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› Discovery Kids Crystal Growing Kit (Model 1010325) Instruction Manual

Discovery Kids 1010325

Discovery Kids Crystal Growing Kit Instruction Manual

Model: 1010325

1. INTRODUCTION

The Discovery Kids Crystal Growing Kit provides an engaging way to explore the science of crystallization. This 25-piece lab kit allows users to grow various crystal formations using different solutions and molds. The kit is designed for educational purposes, encouraging hands-on learning and an understanding of geological processes.



Image 1.1: The complete Discovery Kids Crystal Growing Kit, including chemicals, molds, and display stands.

2. SAFETY INFORMATION

Always prioritize safety when conducting experiments. This kit contains chemicals that require careful handling. Adult supervision is recommended for all experiments.

- Always wear the provided safety goggles to protect your eyes from chemical splashes.
- Do not ingest any chemicals from the kit. Keep them away from mouth and eyes.
- Wash hands thoroughly with soap and water before and after handling chemicals.
- Perform experiments in a well-ventilated area.
- Keep all kit components out of reach of small children and pets.
- Dispose of any leftover chemicals or solutions according to local regulations. Do not pour down drains.

3. PACKAGE CONTENTS

Verify that all the following items are included in your kit:

- 1 pair of Goggles
- 1 Growing tray with various mold shapes (stars, lightning bolts, crescents, circles)
- 10 Starter rocks
- 2 Mixing sticks
- 1 Magnifying glass
- 1 LED display base
- 4 Normal display bases
- 1 bag of spiky crystal chemicals (150g)
- 1 bag of frosty crystal chemicals (250g)
- 3 bottles of colored dye (red, yellow, blue)



Discovery
#MINDBLOWN

CRYSTAL GROWING KIT
25-PIECE CHEMISTRY LAB

CUSTOM GROWING TRAY FOR FUN AND UNIQUE CRYSTALS!

LED DISPLAY BASE CHANGES COLOR!

KIT CONTAINS:

- GOGGLES
- 1 GROWING TRAY
- 10 STARTER ROCKS
- 2 MIXING STICKS
- 1 MAGNIFYING GLASS
- 1 LED DISPLAY BASE
- 4 DISPLAY BASES
- 1 BAG OF SPIKEY CHEMICALS 8.81 OZ. (250 G)
- 1 BAG OF FROSTY CHEMICALS 5.29 OZ. (150 G)
- 3 BOTTLES OF DYE 0.135 FL. OZ. (4 ML) EA

Image 3.1: All components of the Discovery Kids Crystal Growing Kit.

4. SETUP AND PREPARATION

Before starting, ensure you have a clean, flat, and stable workspace. Gather all kit components and a measuring cup for water.

1. Put on the safety goggles.
2. Choose the type of crystal you wish to grow: spiky or frosty. Each type uses a different chemical bag.
3. Carefully open the chosen chemical bag.
4. Prepare warm water as instructed in the specific crystal growing steps below.

Your browser does not support the video tag.

Video 4.1: This video demonstrates the initial steps of preparing the crystal growing solution, including adding water and chemicals to a pot and stirring.

5. CRYSTAL GROWING PROCESS

Follow these steps carefully to grow your crystals. The process typically takes several days for crystals to fully form.

5.1. Growing Spiky Crystals

1. In a heat-safe container (not included), mix the entire bag of spiky crystal chemicals with the specified amount of hot water (refer to the kit's specific instructions for exact water volume). Stir with a mixing stick until the powder is completely dissolved.
2. Allow the solution to cool for 15-20 minutes.
3. Place the starter rocks into the desired molds within the growing tray.
4. Carefully pour the cooled solution into the molds, ensuring the starter rocks are submerged.
5. Place the tray in an undisturbed location at room temperature. Do not move the tray during the growing process.
6. Observe crystal growth over the next 3-7 days.

