



*"Enjoying God's World of Nature"*

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## 23900 – Atomic Age Laboratory Kit

Designed to use with the text *Science in the Atomic Age*, by Dr. Jay Wile

### Things You Need To Know.

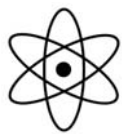
Enclosed is a *Quick Reference Chart* where all items from this kit are listed alphabetically and include the quantity, the bag number where the item is found, as well as the chapter number where the item will be used.

Following the *Quick Reference Chart*, you'll find *Supplies Organized by Chapter*.

There are 2 categories: **Lab. Kit** and **You Provide**

1. **Lab Kit** refers to the supplies in this household laboratory supplies set, custom organized for use with *Science in the Atomic Age* by Dr. Jay Wile. Items within the kit are organized and bagged according to common household categories. The number to the right of the item, on this chapter-by-chapter list, corresponds to the bag number where the item is located within the kit.

2. **You Provide**. Every effort has been made to create a complete kit, however there are some items that are not practical to include. You will find the items, which you will need to provide, listed in this category.



Many items in your kit will be used for several experiments.

Once you have completed an experiment, return reusable items to their original bag. This will maintain the organization of the kit throughout the course. Items labeled **LIB** are too big for the bags. They are found loose in the box (LIB)

#### 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.

***This kit is designed for use with the “Science in the Atomic Age” 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 “Science in the Atomic Age”, by Dr. Jay Wile***

## Quick Reference Chart of items contained in this kit

Item Number	Item Name	Quantity	Bag #	Used in Chapter
40236-3ft	Aluminum foil, 3 ft.	1	3	4, 8
40272	Antacid Tablets, 2 pk. (blue)	1	5	13
40821-2	Antacid Tablets, 2 pk. (white)	1	5	9
40262-1/2C	Baking Soda, 1/2 Cup	1	2	3, 4, 12, 13
22564	Ball, foam baseball	1	7	14
40220-lg	Balloon, large	2	6	2, 9
40220-sm	Balloons, small	3	6	12
40820	Battery, 9-volt	1	6	3
23924	Bouillon, beef	1	2	7
40327	Brown Paper Bag	1	4	8
22567	Candle, taper, 5 in.	1	6	3
40738	Candle, tealight	1	6	5, 16
40772	Candle, votive	1	6	4
40282	Cardboard, chipboard	2	1	11
40422	Clay Dough	2	7	3, 10
40744	Coffee Filter	1	3	13
40423	Colored Pencils, 12 pk.	1	1	16
40475-1	Construction Paper, black	1	1	10
40241-16oz.	Cooking Oil, 16 oz. bottle	1	2	1, 2, 4, 5, 13
40721-120ml	Corn Syrup, 4 oz.	1	2	5
40825-box	Cornstarch, box	1	2	6, 10
40335	Cotton Swab	1	5	7
40343	Die	1	6	10
40264-2	Dish Soap, 1/4 Cup	1	3	13
46210	Dominoes, whole pk.	1	7	9
23921-1	Dried Beans, 1 Cup	1	2	15
50418	Eyedroppers, 3 pk.	1	5	4, 7
40274	Film Canisters	2	4	4
40237-1/2C	Flour, 1/2 Cup	1	2	5, 10
40263-blue	Food coloring, blue	1	2	6
50707	Funnel	1	3	3, 13, 16
41020	Gelatin, Unflavored	1	2	7
40348	Gloves, non-latex, 2 pair pk.	1	5	7
40348-RG	Gloves, rubber, cleaning	1	3	9, 16
40249	Golfball	1	7	2
41026	Graph Paper	1	1	15
40468	Honey, bag of 9 packets	1	2	2

