

297X210MM

CRYSTAL SCIENCE

FROSTY DIAMOND: ALUMINIUM POTASSIUM SULFATE (100%), AQUAMARINE BLUE: AMMONIUM PHOSPHATE (99.5%), FD & C BLUE #1 ALUMINUM LAKE (0.5%), PURPLE AMETHYST GEODE: AMMONIUM PHOSPHATE (99%), COCCINE (0.5%), FD & C BLUE #1 ALUMINUM LAKE (0.5%), GOLDEN CITRINE: AMMONIUM PHOSPHATE (99%), FD & C YELLOW #5 ALUMINUM LAKE (0.5%), FD & C YELLOW #6 ALUMINUM LAKE (0.5%), EMERALD GREEN: AMMONIUM PHOSPHATE (98.5%), FD & C BLUE #1 ALUMINUM LAKE (0.5%), FD & C YELLOW #5 ALUMINUM LAKE (0.5%), FD & C YELLOW #6 ALUMINUM LAKE (0.5%), PINK QUARTZ: AMMONIUM PHOSPHATE (99.5%), COCCINE (0.5%), RED RUBY GEODE: AMMONIUM PHOSPHATE (99.5%), COCCINE (0.5%), GOLD SHELL: CALCIUM SULFATE HEMIHYDRATE (100%), RAMA QUARTZ: AMMONIUM PHOSPHATE (100%).

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KMART NEW ZEALAND - REGIONAL OFFICE C/O. KMART PAPATOETOE STORE HUNTERS PLAZA, GREAT SOUTH RD, PAPATOETOE, AUCKLAND, NEW ZEALAND.

PLEASE REFER TO SAFETY LEAFLET BEFORE USE!
ADULT SUPERVISION REQUIRED AT ALL TIMES!

CRYSTAL SCIENCE

INSTRUCTIONS

WARNING! Not suitable for children under 10 years. For use under adult supervision. Contains some chemicals which may 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 and finished crystals out of reach of children under 10 years old.

Read and follow these instructions, the safety rules and the first aid information and keep them for reference. The incorrect use of chemicals can cause injury and damage to health. Only carry out those experiments which are listed in the instructions. 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 supervising adult should discuss the warnings and safety information with the child before commencing the experiments. The area surrounding the experiment should be kept clear of any obstructions and away from the storage of food. It should be well-lit and ventilated and close to a water supply. A solid table should be provided. Substances in non-reclosable packaging should be used up (completely) during the course of one experiment because the effectiveness of the ingredients following opening may deteriorate. Clean all equipment after use. Ensure that all empty containers and/or non-reclosable packaging are disposed of properly. Wash hands after carrying out experiments. Do not eat or drink in the experimental area. Do not apply any substances or solutions to the body. Do not grow crystals where food or drink is handled or in bedrooms. Do not use any equipment which has not been supplied with the set or recommended in the instructions for use. Take care while handling with hot water and hot solutions.

CAUTION! 34ML FOR CHILDREN OVER 10 YEARS OF AGE ONLY. TAKE APPROPRIATE PRECAUTIONS WHEN USING AS STAINING MAY OCCUR TO SOME MATERIALS/ SURFACES. ADULT SUPERVISION IS REQUIRED AT ALL TIMES. READ THE INSTRUCTIONS BEFORE USE. FOLLOW THEM AND KEEP THEM FOR REFERENCE. KEEP YOUNGER CHILDREN UNDER THE SPECIFIED AGE LIMIT AND ANIMALS AWAY FROM THE ACTIVITY AREA. STORE CHEMICAL TOYS OUT OF REACH OF YOUNG CHILDREN. ALWAYS WASH HANDS AFTER CARRYING OUT ACTIVITIES. CLEAN ALL EQUIPMENT AFTER USE. DO NOT USE ANY EQUIPMENT WHICH HAS NOT BEEN SUPPLIED WITH THE SET OR RECOMMENDED IN THE INSTRUCTIONS FOR USE. DO NOT EAT, DRINK OR SMOKE IN THE ACTIVITY AREA. DO NOT APPLY TO THE BODY. IN CASE OF EYE CONTACT, WASH THE EYE WITH PLENTY OF WATER HOLDING THE EYE OPEN. DO NOT INHALE THE POWDER, OR PLACE IN THE MOUTH. IF ANY IS SWALLOWED WASH OUT THE MOUTH WITH WATER AND DRINK PLENTY OF WATER. DO NOT INDUCE VOMITING. SEEK MEDICAL ADVICE IN ALL CASES.

BATCH No 13/19

CONTENTS

1 DISPLAY LIGHT, 3 PEDESTALS/TRAYS, WOODEN SPATULA, MONOFILAMENT THREAD, MEASURING CUP, MAGNIFYING GLASS, 8 BAGS OF CRYSTALS, ASSORTED PEBBLES, RECORD KEEPING LOG AND INSTRUCTIONS

INTRODUCTION

This pack and its contents are designed to introduce your child to a world of science and wonderful discoveries. Always follow the instruction booklet carefully and have it on hand throughout each experiment.

