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25050 – Household Supplies Add-On Kit for Discovering Design with Chemistry

Designed to use in addition to the Laboratory Set for Discovering Design with Chemistry

Enclosed is a Quick Reference Chart where all items from this kit are listed alphabetically and include the quantity, the bag number where the item is found, as well as the chapter number where the item will be used.

Things You Need To Know.

Following the Quick Reference Chart, you'll find a supplies list organized by chapter.

There are 3 categories:

1. Basic Lab Set
2. Household Supplies Kit
3. You Provide

1. The **Basic Lab Set** refers to the laboratory equipment set custom designed for use with *Discovering Design with Chemistry* by Dr. Jay Wile. The assumption is made that you own the kit or have access to the supplies which are listed under the heading *Basic Lab Set*.

2. The **Household Supplies Kit** refers to the items contained in this kit. Items are listed alphabetically and are keyed to a bag number. The kit is organized with supplies bagged by household categories. Each bag contains a number and name. You'll be referred to each needed item by its bag number, where you'll find the supplies that are called for.

3. **You Provide.** Every effort has been made to create a complete kit, however there are some items that are not practical to include. You'll find these items listed in this category.

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. Observe all Caution notices. 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 pipettes 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.

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25050 – Household Supplies Add-On Kit for Discovering Design with Chemistry

Quick Reference Chart with a list of items contained in this Kit

| Item # | Item name | QTY | Bag # | Use in Chapter # |
|---------------|----------------------------------|------------|--------------|-------------------------|
| 40236-1 | Aluminum Foil, 1 sq. ft. | 2 | 2 | 4 |
| 40236-4 | Aluminum Foil, 4"x4" | 2 | 2 | 12, 15 |
| 45055 | Household Ammonia | 1 | 3 | 16 |
| 40821-2 | Antacid, 2 tablets | 1 | 1 | 15 |
| 40735-2 | Baker's Yeast, 1 Tbsp | 1 | 3 | 2, 10, 15 |
| 40262-1/4 | Baking Soda, 1/4 cup | 1 | 3 | 7, 8, 11, 13 |
| 40220-lg | Balloon, large | 6 | 1 | 7, 10, 13 |
| 40220-sm | Balloon, small | 3 | 1 | 5, 10 |
| 40820 | Battery, 9-Volt | 2 | 1 | 4, 6 |
| 40521-1 | Battery, AA | 1 | 1 | 12 |
| 40224-1 | Black Marker | 1 | 1 | 9 |
| 40263-blue | Blue Food Coloring | 1 | 2 | 6 |
| 40463 | Bug Catching Jar, 4 oz. with lid | 1 | 4 | 10 |
| 40461 | Canning Jar, 12 oz. | 1 | 4 | 10 |
| 40282-4 | Corrugated Cardboard, 4"x4" | 1 | 5 | 13 |
| 23602-5 | Charcoal, 5 pk. | 1 | 1 | 4 |
| 40827 | Circular Pie Pan | 1 | 2 | 6 |
| 40524 | Clear Plastic Cup | 1 | 4 | 4 |
| 40241-120mL | Cooking Oil, 4 oz. | 2 | 3 | 1, 5 |
| 25005 | Cylindrical Bottle | 1 | 4 | 1 |
| 40264-2 | Dish Soap, 10-ml | 1 | 3 | 5 |
| 64008 | Economical Magnifier | 1 | 1 | 5 |
| 40272 | Effervescent Tablet, 2pk. | 1 | 1 | 7 |
| 40431-1 | Feathers, 2 pk. | 1 | 1 | 4 |
| 25012 | Galvanized Nail, 3 in. | 1 | 1 | 6 |
| 25016 | Glass Cleaner, 5mL | 1 | 3 | 11 |
| 40774 | Heavy Duty Paper Plate | 2 | 2 | 4 |
| 41223-16 | Hydrogen Peroxide, 16 oz. | 1 | 3 | 2, 12, 15 |
| 40341-1 Bulk | Index Card | 1 | 5 | 4 |
| 25018 | Laundry Detergent, 1 tsp | 1 | 3 | 11 |