Item Number	Item Name	Quantity	Bag #	Used in Chapter
41223	Hydrogren Peroxide, 16 oz.	1	5	8, 13, 16
40341-18	Index Cards, 18 pk.	1	1	15
50699	Iodine	1	5	5, 6, 7
40732-120ml	Isopropyl Alcohol, 1/2 Cup	1	5	8
40732-10ml	Isopropyl Alcohol, 10ml	1	5	5
40275	Jar, glass, 8 oz.	1	3	3
23922	M&M Candies, samll packet	1	2	1
40224-1	Marker, black	1	1	5, 14, 15
41029-2	Marshmallows, 2 pk.	1	2	3
41122	Matches	1	3	2, 3, 4, 5, 16
22550-1	Measuring Cups	1	3	used throughout
22551	Measuring Spoons	1	3	used throughout
40555-2	Modeling Clay, single stick	1	7	12
40824-1	Olive Oil, 10 ml	1	2	4
40530-5	Paper clip, 5 pk.	1	1	10, 11
40525	Paper Cup, 7 oz. white lined	2	4	12
40450-1	Paper Towel	12	4	3, 4, 6, 8, 9, 13
40421	Pen	1	1	used throughout
40239-S	Pencil, sharpened	1	1	11, 14
40239	Pencils, unsharpened	2	1	5
40730	Petroleum Jelly	1	5	9
40277	Plastic Bag, 6x6"	2	4	6, 12
40281-1	Plastic Bag, 6x9"	4	4	5
40420	Plastic Cup, 12 oz.	1	4	3
40551-cap	Plastic lids, small	2	4	9
40258	Plastic Wrap	1	LIB	7, 8, 12, 14
40322	Plate, plastic, 6 in.	4	4	4
46135-1/2C	Potting soil, 1/2 Cup	1	7	13
40840-6	Rocks, large, 6 pk.	1	7	8
40245-Lg	Rubber Band, thick	1	1	12
40245-3x1/16	Rubber Band, thin	1	1	12
40333	Ruler, centimeter	1	1	10, 11
40240	Salt, 2 TB	1	2	3, 4, 5
40221-Lg	Scissors, large	1	1	8, 9, 11, 12, 13, 15
40247	Skewers, bamboo	3	3	9
40449-2	Spoons, plastic, 2 pk.	1	4	5
40533	Stopwatch	1	7	11
22556	Straw	1	4	6
23550	Straws, bendable, 2 pk.	1	4	12
40544-10	String, 10 ft.	1	6	2, 9, 11
40266-6	Sugar, 2 TB	1	2	4, 5, 7
40235	Tape	1	1	9, 10, 11
40447	Tea Bag, black tea	2	2	13
40223	Thread	1	6	11
40222-5	Thumbtacks, 5 pack	1	1	3, 11
40261-32	Vinegar, qt.	1	LIB	3, 5, 8, 9, 12, 13
40233-1	White Paper	7	1	6, 7, 14, 15
40735-2TB	Yeast, 2TB	1	2	5, 16

# Supplies Organized by Chapter

## Supplies Needed - Chapter 1

### Lab. Set:

M&M Candies	2
Cooking Oil	2

### You Provide:

Fork  
Glasses, small, 2  
Notebook  
Water

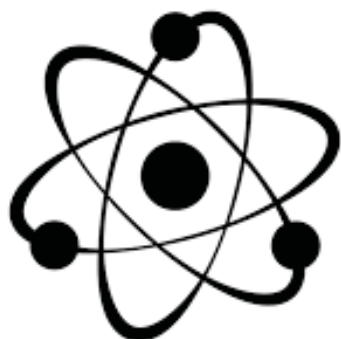
## Supplies Needed - Chapter 2

### Lab Set:

Balloon, large	6
Cooking Oil	2
Golfball	7
Honey Packets	2
Matches	3
String	6

### You Provide:

Clean, dry hair  
Coin  
Glass, tall  
Grape, optional  
Ice  
Soda can, empty  
Water



## Supplies Needed - Chapter 3

### Lab. Set:

Baking Soda	2
Battery, 9Volt	6
Candle, taper, 5in.	6
Clay Dough	7
Funnel	3
Marshmallows	2
Matches	3
Measuring Cups	3
Measuring Spoons	3
Paper Towels	4
Plastic Cup	4
Salt	2
Thumbtacks	1
Vinegar	LIB

### You Provide:

Bowls, 2  
Coins, pennies and nickles  
Microwave Oven  
Water

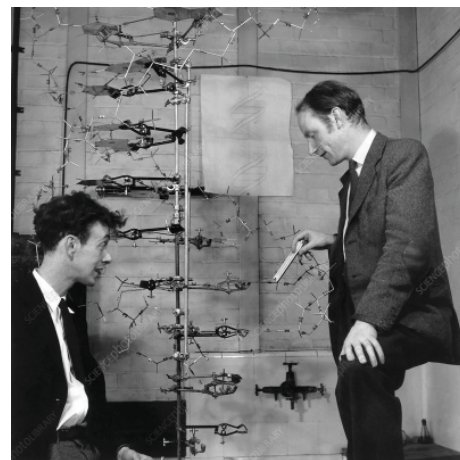
## Supplies Needed - Chapter 4

### Lab. Set:

Aluminum Foil	3
Baking Soda	2
Candle, votive	6
Cooking Oil	2
Eyedropper	5
Film Canisters	4
Matches	3
Olive Oil, 10ml	2
Paper Towels	4
Plastic Plates	4
Salt	2
Sugar	2

