

# ***You Be The Chemist* Activity Guide**

## **Materials List (K-4)**

### **Gear Up!**

The following items should be on hand at all times and are used in multiple experiments. All of the items can be purchased at a grocery store or all-purpose store. Don't forget to check out "dollar stores"; they sometimes have most of these items for a dollar or less.

- Aluminum foil
- Bowls
- Clear cellophane/plastic tape
- Clear plastic/glass cups
- Construction paper (black)
- Food coloring
- Ice
- Jars with lids
- Magnets
- Measuring spoons
- Microwave (will aid in heating water when experiments call for hot water)
- Paper towels
- Pennies
- Plastic spoons
- Salt
- Scissors
- Water

Material/Item	Lesson	Where to Purchase
Aluminum foil	6, 16, 19	All-purpose store; grocery store
Baby powder	25	All-purpose store; grocery store
Baking soda	1	All-purpose store; grocery store
Balloons	17, 19	All-purpose store; grocery store
Borax	3	All-purpose store; grocery store
Bowls (large)	19, 22, 23 <sup>†</sup> , 25, 27	All-purpose store
Charging cloths (wool, plastic wrap, carpet, etc.)	17	All-purpose store; grocery store
Clear cellophane/plastic tape	4, 6, 16, 27	All-purpose store; office supply store
Clear plastic food wrap	13, 27	Grocery store
Clear plastic/glass cups (8 oz)	1, 3, 4, 6, 8, 11, 12, 14, 15, 18, 22, 27 <sup>††</sup>	All-purpose store; grocery store
Club soda	1	Grocery store
Coffee filter (white)	4	All-purpose store; grocery store
Construction paper (black)	6, 14, 24	All-purpose store; office supply store
Cotton swabs	14	All-purpose store; grocery store
Diet Coke <sup>®</sup> or Diet Pepsi <sup>®</sup> (2-liter bottle)	24	All-purpose store; grocery store
Eggs	20	Grocery store
Empty 2-liter soda bottle	21	Grocery store
Epsom salt	14	Grocery store
Food coloring (red, blue, yellow):	4, 12, 15, 27	All-purpose store; grocery store
Ginger ale or 7-Up <sup>®</sup>	2	Grocery store

Green bananas	13	Grocery store
Ground pepper	25	Grocery store
Ice	5*, 9, 21	Grocery store
Index cards	24	All-purpose store; office supply store
Ivory® soap	26	All-purpose store; grocery store
Jars with lids (clear glass)	9, 12, 20	
Ketchup	1	All-purpose store; grocery store
Lemon juice	1, 10	Grocery store
Light corn syrup	12	Grocery store
Liquid dishwashing soap	25	All-purpose store; grocery store
Magnets	7, 16, 19	All-purpose store; hardware store; craft store (Michael's, JoAnn Fabric & Craft)
Masking Tape	14	All-purpose store
Measuring cups	1, 12	All-purpose store; online
Measuring spoons	1, 3, 4, 11, 14, 27	All-purpose store; online
Metric ruler	4, 16	All-purpose store; office supply store
Microwave	6*, 8*, 9*, 11*, 15*, 21*, 26	All-purpose store; hardware store, online
Original Mentos® breath mints	24	All-purpose store; grocery store
Paper bags	13, 18	Grocery store
Paper clips (metal)	16, 19	All-purpose store; office supply store
Paper towels	10, 19, 22	All-purpose store; office supply store
Pen	14	All-purpose store; office supply store
Pencils	4	All-purpose store; office supply store
Pennies	10, 16, 27	Bank
Plastic bag with twist tie	13	Grocery store
Plastic spoons	1, 3, 11, 12, 18	All-purpose store; grocery store
Plate	17	All-purpose store
Puffed rice cereal	17	Grocery store
Pyrex® brand glassware	23	All-purpose store
Raisins	2	Grocery store
Salt (kosher salt recommended)	12, 18, 27	Grocery store
Scissors	4, 6, 19	All-purpose store; office supply store
Seltzer tablets (any brand)	8	All-purpose store; grocery store
Straws	19	All-purpose store; grocery store
Sugar	11, 12	Grocery store
Sugar cubes	11	Grocery store
Super-absorbent disposable diapers	18	All-purpose store
Tall glass or clear plastic cylinder	2	All-purpose store

Total® cereal or other high-iron cereal	7	Grocery store
Vegetable oil	12, 23	Grocery store
Vinegar	20	Grocery store
Water (hot, cold, and room temperature)	1, 3, 4, 5*, 8, 9, 11, 12, 15, 18 <sup>†††</sup> , 21, 22	
White school glue	3	All-purpose store
White T-shirt	1	All-purpose store
Window screen or net	19	All-purpose store; hardware store
Ziploc® bags (quart size with easy zipper)	7	All-purpose store; grocery store

\* These items are optional for this lesson.

† May need some other large glass container, such as a small aquarium, if bowl is not large enough.

†† A heavy glass cup will work best for this experiment.

††† Distilled water will work best for this experiment.

The following items are not necessary to perform the experiments. Some of the items are only needed for optional extensions, and other items can be substituted for more common items. For example, The Fountain of Soda experiment (Lesson24) recommends a test tube, but construction paper (rolled into a tube) can work as well. Read through the experiments before purchasing any items to determine what you will need.

Material/Item	Lesson	Where to Purchase
Beakers	5*	Online
Hot plate and a pan	5*	All-purpose store; online
Magnifying glass	14*, 18*	All purpose store; online
Other metal objects (key, metal spoon, hair pin, safety pin, nickel, dime, quarter, nail, metal bottle cap, etc.)	16	All-purpose store, bank, office supply store
Refrigerator or freezer	21	All-purpose store; hardware store; online
Test tube	24	Online

\* These items are optional for this lesson.

## Where to Purchase - Examples

- Grocery store: Albertson's, Giant, Kroger, Publix, Safeway, Shoprite, Vons, etc.
- All-purpose store: Target, Wal-Mart, K-Mart, etc.
- Office supply: Office Depot, Staples, etc.
- Hardware store: Home Depot, Lowes, Sears Hardware, etc.
- Online resources: (see list below)

## Online Resources

- Basic measurement tools and Pyrex glassware:
  - [www.shopworldkitchen.com](http://www.shopworldkitchen.com)
  - [www.cooking.com](http://www.cooking.com)
  - [www.pyrex.com](http://www.pyrex.com)
  - [www.amazon.com](http://www.amazon.com)
  - [www.thecontainerstore.com](http://www.thecontainerstore.com)
- Beakers:
  - [www.thelabdepot.com](http://www.thelabdepot.com)
  - Griffin beaker – low form borosilicate
  - 100 mL - 12pack/\$21.12 (\$1.76 each)
  - 1000 mL - 6/pack\$36.84 (\$6.14 each)
- Clear glass jar with lid:
  - [www.sciencelab.com](http://www.sciencelab.com) \$2.50 - \$4.95
  - [www.thelabdepot.com](http://www.thelabdepot.com) \$2.40 - \$6.15
- Laboratory Hot Plates:
  - [www.sciencelab.com](http://www.sciencelab.com) \$45.00
  - [www.wardsci.com](http://www.wardsci.com) \$40.00 – \$67.00
- Magnifying glass:
  - [www.sciencelab.com](http://www.sciencelab.com) \$4.50 - \$10.50