| Item # | Item name | QTY | Bag # | Use in Chapter # |
|---------------|--------------------------------|-----|-------|---------------------------------|
| 25014 | Liquid Hand Soap, 5 mL | 1 | 3 | 11 |
| 40256-4in | Masking Tape, 4 in. strip | 1 | 5 | 10 |
| 22550 | Measuring Cups | 1 | 2 | 13 |
| 25008 | Measuring Spoons Set | 1 | 2 | 2, 3, 4, 6, 12, 13 |
| 40461-2 | Metal Lid for 12 oz. Glass Jar | 1 | 4 | 10 |
| 25019 | Metal Object (such as a bolt) | 1 | 1 | 13 |
| 40555-2 | Modeling Clay | 1 | 1 | 10 |
| 40824-1 | Olive Oil, 10 mL | 1 | 3 | 5 |
| 40450-1 | Paper Towel | 2 | 5 | 12 |
| 23706 | Pes Gravel/Pebbles, 1 Tbsp | 1 | 1 | 10 |
| 40272 | Pint-size Plastic Bag, 6"x6" | 2 | 2 | 4, 10 |
| 40233-1 | Plain Paper | 1 | 1 | 6 |
| 25006 | Plastic Tongs | 1 | 2 | 13 |
| 40269 | Plastic Water Bottle | 4 | 6 | 7, 10 |
| 40245-3.5x1/4 | Rubberband, large | 1 | 1 | 14 |
| 40333 | Ruler, cm, wood | 1 | 1 | 1, 3, 4, 10 |
| 40240-1/2 | Table Salt, 1/2 cup | 1 | 3 | 1, 3, 4, 9, 12 |
| 40729-1/2pc | Steel Wool, 1/2 pc | 1 | 2 | 6, 12 |
| 40471 | Styrofoam Cups | 13 | 4 | 9, 12, 13, 16 |
| 40266-5 | Sugar, 2 Tbsp | 1 | 3 | 4, 9 |
| 40738 | Tea Light Candle | 1 | 1 | 13 |
| 40222-2 | Thumbtacks, set of 2 | 1 | 1 | 4 |
| 40549-bulk | Toothpicks | 3 | 2 | 2 |
| 40723 | Trial-Size Soap Bar | 1 | 1 | 11 |
| 22552 | Turkey Baster | 1 | 2 | 7, 10 |
| 40261-32 | Vinegar, qt. | 1 | 3 | 2, 7, 8, 11, 12, 13, 14, 15, 16 |
| 40445 | Waxed Paper sq. ft. | 1 | 5 | 7, 14 |
| 40544-1 | White Cotton String, 1 foot | 1 | 1 | 6 |
| 40544-3 | White Cotton String, 3 feet | 1 | 1 | 10 |
| 40233-1 | White Paper | 1 | 5 | 6 |

***This kit is designed for use 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".

Supplies Organized by Chapter

Supplies Needed - Chapter 1

Basic Lab. Set:

Dropper Pipette
Funnel
Mass Scale
Safety Goggles
50-mL Plastic Cylinder
250-mL Beaker
Safety Goggles

Household Supplies Kit with Bag Number:

| | |
|--------------------|---|
| Cooking Oil | 3 |
| Cylindrical bottle | 4 |
| Ruler | 1 |

You Provide:

Salt in a salt shaker
Soft Cover Book
Water and sink

Supplies Needed - Chapter 2

Basic Lab. Set:

Alcohol Burner
Filter Paper
Funnel
Mass Scale
Safety Goggles
Watch Glass
100-mL Beaker
250-mL Baker

Household Supplies Kit with Bag Number:

| | |
|---------------------|---|
| Measuring Spoon Set | 2 |
| Salt | 3 |
| Vinegar | 3 |

Continued next column

Chapter 2 continued

You Provide:

Fresh or Dried Chevril Herb
Matches or Lighter
Milk
Water and Sink

Supplies Needed - Chapter 3

Basic Lab. Set:

Cupric Sulfate
Dropper Pipette
Strontium Chloride
Safety Goggles
100-mL Beaker

Household Supplies Kit with Bag Number:

| | |
|--------------------|---|
| Measuring Teaspoon | 2 |
| Ruler | 1 |
| Table Salt | 3 |

You Provide:

Bowl
Ceramic Plate
Denatured Alcohol (available at hardware store)
Dish Towel
Eggs, 4
Glass Caserole Dish
Glasses, 2 small
Matches or lighter
Microwave Oven
Sink
Wisk

Supplies Needed - Chapter 4

Basic Lab. Set:

Safety Goggles

Household Supplies Kit with Bag Number:

| | |
|--------------------------|---|
| Aluminum Foil 12 in. Sq. | 2 |
| Charcoal, 5 pc. | 1 |
| Clear Plastic Cup | 4 |
| Feathers | 1 |
| Heavy Paper Plate | 2 |

Continued next column

Chapter 4 continued

| | |
|-----------------------|---|
| Index Card | 5 |
| Measuring Tablespoon | 2 |
| Metal Thumbtacks, 2pk | 1 |
| Plastic Bag 6"x6" | 2 |
| Ruler | 1 |
| Sugar | 3 |
| Table Salt | 3 |
| 9-Volt Battery | 1 |