### You Provide:

Freezer  
Glasses, small, 4  
Pennies, 2  
Sink  
Water



Watson and Crick  
with DNA model

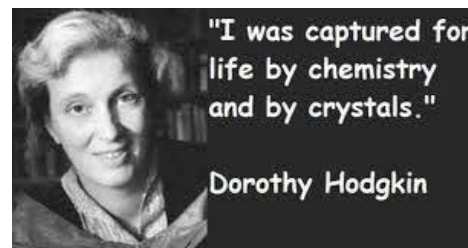
## Supplies Needed - Chapter 5

### Lab. Set:

Black Marker	1
Candle, tealight	6
Cooking Oil	2
Corn Syrup	2
Flour	2
Iodine	5
Matches	3
Measuring Cups	3
Measuring Spoons	3
Pencils, unsharpened	1
Plastic Bags, 6x9"	4
Plastic Spoons	3
Rubbing Alcohol	5
Salt	2
Sugar	2
Vinegar	LIB
Yeast	2

### You Provide:

Butter, 1/2 stick  
Egg, 1  
Glasses, small, 3  
Pan  
Water



"I was captured for  
life by chemistry  
and by crystals."

Dorothy Hodgkin

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### Cells

Lime green chloroplasts  
Structured cell walls  
Mighty mitochondria  
Food filled vacuoles  
Slimy cytoplasm  
Square plants  
Round animals  
Foundation of all living things.



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### Supplies Needed - Chapter 6

#### Lab. Set:

<u>Corn Starch</u>	<u>2</u>
<u>Food Coloring</u>	<u>2</u>
<u>Iodine</u>	<u>5</u>
<u>Measuring Cups</u>	<u>3</u>
<u>Measuring Spoons</u>	<u>3</u>
<u>Paper Towels</u>	<u>4</u>
<u>Plastic Bag, 6x6"</u>	<u>4</u>
<u>Straw, (not bendable)</u>	<u>4</u>
<u>White Paper</u>	<u>1</u>

#### You Provide:

Bread, 2 slices  
Cup  
Dinner Plates, 2  
Distilled Water  
Glasses, small, 2  
Knife  
Red Cabbage  
Sink  
Soup Bowl  
Spoon  
Water

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### Supplies Needed - Chapter 7

#### Lab. Set:

<u>Bouillon Cube</u>	<u>2</u>
<u>Cotton Swab</u>	<u>5</u>
<u>Gelatin, unflavored</u>	<u>2</u>
<u>Gloves, disposable, non-latex</u>	<u>3</u>
<u>Iodine</u>	<u>5</u>
<u>Measuring Cups</u>	<u>3</u>
<u>Measuring Spoons</u>	<u>3</u>
<u>Plastic Wrap</u>	<u>LIB</u>
<u>Sugar</u>	<u>2</u>
<u>White Paper</u>	<u>1</u>

#### You Provide:

Ammonia  
Glasses, small, 2  
Pot  
Spoon for Stirring  
Stove  
Toilet Bowl Cleaner  
Water

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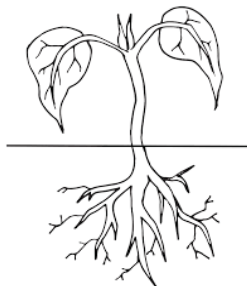
### Supplies Needed - Chapter 8

#### Lab. Set:

<u>Aluminum Foil</u>	<u>3</u>
<u>Brown Paper Bag</u>	<u>4</u>
<u>Hydrogen Peroxide</u>	<u>5</u>
<u>Isopropyl Alcohol</u>	<u>5</u>
<u>Measuring Spoons</u>	<u>3</u>
<u>Paper Towels</u>	<u>4</u>
<u>Plastic Wrap</u>	<u>LIB</u>
<u>Rocks</u>	<u>7</u>
<u>Scissors</u>	<u>1</u>
<u>Vinegar</u>	<u>LIB</u>

#### You Provide:

Glass, small  
Green Leaves  
Hair Dryer  
Kitchen Tongs  
Oven  
Pennies, 5  
Pot  
Stove  
Water  
Wooden Spoon



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### Supplies Needed - Chapter 9

#### Lab. Set:

<u>Antacid tablets (white packet)</u>	<u>5</u>
<u>Balloon, large</u>	<u>6</u>
<u>Bamboo Skewers</u>	<u>3</u>
<u>Dominoes</u>	<u>7</u>
<u>Gloves, rubber, cleaning</u>	<u>3</u>
<u>Paper Towels</u>	<u>4</u>
<u>Petroleum Jelly</u>	<u>5</u>
<u>Plastic lids, small</u>	<u>4</u>
<u>Scissors</u>	<u>1</u>
<u>String</u>	<u>6</u>
<u>Tape</u>	<u>1</u>
<u>Vinegar</u>	<u>LIB</u>

#### You Provide:

Bowl  
Chicken Bone  
Chicken, raw  
Cutting Board  
Glasses, small, 2  
Knife  
Pot  
Toilet Bowl Cleaner



