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25000 - Laboratory Set for Discovering Design with Chemistry

Items List

| 100ml Beaker | 50681 | Safety Goggles |
|------------------------------------|--|--|
| 250 ml Beaker | 50711-6 | Stirring Rod |
| 50 m. Plastic Cylinder – x2 | 50706 | Test Tubes – x4 |
| Alcohol Burner w/Stand* | 50713 | Test Tube Cleaning Brush |
| Celsius Thermometer | 50710 | Watch Glass |
| Digital Mass Scale | | |
| Dropper Pipettes – x2 | | <u>Chemical Bag</u> |
| Filter Paper | 25002 | Cupric Sulfate – 40g |
| Plastic Funnel | 45129-40g | Sodium Hydroxide – 40g |
| Red & Blue Litmus Paper - 2pks ea. | 25001 | Strontium Chloride – 20g |
| | 250 ml Beaker 50 m. Plastic Cylinder – x2 Alcohol Burner w/Stand* Celsius Thermometer Digital Mass Scale Dropper Pipettes – x2 Filter Paper Plastic Funnel | 250 ml Beaker 50711-6 50 m. Plastic Cylinder – x2 50706 Alcohol Burner w/Stand* 50713 Celsius Thermometer 50710 Digital Mass Scale Dropper Pipettes – x2 Filter Paper 25002 Plastic Funnel 45129-40g |

This kit is designed for use ONLY with the Discovering Design with Chemistry textbook. Instructions for the experiments are found in the student textbook.

Nature's Workshop Plus! Inc., assumes no liability for any damage or injury incurred through accidental or intentional misuse or abuse of any of the chemicals or other products contained in this kit. All experiments should be performed under adult supervision exactly as outlined in the textbook "Discovering Design with Chemistry".

General Safety Rules

- Before you do any experiment, read these instructions and the instructions for that experiment completely.
- Always recap each bottle when you are through with it, and keep all bottles and other materials away from younger children and pets.
- Handle chemicals with care. Caution notices and antidotes for chemicals are listed in these instructions. In the event of misuse (ingestion, inhalation, skin contact) immediately contact the United States National Poison Control Hotline @ 800-222-1222.
- A list of materials precedes each experiment. Some experiments require the use of common household items and materials. Common household chemicals not supplied in this kit can be purchased at local stores.
- Avoid contact between any chemical and your skin. Never rub your eyes or put your fingers in your mouth after handling a chemical. Always wash your hands immediately with soap and warm water after working with any chemical.
- Before you begin any activity, roll up your sleeves, put on an apron or smock, or other protective clothing. Tie long hair back from your face so it doesn't block your view or get caught in any equipment. Also, cover your work area with newspaper or a plastic sheet. Avoid splashing chemicals on wood surfaces, vinyl flooring, carpet, etc. Keep chemicals away from food areas.
- Always clean your equipment and work area after each activity. Clean your lab equipment, such as pipets and scoops, with warm, sudsy water. It's okay if a small amount of liquid or solid waste goes down the drain, but you should not dispose of waste material by flushing it. After your equipment is clean, be sure to wash the sink with lots of water. Be careful not to use a kitchen towel for clean up. Use a rag or paper towels that can be disposed of.

Disposal of Chemicals

None of the chemicals in this kit pose any significant environmental hazard. However, you should still use caution when you dispose of your waste chemicals. The waste materials from each experiment should be placed in a small plastic container, like a pill vial or film canister, and the container should be placed in a sealable bag. The contained material may then be placed in the garbage for disposal in a land fill. Never mix waste products from two different experiments in the same waste container.

Laboratory Techniques

Crushing and Grinding Chemicals

For some activities you will need to crush a solid chemical into a fine powder. One method is to wrap the solid in a cloth, tap the object with a hammer to break it into smaller crystals. Keep your fingers out of the way. Then pour the pieces into a clean dry jar lid, and grind them into a fine powder using the back of an old spoon.

Notebook

Even if you have a great memory, it helps to keep a written record of what you do. Include how you prepared, what steps you did, and what you observed during and after the activity. Good records often include notes, drawings, graphs, and even photographs.

Distilled Water

Unless the directions call for a specific type of water, it is best to use distilled water if possible.

PRECAUTIONS AND FIRST AID INFORMATION

25001 Strontium Chloride

Warning: Can burn eyes and irritate skin and mucous membranes. Harmful if inhaled.

First Aid Information: In caseses of contact with eyes immediately rinse eyes with water for fifteen minutes. If contact with skin immediately rinse skin with large amounts of water. If swallowed rinse mouth with water, give large amounts of milk or water. Do not induce vomiting. If inhaled, move subject to fresh air.

25002 Cupric Sulfate

Warning: Toxix if swallowed. May be harmful in contact with skin. Causes skin and serious eye irritation. First Aid Information: In caseses of contact with eyes immediately rinse eyes with water for fifteen minutes. If contact with skin immediately rinse skin with large amounts of water. If swallowed rinse mouth with water, give large amounts of milk or water. Do not induce vomiting. If inhaled, move subject to fresh air. Contact Poison Center or physician.

45129-40g Sodium Hydroxide

Warning: May be fatal if swallowed. Causes severe skin, and eye burns and damage. Acute oral and respiratoryu toxicity.

First Aid Information: In caseses of contact with eyes immediately rinse eyes with water for fifteen minutes. If contact with skin immediately rinse skin with large amounts of water. If swallowed rinse mouth with water, give large amounts of milk or water. Do not induce vomiting. If inhaled, move subject to fresh air. If necessary seek medical attention.

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