hand2mind 86415

hand2mind Fizz Chemistry Science Kit Instruction Manual

Model: 86415

Introduction

Welcome to the hand2mind Fizz Chemistry Science Kit! This kit is designed to introduce children aged 8 and up to the exciting world of chemistry through hands-on experiments. It encourages scientific thinking, observation, and exploration of fundamental chemical principles.

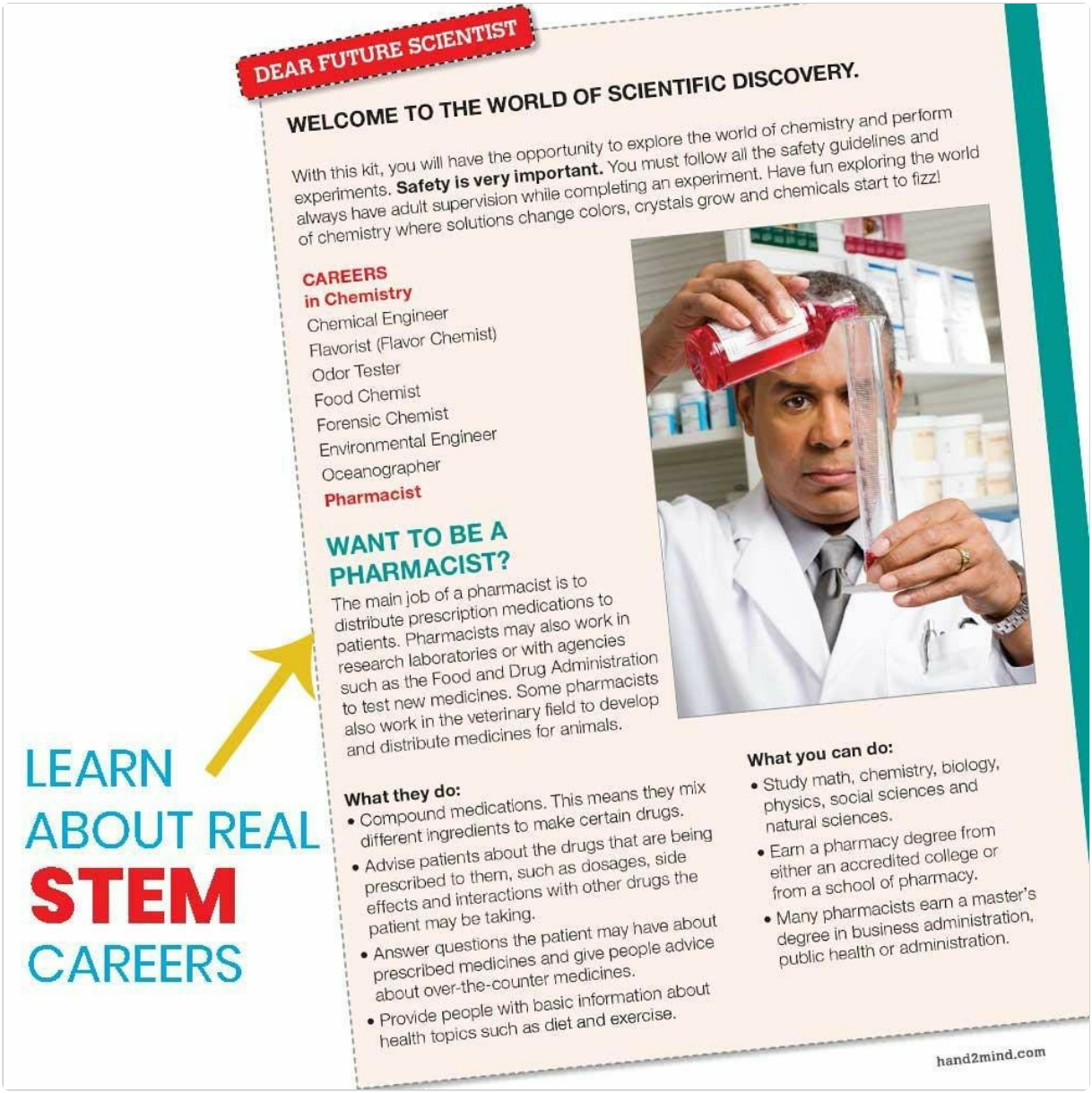

Image: An introductory page from the included lab guide.

Safety Information

WARNING: CHOKING HAZARD! SMALL PARTS. Not for children under 3 years.

Adult supervision is required for all experiments. Always follow safety guidelines provided in the lab guide. Wear protective goggles when instructed to protect your eyes from splashes or fumes. Avoid ingesting any chemicals. Wash hands thoroughly before and after handling chemicals.

What's Included

Your hand2mind Fizz Chemistry Science Kit includes the following items:

Image: All components of the Fizz Chemistry Science Kit.