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### Supplies Needed - Chapter 10

#### Lab. Set:

<u>Black Construction Paper</u>	<u>1</u>
<u>Clay Dough</u>	<u>7</u>
<u>Cornstarch</u>	<u>2</u>
<u>Die</u>	<u>6</u>
<u>Flour</u>	<u>2</u>
<u>Measuring Cups</u>	<u>3</u>
<u>Measuring Spoons</u>	<u>3</u>
<u>Paper Clips</u>	<u>1</u>
<u>Ruler</u>	<u>1</u>
<u>Tape</u>	<u>1</u>

#### You Provide:

Bowl  
Sink  
Table and Chair  
Water  
Wooden Spoon



**Supplies Needed - Chapter 11****Lab. Set:**

<u>Cardboard</u>	<u>1</u>
<u>Paper Clips</u>	<u>1</u>
<u>Pencil</u>	<u>1</u>
<u>Ruler</u>	<u>1</u>
<u>Scissors</u>	<u>1</u>
<u>Stopwatch</u>	<u>7</u>
<u>String</u>	<u>6</u>
<u>Tape</u>	<u>1</u>
<u>Thread</u>	<u>6</u>
<u>Thumbtacks</u>	<u>1</u>

**You Provide:**

Books  
Chair  
Pennies, 5

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

<u>Baking Soda</u>	<u>2</u>
<u>Balloons, small</u>	<u>6</u>
<u>Measuring Cups</u>	<u>3</u>
<u>Modeling Clay, stick</u>	<u>7</u>
<u>Paper Cups, 7oz.</u>	<u>4</u>
<u>Plastic Wrap</u>	<u>LIB</u>
<u>Plastic Bag 6x6"</u>	<u>4</u>
<u>Rubber Band, thin</u>	<u>1</u>
<u>Rubber Band, thick</u>	<u>1</u>
<u>Scissors</u>	<u>1</u>
<u>Straw, bendable</u>	<u>4</u>
<u>Vinegar</u>	<u>LIB</u>

**You Provide:**

Bottle, 2-liter  
Bowl  
Gallon Jug, empty  
Glass  
Pot  
Red Cabbage  
Sink  
Spoons, 2  
Stove

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

<u>Antacids (blue packet)</u>	<u>5</u>
<u>Baking Soda</u>	<u>2</u>
<u>Coffee Filter</u>	<u>3</u>
<u>Cooking Oil</u>	<u>2</u>
<u>Dish Soap</u>	<u>3</u>
<u>Funnel</u>	<u>3</u>
<u>Hydrogen Peroxide</u>	<u>5</u>
<u>Measuring Cups</u>	<u>3</u>
<u>Measuring Spoons</u>	<u>3</u>
<u>Paper Towel</u>	<u>4</u>
<u>Potting Soil</u>	<u>7</u>
<u>Scissors</u>	<u>1</u>
<u>Tea Bags</u>	<u>2</u>
<u>Vinegar</u>	<u>LIB</u>

**You Provide:**

Bowl  
Glasses, small, 2  
Knife  
Lemon Juice  
Milk  
Mug  
Potato, raw  
Pitcher  
Sink  
Spoons, 2  
Strainer  
Water

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

<u>Black Marker</u>	<u>1</u>
<u>Foam Baseball</u>	<u>7</u>
<u>Pencil</u>	<u>1</u>
<u>Plastic Wrap</u>	<u>LIB</u>
<u>White Paper</u>	<u>1</u>

**You Provide:**

Counter Top  
Chair  
Clear Baking Pan  
Glasses, 2  
Helpers, 3  
Phone  
Small Object  
Table

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

<u>Black Marker</u>	<u>1</u>
<u>Dried Beans</u>	<u>2</u>
<u>Graph Paper</u>	<u>1</u>
<u>Index Cards</u>	<u>1</u>
<u>Measuring Cups</u>	<u>3</u>
<u>Measuring Spoons</u>	<u>3</u>
<u>Scissors</u>	<u>1</u>
<u>White Paper</u>	<u>1</u>

**You Provide:**

Container with lid  
Plate

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

<u>Candle, tealight</u>	<u>6</u>
<u>Colored Pencils</u>	<u>1</u>
<u>Funnel</u>	<u>3</u>
<u>Gloves, rubber, cleaning</u>	<u>3</u>
<u>Hydrogen Peroxide</u>	<u>5</u>
<u>Matches</u>	<u>3</u>
<u>Measuring Cups</u>	<u>3</u>
<u>Measuring Spoons</u>	<u>3</u>
<u>Yeast</u>	<u>2</u>

**You Provide:**

Bottle, 2-liter  
Casserole Dish  
Counter Top  
Glass  
Spade  
Yard

 **DONE!**