You Provide:

Distilled Water
Hammer
Ice Cubes, 2
Lamp With Bare Bulb
Sharp Knife

Supplies Needed - Chapter 5

Basic Lab. Set:

Funnel
Safety Goggles
100-mL Beaker
250 mL-Beaker

Household Supplies Kit with Bag Number:

| | |
|----------------------|---|
| Balloon, small | 1 |
| Dish Soap | 3 |
| Economical Magnifier | 1 |
| Olive Oil | 3 |
| Vegetable Oil | 3 |

You Provide:

A Helper
Sink
Spoons, 2
Water

Supplies Needed - Chapter 6

Basic Lab. Set:

Dropper Pipette, 2
Mass Scale
Safety Goggles
Thermometer
50- mL Graduated Cylinder
100 mL-Beaker
250 mL-Beaker

Continued next page

Chapter 6 continued

Household Supplies Kit with Bag Number:

| | |
|-----------------------------------|---|
| Battery, 9 Volt | 1 |
| Blue Food Coloring | 2 |
| Circular Pie Pan | 2 |
| Galvanized Nail | 1 |
| Measuring Teaspoon | 2 |
| Steel Wool (Save for chapter 12.) | 2 |
| White Cotton String 1 ft. | 1 |
| White Paper | 5 |

You Provide:

Denatured Alcohol
Glasses, 3 tall
Ice
Pan, small
Spoon
Stove
Water

Supplies Needed - Chapter 7

Basic Lab. Set:

Alcohol Burner
Cupric Sulfate
Dropper Pipette
Glass Stirring Rod
Graduated Cylinder
Mass Scale
Safety Goggles
Watch Glass
100-mL Beaker
250-mL Beaker

Household Supplies Kit with Bag Number:

| | |
|-------------------------------------|---|
| Baking Soda | 3 |
| Balloons, 3 Large | 1 |
| Effervescent Tablets | 1 |
| Measuring Teaspoon | 2 |
| Turkey Baster | 2 |
| Vinegar | 3 |
| Wax Paper (Save excess for ch. 14.) | 5 |
| 3-Plastic Water Bottles | 6 |

You Provide:

Water

Supplies Needed - Chapter 8

Basic Lab. Set:

Dropper Pipette
Graduated Cylinder
Mass Scale
Safety Goggles
Watch Glass
250-mL Beaker

Household Supplies Kit with Bag Number:

| | |
|--------------------|---|
| Baking Soda | 3 |
| Measuring Teaspoon | 2 |
| Vinegar | 3 |

You Provide:

Nothing Additional

Supplies Needed - Chapter 9

Basic Lab. Set:

Alcohol Burner
Dropper Pipette
Graduated Cylinder
Mass Scale
Stirring Rod
Test Tubes, 3
Thermometer
Safety Goggles
Sodium Hydroxide
Strontium Chloride
100-mL Beaker
250-mL Beaker

Household Supplies Kit with Bag Number:

| | |
|-------------------|---|
| Black Marker | 1 |
| Salt | 3 |
| Styrofoam Cups, 3 | 4 |
| Sugar | 3 |

You Provide:

A Helper
Can of Soda, cold
Coffee Saucer
Denatured Alcohol (available at hardware store)
Dish Towel
Freezer
Glasses, 3 small
Ice
Matches
Water and Sink

Supplies Needed - Chapter 10

Basic Lab. Set:

Funnel
Mass Scale
Safety Goggles
Thermometer

Household Supplies Kit with Bag Number:

| | |
|--------------------------------|---|
| Centimeter Ruler | 1 |
| Hydrogen Peroxide | 3 |
| Large Balloon | 1 |
| Masking Tape | 5 |
| Modeling Clay | 1 |
| Pebbles | 1 |
| Pint Canning Jar and Metal Lid | 4 |
| Plastic Bag, 6"x6" | 2 |
| Plastic Water Bottle | 6 |
| Small Balloons | 1 |
| Small Plastic Jar | 4 |
| White Cotton String, 3ft. | 1 |
| Turkey Baster | 2 |
| Yeast | 3 |

You Provide:

A Helper
Freezer
Ice
Kitchen Towel
Microwave Oven
Pot for Boiling
Pot Holder/Oven Mitts
Scissors
Stove
Small Juice Glass
Small Plate
Wall Mirror
Water
Weather Report

Supplies Needed - Chapter 11

Basic Lab. Set:

Alcohol Burner
Dropper Pipette
Graduated Cylinder
Litmus Paper, Red and Blue
Mass Scale
Safety Goggles
Sodium Hydroxide