- 36-page career and lab guide
- Protective Goggles
- Lab Coat
- Pipettes
- Measuring Cup
- Measuring Cup Lids
- Ammonium Iron (III) Sulfate (Mother's Salt)
- Potassium Ferrocyanide
- Citric Acid
- Sodium Carbonate
- Litmus Powder
- Plastic Mixing Spoon
- Test Tube Lids
- Test Tubes
- Bottle for Tournedos (Litmus Solution)
- pH Strips

- Protective Gloves

Additional Household Items Required

Some experiments in this kit require common household items not included. Please ensure you have these readily available before starting any experiment:

- 2 drinking Glasses
- Water
- Sugar
- Salt
- Yeast
- Baking Soda
- Flour
- Detergent Powder
- Lemon Juice
- Coffee Grounds
- Black Pepper
- Cocoa
- Tape
- Strainer
- Container with Lid
- Saucepan
- Wooden Spoon
- Wooden Skewers
- Glass Bowl
- Glass Jar
- Paper
- Matches
- Candle
- Funnel
- Coffee Filter
- Small Water Bottle
- Facial Tissue
- Plastic Wrap
- 2 Balloons
- Needle
- Yarn
- Straw
- Modeling Clay
- Bar of Soap
- Food Coloring (optional)
- Vinegar
- Apple Juice
- Cola

- Orange Juice
- Red Cabbage
- Moth balls or Raisins
- Noodles
- Milk
- Powdered Milk
- Apple
- Carbonated Water or Club Soda
- Cooking Oil

Setup

Proper setup is crucial for a safe and successful experiment. Follow these steps before you begin:

1. **Choose a Workspace:** Select a clean, flat, and stable surface. Cover the area with newspaper or a protective mat to prevent spills or stains. Ensure good ventilation.
2. **Read the Lab Guide:** Before starting any experiment, read through the entire experiment's instructions in the 36-page lab guide. This will help you understand the steps, safety precautions, and gather all necessary materials.
3. **Wear Safety Gear:** Always wear the provided protective goggles and lab coat when performing experiments to protect your eyes and clothing.
4. **Organize Materials:** Place all included kit components and any required household items within easy reach, organized according to the experiment's steps.

Image: A child preparing for an experiment with the kit.

Operating the Kit: Performing Experiments

The hand2mind Fizz Chemistry Science Kit includes 32 unique experiments designed to explore various chemical reactions. Each experiment is detailed with step-by-step instructions in the included 36-page lab guide.

Image: The kit box emphasizing the 32 experiments.

General Experiment Guidelines:

- **Read Carefully:** Always read the instructions for each experiment thoroughly before you begin. Understand the objective, materials, and procedure.
- **Measure Accurately:** Use the provided measuring tools to ensure precise measurements of ingredients. Inaccurate measurements can affect experiment results.
- **Observe and Record:** Pay close attention to what happens during each experiment. The lab guide provides space for observations and explanations. Documenting your findings is a key part of scientific inquiry.
- **Adult Supervision:** For safety, an adult must supervise all experiments, especially those involving heat, matches, or sharp objects.

Experiment Examples:

The kit allows you to perform a variety of experiments, including:

- Mixing chemicals that change color and fizz.
- Using chemistry to perform magic tricks.
- Constructing a homemade fire extinguisher.
- Making crystals, foam, and Prussian blue.

Image: An example of a fizzy foam experiment.

