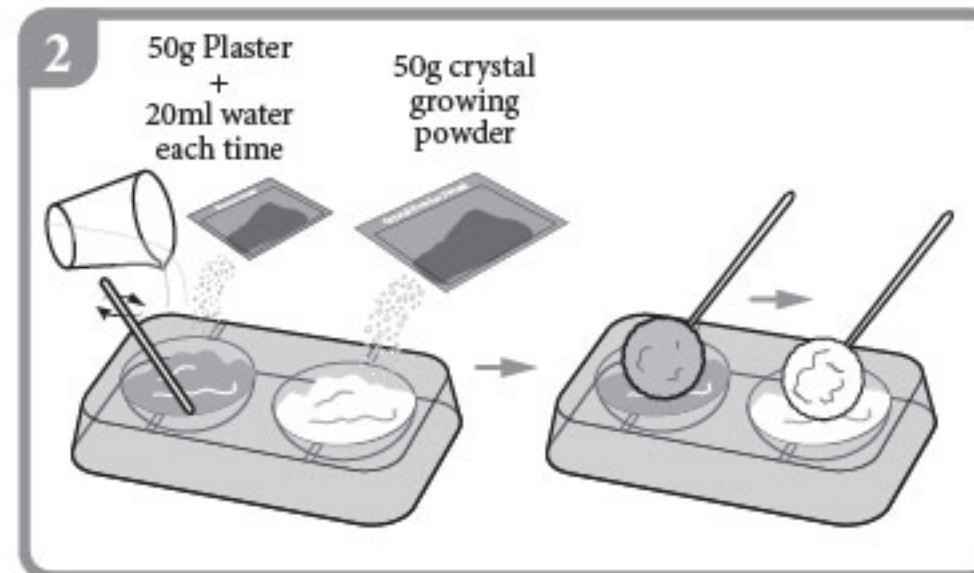
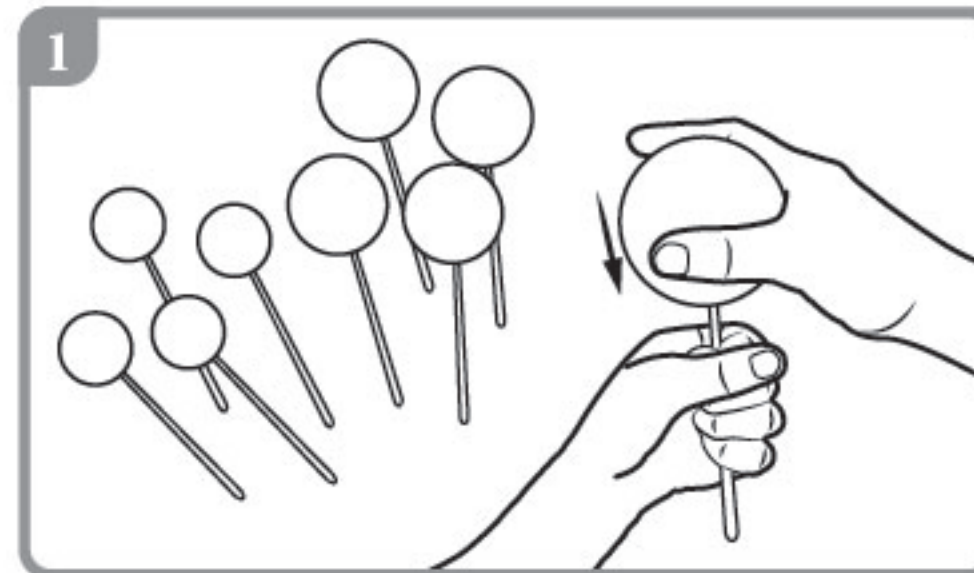
1. Insert a stick into every foam ball. Do not penetrate through the foam ball, it should look like a lollipop.

2. Measure 50g of crystal growing powder by filling it up to the 50ml mark of the measuring cup. And fill 50ml crystal growing powder in one cavity of the crystal coating container.

Mix Plaster 50g (half of the plaster pack) with water 20ml (0.7 fl.oz.) in the other cavity by any stick or pencil you have, and coat the foam balls with plaster mixture. Then quickly coat a thin layer of crystal powder on each foam ball before the plaster dried up by using the crystal coating container. Clean this cavity if plaster mixture dried up and repeat last step by mixing the other half plaster with same amount of water so that all foam balls are coated with plaster mixture and crystal powder.

Since the plaster would dry up in a short time, please finish this step as quickly as possible.

3. Secure the foam balls into the plastic frame as shown and let them dry under room temperature.



4. Prepare 1200ml (40.6 fl.oz.) of clean hot water to grow your crystals in. Use boiling water (100°C / 212°F) if possible, as this is best for making the crystals grow.

Be careful when handling hot water — ask an adult to do this part for you. Measure the amount of boiling water as precisely as you can. If you use too much water, or not enough, your crystal growing might not work properly.

- Pour out exactly 600ml (20.3 fl.oz.) boiling water into 1st crystal-growing container (A), and mix one pack (300g) crystal powder with it.

- Pour out exactly 560ml (18.9 fl.oz.) boiling water into 2nd crystal-growing container (B), and mix all the remaining crystal powder from the pack used in Step 2.

5. As soon as you have added the water, stir quickly until all the powder is dissolved. Then submerge the foam balls (Sun - biggest diameter foam ball and 2 middle size foam ball) into crystal-growing container A, and other 6 (2 middle size and 4 small size foam ball) into crystal-growing container B. Bind a rubber band on each hole of crystal-growing container lid and secure the frame hooks to fix it on top of the containers. **MAKE SURE** the whole foam ball is immersed in the solution without touching each other or the bottom, by adjusting the height of sticks on plastic frame. Do not stir or shake the solution after this.

6. Find a location for the growing container where the temperature stays relatively constant and where the crystals can happily grow undisturbed. After 24 hours, some growing crystal clusters should start to appear on the body. Shining a bright focused flashlight on the foam balls will help you spot crystals growing and extending in the solution. In good growing conditions, crystals will grow all over the ball surface in 1 day. The crystals' size and growing time will vary depending on the environment you grow them in. If the environment is cold or humid, it will take longer for them to grow*.

7. Carefully remove you lovely sun and planets from the container after you are pleased with the crystals. Pour away the remaining solution. Place them one by one onto the display stand with display clips like fig.7 and let them dry.

8. Once the crystals are completely dry, paint them with food colouring according to the poster and carefully place the Rings of Saturn on. Your crystals are completed! Now you can display your crystal solar system collection with the nice poster!