Continued next page

Chapter 11 continued

Test Tubes, 4
100-mL Beaker
250-mL Beaker

**Household Supplies Kit
with Bag Number:**

| | |
|--------------------------|----------|
| <u>Baking Soda</u> | <u>3</u> |
| <u>Bar of Soap</u> | <u>1</u> |
| <u>Glass Cleaner</u> | <u>3</u> |
| <u>Laundry Detergent</u> | <u>3</u> |
| <u>Liquid Hand Soap</u> | <u>3</u> |
| <u>Vinegar</u> | <u>3</u> |

You Provide:

Apple
Bleach
Distilled Water
Knife
Lemon or Orange Juice
Milk
Red Cabbage
Sink
Small Glass
Soda Pop
Tap Water
Tub and Tile Cleaner
Yogurt

Supplies Needed - Chapter 12**Basic Lab. Set:**

Copper II Sulfate (Cupric Sulfate)
Safety Goggles
Stirring rod
Test Tube
100-mL Beaker
250-mL Beaker

**Household Supplies Kit
with Bag Number:**

| | |
|--|----------|
| <u>Aluminum Foil 4"x4"</u> | <u>2</u> |
| (Save excess foil for ch.15.) | |
| <u>Battery, AA</u> | <u>1</u> |
| <u>Hydrogen Peroxide</u> | <u>3</u> |
| <u>Measuring Spoons</u> | <u>2</u> |
| <u>Paper Towel</u> | <u>5</u> |
| <u>Salt</u> | <u>3</u> |
| <u>Steel Wool</u> (Saved from chapter 6) | <u>2</u> |
| <u>Styrofoam Cups, 3</u> | <u>4</u> |
| <u>Vinegar</u> | <u>3</u> |

Continued next column

Chapter 12 continued**You Provide:**

Copper Penny
Scissors
Spoon
Water

Supplies Needed - Chapter 13**Basic Lab. Set:**

Alcohol Burner
Funnel
Mass Scale
Safety Goggles
Thermometer
250 mL-Beaker

**Household Supplies Kit
with Bag Number:**

| | |
|--------------------------|----------|
| <u>Baking Soda</u> | <u>3</u> |
| <u>Balloons, 2 Large</u> | <u>1</u> |
| <u>Cardboard 4"x4"</u> | <u>5</u> |
| <u>Measuring Cups</u> | <u>2</u> |
| <u>Measuring Spoons</u> | <u>2</u> |
| <u>Metal Object</u> | <u>1</u> |
| <u>Plastic Tongs</u> | <u>2</u> |
| <u>Styrofoam Cups, 2</u> | <u>4</u> |
| <u>Tea Light Candle</u> | <u>1</u> |
| <u>Vinegar</u> | <u>3</u> |

You Provide:

Bowl
Ice
Pan
Sink
Spoon
Stove
Strainer
Water

Supplies Needed - Chapter 14**Basic Lab. Set:**

Calorimeter (saved from chapter 13)
Mass Scale
Safety Goggles
Sodium Hydroxide

**Household Supplies Kit
with Bag Number:**

| | |
|---------------------------------------|----------|
| <u>Large Rubber Band</u> | <u>1</u> |
| <u>Vinegar</u> | <u>3</u> |
| <u>Waxed Paper</u> (Saved from ch.7.) | <u>5</u> |

You Provide:

Sharp Knife

Supplies Needed - Chapter 15**Basic Lab. Set:**

Alcohol Burner
Graduated Cylinder
Mass Scale
Safety Goggles
Test Tubes, 2
100-mL Beaker
250-mL Beaker

**Household Supplies Kit
with Bag Number:**

| | |
|--|----------|
| <u>Aluminum Foil</u> (Saved from ch.12.) | <u>2</u> |
| <u>Antacid Tablets</u> | <u>1</u> |
| <u>Hydrogen Peroxide</u> | <u>3</u> |
| <u>Vinegar</u> | <u>3</u> |
| <u>Yeast</u> | <u>3</u> |

You Provide:

Sharp Knife
Spoon
Water

Supplies Needed - Chapter 16**Basic Lab. Set:**

Alcohol Burner
Copper II Sulfate (Cupric Sulfate)
Dropper Pipettes, 2
Safety Goggles
Stirring Rod
Test Tubes, 2
100-mL Beaker
250-mL Beaker

**Household Supplies Kit
with Bag Number:**

| | |
|--------------------------|----------|
| <u>Ammonia</u> | <u>3</u> |
| <u>Styrofoam Cups, 3</u> | <u>4</u> |
| <u>Vinegar</u> | <u>3</u> |

You Provide:

Glasses, 2 small
Ice
Red Cabbage
Pot for Boiling
Sharp Knife
Sink
Stove
Water