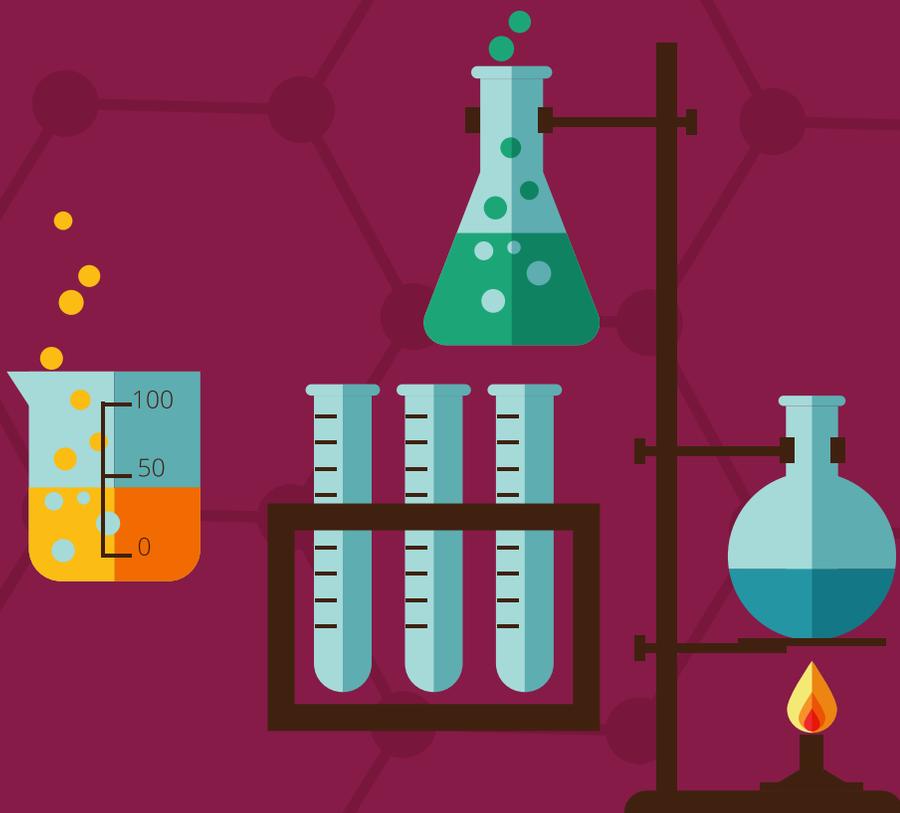


Beginning Chemistry

and the Scientific Method

Units Study for Grades 5-7



CHEMISTRY

Created by Elizabeth Thuernagle, Jenny Phillips, and Lezlie-Anne Ivie

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Unit Information



Journal

All of The Good and the Beautiful science units include activities for a science journal. For each child, prepare a 1" to 2" 3-ring binder to function as his or her science journal. Tabbed divider pages may be used to separate the different units. Have wide-ruled paper and blank white paper on hand for journal activities. All completed journal activities are to be kept in the science journal. You may also consider having children create a cover for their journals, which they insert under the clear cover of the binder.



Science Wall

All of The Good and the Beautiful science units include vocabulary words to be placed on your science wall, which is a wall (or a 3-fold presentation board) in your learning area on which you attach the vocabulary words and other images. **Cut out the vocabulary word cards at the beginning of the unit.** The course will indicate when to place them on the wall.



Lesson Mini Books

Some lessons in this unit incorporate science mini books. To make your mini books, simply print the pages single-sided, cut them in half along the dotted lines, stack the pages together, and staple twice along the left side.



Lesson Preparation

All of The Good and the Beautiful science units include easy-to-follow lesson preparation directions at the beginning of each lesson.



Teaching Older Children?

This unit study is designed for Grades 5–6. If you are teaching older children (Grades 7–8), look for the “older children” symbol (a magnifying glass) at the end of most lessons. There you will find ideas for guiding older children through more in-depth research and study. This course, even with the extensions, is not considered sufficient for high school level coursework.



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Supplies Needed

Lesson 1

- A bowl or basket
- White coffee filters, 3–6 per student
- A ball-point pen
- 3–6 cups per student, any kind
- Water
- A permanent black marker
- Five colors of washable markers, including black and brown

Lesson 2

- 3–4 items worn for protection (such as gloves, a helmet, swimming goggles, etc.)

Lesson 3

- A ruler that shows both inches and centimeters
- A clear measuring cup for liquids (with measurements printed on the outside, indicating both cups, pints, or quarts and milliliters or liters)
- A packaged drink bottle (or any packaged container that has the volume printed on the label in fluid ounces and milliliters)
- A kitchen scale that can display both grams and either ounces or pounds
- An object that can be weighed on the scale
- (Optional) graduated cylinders and beakers (a recommended set is available on Amazon.com, item #B01MR00VIH)

Lesson 4

- A rock
- A drink in a cup with a straw for each child
- Empty cups of various sizes, one for each child
- A balloon

Lesson 5

- Four paper cups
- A permanent marker
- Salt
- Water
- 1 tsp measuring spoon
- 1 cup liquid measuring cup or a 250 mL graduated cylinder
- A candy thermometer
- Playdough
- A straw
- A cup of water
- A short glass cup or jar
- (Optional) food coloring

Lesson 6

- Three colors of playdough (at least 5 oz. of each color for each child)
- Toothpicks

Lesson 7

- Three objects (your choosing)
- 1 Tbsp vegetable oil
- Two glasses filled with water
- 1 Tbsp sugar
- A graduated cylinder or measuring cup filled halfway with water
- A marble (or other small, sinkable object)
- A kitchen scale
- A calculator
- (Optional) ¼ cup each of honey, corn syrup, dish soap, water, vegetable oil, and rubbing alcohol
- (Optional) food coloring
- (Optional) a few small objects like a raisin, a safety pin, a screw, etc.

Lesson 8

- A 250 mL graduated cylinder (or an empty disposable water bottle)
- A funnel (if using a water bottle)
- A 50 mL beaker (or a ¼ cup measuring cup)
- A 300 mL beaker (or a drinking cup)
- A tray lined with foil
- Warm water
- A kitchen scale
- Food coloring
- Hydrogen peroxide (at least 3% strength)—see note at the end of Lesson 8
- Dish soap
- Yeast
- A spoon

Lesson 9

None

Lesson 10

- Three different colors of playdough
- Craft wire

Lesson 11

- Two magnets (bar magnets, if possible—recommended magnets can be found on Amazon.com, item #B001DRORA8)
- Tape

Lesson 12

- Vinegar
- Baking soda
- A balloon
- A measuring spoon
- A 100 mL graduated cylinder (or an empty disposable water bottle with a narrow neck)
- A mini measuring cup (similar to a plastic cup that comes with children's cough syrup)
- A kitchen scale

Lesson 13

- A variety of beads or buttons (a handful for each child)
- School glue
- A kitchen scale
- A 50 mL beaker (or a ¼ cup measuring cup)
- A small bowl
- A small baking dish (about 8" x 8")
- A spoon
- Salt
- Water

Lesson 14

- A calculator
- Tape
- A pitcher of water
- A glass
- A cookie tray
- Crayons or colored pencils