GROWING YOUR CRYSTALS

- Choose your desired crystals to grow and record in your record keeping log. Ensure that you log the date, time & crystal name.
- With the help of an adult pour in the required amount of water needed (see table on next page) into a saucepan using your measuring jug.
NOTE: You will need a saucepan that is no longer used for cooking and will be only used for mixing and heating chemicals.
- Pour crystals into the bowl, keeping 1/8 of the crystals in the bag.
- Slowly stir the crystals until they have fully dissolved using your wooden spatula.
- Wait for liquid to cool to lukewarm temperature.
- While liquid is cooling place your rocks into one of the trays. Small rocks have been provided, however for a more prominent crystal you may wish to find larger rocks in your garden. (Please ensure these are washed & you wash your hands after touching them).
- Now pour the liquid from the bowl into the tray, pouring over the rocks.
- Once the liquid has settled, take the remaining grains still in your bag & sprinkle them above the base rock so they settle onto the rock.

- Set your tray with the crystal solution in a place where it will not be disturbed by movement or rapid change in temperature.
- Crystals should start to grow in a few hours, you can use your magnifying glass to look through them and report any findings in your log book.
- Allow the crystals to grow undisturbed for 3-4 days. You can then decide one of two things:
 - Remove crystal from solution.
 - Let solution evaporate for a few more days which will allow crystal to grow larger.
- Place the crystal mass aside on a piece of newspaper or paper towel & allow it to dry completely for one day.
NOTE: If the crystal mass and the base rock have formed a square shape due to the shape of the plastic tray, you may choose to break off excess crystals to make your crystal look more geologically natural.
TIP: If you wish to make more crystals ensure you keep excess solution in a storage jar (not provided) and label these so you know what crystal these make.
- To make White Calcite: Use your measuring cup to measure 100mL of the Rama Quartz saved solution into a saucepan. Add one teaspoon of Frosty Diamond saved solution into the same solution.
- Crush 14g of Rama Quartz crystals that you have previously made into a powder and add this to the saucepan. With the help of an adult slowly heat the saucepan, stirring the crystals until they have fully dissolved using your wooden spatula. Then, wait for liquid to cool to lukewarm temperature.
- Place some base rocks into one of the trays. Now pour the liquid from the saucepan into the tray, pouring over the rocks. Allow to sit for 3-4 days again, as before.

Bag No	Crystal Name	Water Amount
1	Golden Citrine	34mL
2	Pink Quartz	34mL
3	Rama Quartz	34mL
4	Purple Amethyst	34mL
5	Red Ruby	34mL
6	Emerald Green	34mL
7	Aquamarine Blue	34mL
8	Frosty Diamond	34mL

*All amounts are estimates, if crystals are not growing you have used too much water.

GROWING CRYSTALS ON A THREAD

- Using your magnifying glass select 4 of the largest frosty diamond crystals you have previously made.
- Cut your monofilament thread into four even pieces (scissors not provided).
- You will need PVA glue (not provided) to attach one end of your thread to the seed crystal. Set this aside to dry completely.
- Once the glue has set, tie the other end of the thread to a pencil (not provided). Make sure there is enough space between each hanging crystal. Place the pencil over one of the trays. Only have the threads dangling no more than 3cm so your crystals are not touching the bottom of the tray.
- Fill one of the trays with any left over Frosty Diamond Solution and leave the crystals to grow over the next few days. You can keep adding more solution as the days go by or until you are happy with the growth of your crystals.
- Display your chosen crystals on the display pedestals provided and for your best formed crystal, place this onto the display light stand which will shine a light through your crystal, lighting up the colours making them glow.

GEODE FACTS!

Natural Geodes form when water in the Earth becomes hot enough to dissolve minerals in the rocks. The minerals are carried in the water where it seeps into cracks and holes in the rocks. When it cools, cavities filled with sparkling crystals form. These are geodes.

HOW TO MAKE A GEODE

- Mix 20mL of water in with your plaster of paris (38g) (not provided) to make a thick paste. If you happen to have a couple of seed frosty diamond crystals left over, you can stir them into the plaster mixture.
- When the plaster starts to thicken use the wooden stick to coat the sides and bottom of the mould evenly with this mixture, making a bowl-like shape.
- Allow at least 30 minutes for your plaster to set. Then remove it from the mould and leave it aside on some newspaper to finish drying.
- With the help of an adult pour in the required amount of water needed (see previous table) into a kettle using your measuring jug, boil and pouring into a mixing bowl. **NOTE:** You will need a bowl that is no longer used for cooking and will be only used for mixing chemicals.
- Using your Purple Amethyst or Red Ruby crystals pour half of the packet into the mixing bowl. Stir until the crystals have fully dissolved using your wooden spatula.
- Wait for liquid to cool to lukewarm temperature.
 - While the liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of it.
 - Pour in the crystal solution into the tray.
 - Set your tray with the crystal solution in a place where it will not be disturbed by movement or rapid change in temperature. Allow the crystals to grow for at least a week. Observe the crystal growth using your magnifying glass to look through them and report any findings in your log book.
 - When you are happy with the crystal growth, remove the geode crystal and place it aside on a piece of newspaper or paper towel & allow it to dry completely for one day.
TIP: Make crystals using any leftover solution following the steps 1-13 on the reverse.
NOTE: Pour any unwanted liquid down your drain for safe disposal of the product.

CRYSTAL FACTS!

A solid figure that is made up of a repeating pattern of geometric shapes is known as a crystal. Crystals form when a liquid cools and hardens. During this crystallization process, molecules within the liquid pull together in a pattern.

FIRST AID ADVICE

Enter the contact details of your local poison centre or hospital below, who will be able to help in the event of accidental ingestion or injury.

ADULT SUPERVISION REQUIRED AT ALL TIMES!