5.2. Growing Frosty Crystals

1. In a heat-safe container, mix the entire bag of frosty crystal chemicals with the specified amount of hot water. Stir until dissolved.
2. Allow the solution to cool for 15-20 minutes.
3. Place the starter rocks into the desired molds within the growing tray.
4. Carefully pour the cooled solution into the molds, ensuring the starter rocks are submerged.
5. Place the tray in an undisturbed location at room temperature.
6. Observe crystal growth over the next 3-7 days.



Image 5.1: Examples of successfully grown crystals in various colors.

6. CUSTOMIZING CRYSTALS

You can add color to your crystals and grow them in different shapes.

6.1. Adding Color

To color your crystals, add a few drops of the red, yellow, or blue dye to the crystal solution after it has cooled but before pouring it into the molds. You can mix dyes to create new colors (e.g., red + yellow for orange, blue + yellow for green).

6.2. Using Molds

The growing tray includes various mold shapes like stars, lightning bolts, crescents, and circles. Place your starter rocks within these molds to encourage crystals to grow in these specific forms.

7. DISPLAYING YOUR CRYSTALS

Once your crystals have fully grown and the solution has evaporated or been carefully drained, you can remove them from the molds and display them.

- **Normal Display Bases:** Use the four normal display bases to showcase your crystals on any flat surface.
- **LED Display Base:** For an enhanced visual effect, place a crystal on the LED display base. The built-in LED light will illuminate the crystal from underneath, creating a dazzling, color-changing effect. Ensure the LED base has batteries installed (not included, typically 3x AAA).



SKILL LEVEL
INTERMEDIATE / ADVANCED

FASCINATING FACTS

COOL CRYSTALLIZATION

Crystallization is the process of forming crystals. When liquids cool, they start to harden into solids because the atoms cling to each other in particular ways. This causes a pattern to emerge and it repeats over and over until the crystal forms.

Crystallization transforms lots of liquids into solids. Ice is a great example, and one particular kind of ice shows just how unique crystals are – each and every snowflake is unique!

GROW COLORFUL CRYSTALS AT HOME!

Grow your own unique crystals with awesome shapes and then display them on cool bases. You can even make them shine with color-changing LED light!

Image 7.1: A grown crystal illuminated by the LED display base.

8. CARE AND MAINTENANCE

To ensure the longevity of your grown crystals and the kit components:

- Handle grown crystals gently as they can be fragile.
- Keep crystals away from direct sunlight or extreme temperatures, which can cause them to degrade over time.
- Clean the growing tray and mixing sticks with warm water after each use. Ensure they are completely dry before storing.

- Store unused chemicals in their original sealed bags in a cool, dry place.
- Wipe the LED display base with a dry cloth; do not submerge in water.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
No crystal growth or very small crystals.	Solution too hot/cold, not enough chemical dissolved, disturbed during growth, or too much water.	Ensure water temperature is correct. Stir thoroughly to dissolve all chemicals. Place in an undisturbed area. Use exact water measurements.
Crystals are cloudy or misshapen.	Impurities in water, solution cooled too quickly, or too many starter rocks.	Use distilled water if tap water is hard. Allow solution to cool gradually. Use only the recommended number of starter rocks.
LED display base not lighting up.	No batteries, dead batteries, or incorrect battery insertion.	Install 3x AAA batteries (not included). Check battery polarity. Replace with fresh batteries.

10. PRODUCT SPECIFICATIONS

- **Brand:** Discovery Kids
- **Model Number:** 1010325
- **UPC:** 843479100976
- **Item Dimensions:** 12.13 x 15.08 x 2.56 inches
- **Educational Objective:** Exploratory Skills, STEM
- **Age Range:** Kid (Recommended for ages 8+)
- **Assembly Required:** No (for the kit itself, but involves experimental setup)
- **Manufacturer:** MerchSource

11. SUPPORT AND WARRANTY

For product support or inquiries, please refer to the contact information provided on the product packaging or visit the official Discovery Kids website. This product is typically covered by a limited manufacturer's warranty against defects in materials and workmanship. Please retain your proof of purchase for warranty claims.

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