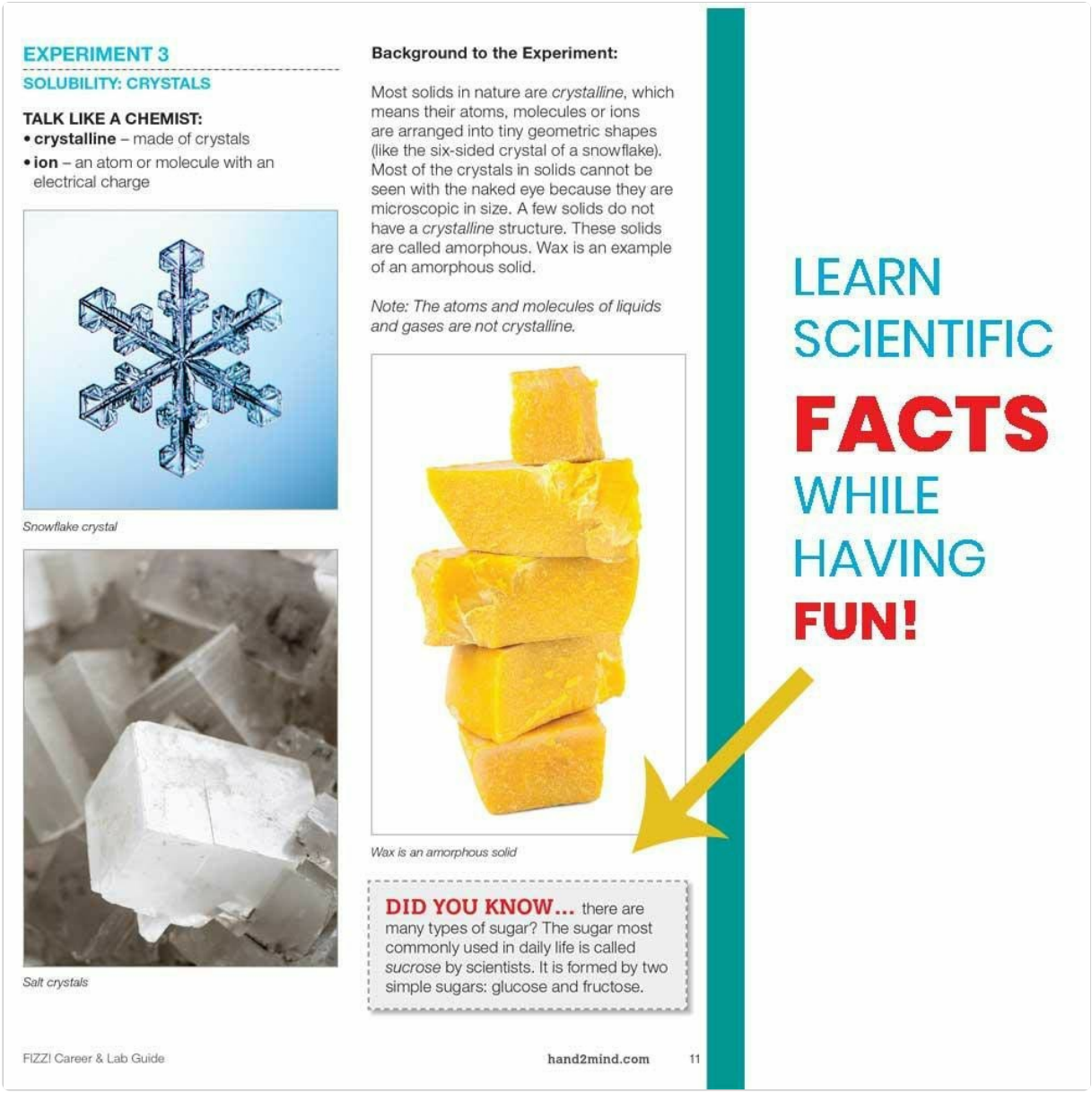

Image: A page from the lab guide detailing crystal experiments.

Maintenance and Care

Proper care of your science kit components will ensure their longevity and readiness for future experiments.

- **Cleaning:** After each experiment, thoroughly clean all reusable lab tools (test tubes, measuring cups, pipettes) with warm water and mild soap. Rinse well and allow to air dry completely before storing.
- **Storage:** Store all kit components in their original packaging or a designated container in a cool, dry place, away from direct sunlight and extreme temperatures. Keep out of reach of small children and pets.
- **Chemicals:** Keep all chemical powders and solutions sealed in their original containers when not in use. Dispose of any leftover chemicals according to local regulations and the specific instructions in the lab guide. Never pour chemicals down the drain unless explicitly instructed.
- **Goggles and Lab Coat:** Clean goggles with a soft cloth and mild soap. The lab coat can be hand-washed if needed.

Troubleshooting

Most issues encountered during experiments can be resolved by carefully re-reading the instructions and ensuring all steps are followed precisely. Here are some common troubleshooting tips:

- **Experiment Not Working as Expected:**
  - Verify that all measurements are accurate.
  - Check if the correct ingredients were used for each step.
  - Ensure the temperature or environmental conditions match the experiment's requirements (if specified).
  - Confirm that any additional household items used are fresh and appropriate (e.g., fresh yeast, active baking soda).
- **Missing Components:** Carefully check all packaging and the contents list. If a component is genuinely missing, contact hand2mind customer support.
- **Chemical Spills:** In case of a spill, immediately clean the area with water and appropriate cleaning agents. Refer to the safety information in the lab guide for specific chemical handling and first aid.

Specifications

Feature	Detail
Brand	hand2mind
Model Number	86415
Age Range	8-12 years (Manufacturer Minimum Age: 72 months)
Educational Objective	STEM (Science, Technology, Engineering, Mathematics)
Number of Experiments	32
Included Lab Tools	16
Item Weight	1.21 Pounds
Item Dimensions (L x W x H)	15 x 4 x 12 inches
Material Type	Foam (referring to some components)

Warranty Information

As per manufacturer specifications, this product comes with no explicit warranty. For any issues or defects upon purchase, please refer to the retailer's return and exchange policy where the product was acquired.

Customer Support

For further assistance, questions, or concerns regarding your hand2mind Fizz Chemistry Science Kit, please visit the official hand2mind website or contact their customer service directly.

- **Official Website:** hand2mind.com
- **Customer Service Phone:** 800-445-5885
- **Email:** hand2mind@hand2mind.com