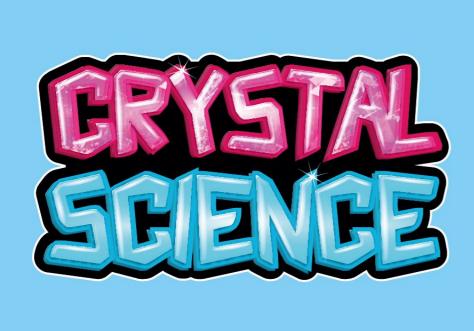
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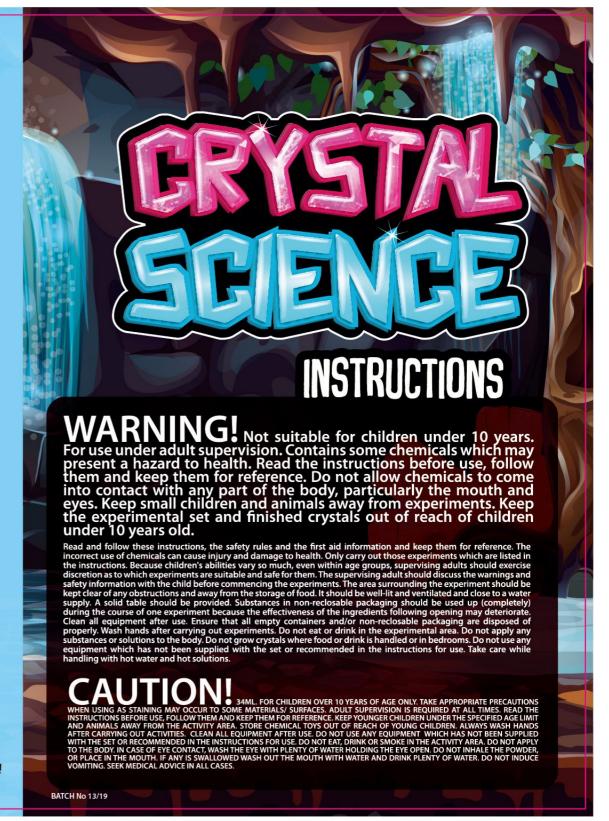


ROSTY DIAMOND: ALUMINUM POTASSIUM SULFATE (100%). AQUAMARINE BLUE: AMMONIUM PHOSPHATE (99.5%), FD & C BLUE #1 ALUMINUM LAKE (.5%). PURPLE AMETHYST GEODE: AMMONIUM PHOSPHATE (99.9%), COCCINE (0.5%), FD & C BLUE #1 ALUMINUM LAKE (0.5%), GOLDEN CITRINE: MMONIUM PHOSPHATE (99.9%), FD & C YELLOW #3 ALUMINUM LAKE (0.5%), EMPRALD GREEN: MMONIUM PHOSPHATE (98.9%), FD & C BLUE #1 ALUMINUM LAKE (0.5%), EMPRALD GREEN: MMONIUM PHOSPHATE (98.9%), FD & C BLUE #1 ALUMINUM LAKE (0.5%), FD & C YELLOW #3 ALUMINUM LAKE (0.5%), FD & C YELLOW #3 ALUMINUM LAKE (0.5%), FD & C YELLOW #5 ALUMINUM PHOSPHATE (99.5%), COCCINE (0.5%). TO 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,

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



### CONTENTS

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

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.



1. Choose your desired crystals to grow and record in your record keeping log. Ensure that you log the date, time & crystal name.

2. 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.

 ${\bf 8. Powrozystals into the bowl, keeping 1/8 of the crystals in the bag.}\\$ 4. Slowly stir the crystals until they have fully dissolved using your wooden spatula.

5. Wait for liquid to cool to lukewarm temperature.

G. 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).

 $7. Now pour the liquid from the bowl into the {\it tray}, pouring over the rocks.$ 8. 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.

 $10. Set your tray with the {\it crystal solution} in a place where it will not be disturbed by movement or rapid change in temperature.$ 

 $\hbox{ 11. Grystals should start to grow in a few hours, you can use your magnifying glass to look through them and report any findings linyour log book.}$ 

 $12. Allow the {\it crystals} to {\it grow undisturbed for 3-4 days}. You can then decide one of two things:$ a) Remove crystal from solution. b) Let solution evaporate for a few more days which will allow crystal to grow larger.

13. Place the crystal mass aside on a piece of newspaper or paper towel & allow it to dry completely for 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.

 $\label{thm:constraint} III > II / output is to make more crystals ensure you keep excess solution in a storage far (not provided) and label these so you know what crystal these make.$ 14. To make White Galcite: 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.

15. 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.

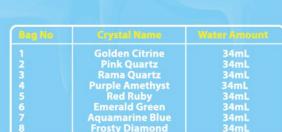
16. Places ome base rocks into one of the trays. Now pour the liquid from the saucepan into the tray, pouring over the rocks. Allow to six for 3-4 days again, as before.

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

## 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

hardens. During this crystallization process, molecules within the liquid pull together in a pattern.



 $\PAll$  amounts are estimates, if crystals are not growing you have used too much water.

1. Using your magnifying glass select 4 of the largest frosty diamond crystals you have previously made.

2. Cut your monofilament thread into four even pieces (scissors not provided). 3. You will need PVA glue (not provided) to attach one end of your thread to the seed crystal. Set this aside to dry completely.

4. 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.

5. 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.

6. 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.



Mix 20mL of waterin 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.

Allowateleast 30 minutes for your plaster to set. Then remove it from the mould and leave it aside on some newspaper to finish drying.

4. With the help of an adult pour in the required amount of water needed (see previous table) (into a kettle using your measuring jue, 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.

5. Using your Purple Amethystor Red Ruby crystals pour half of the packet into the mixing bowl. Stiruntil the crystals have fully dissolved using your wooden spatula.

6. Waitfor liquid to cool to lukewarm temperature.

 $7. \begin{tabular}{ll} While the liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of its liquid is cooling place a few base rocks into one of the trays to form a layer around the bottom of the layer around the bottom of the layer are the layer around the layer around the layer are the layer around the layer are the layer around the layer around the layer are the l$ 

8. Pour in the crystal solution into the tray.
9. Setyour 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 the mand report any findings linyour log book.

10. When you are happy with the crystal growth, remove the geode crystal and place it as ideona piece of newspaper or paper towel & allow it to dry completely for one day.

IIP: Make crystals using any leftover solution following the steps 1-18 on the reverse.

NOTE Pour any unwanted liquid down your drain for safe disposal of the product.