Supply List

Every student will need his own notebook (or the Chemistry and Physics Notebooking Journal), blank paper, lined paper, and colored pencils. An adult should supervise all projects, experiments, and “Try This!” activities. Caution: Set aside equipment to be used only in experiments, not for cooking. Never experiment and cook/eat with the same items! Thrift stores are a good source of inexpensive equipment.

Lesson 1
- water
- graduated cylinder
- small, solid object that doesn’t absorb water (such as a rock)
- safety goggles
- 2 glasses
- 2 eggs
- 2 clear plastic straws
- food coloring (red, yellow, blue, and green)
- 12 plastic cups
- measuring spoons
- 1½ cups salt
- tall, thin vase or glass
- 8 ounces honey
- 8 ounces corn syrup
- 8 ounces 100% pure maple syrup
- 8 ounces whole milk
- 8 ounces dish soap
- large bottle of vegetable oil
- 8 ounces rubbing alcohol
- turkey baster
- popcorn kernel
- die from a game
- cherry tomato
- bead
- ping-pong ball or marshmallow
- bowl to hold water
- small piece of wood
- cork
- piece of ice
- coins
- small plastic toys
- 25 pennies
- large glass pan to hold water
- aluminum foil
- damp paper towel
- strong magnet
- needle
- metal tack
- metal hair clip
- 3 tall, thin plastic bottles with caps (like a soda or water bottle)
- box of Alka-Seltzer tablets
- vinegar

Lesson 2
- water
- 5 identical plastic cups
- 1¼ cup salt
- ¼ cup Epsom salt
- ¼ cup rubbing alcohol
- 1 packet Jell-O
- freezer
- clock
- 16 ounces corn starch
- glass cake pan
- measuring cup
- piece of waxed paper
- bowl
- needle
- 1 square of toilet paper
- 1 cup fruit juice
- 2 cups ice
- small zippered plastic bag
- large zippered plastic bag
- clear plastic cup
- small piece of paper
- 1 piece of gum (or peanut butter)
- uninflated balloon
- small bottle of soda
- packet of Pop Rocks candy
- 1 piece of bubble gum
- mirror or window
- large, clear plastic container or jar with a tight-fitting lid
- enough rocks to make a layer in the container
- enough sand to make a layer in the container
• enough topsoil to make a layer in the container
• plant from a plant store
• small plastic cup

Lesson 3
• gloves
• safety goggles
• small empty soda bottle
• tablespoon measuring spoon
• 1 tablespoon yeast (or potassium iodide for stronger reaction)
• very warm water
• ¼ cup dishwashing liquid
• 7 colors of food coloring
• cup
• spoon for stirring
• sink or deep-sided dish
• ½ cup hydrogen peroxide (The stronger kind from the beauty supply store makes a bigger reaction.)
• 1 large and 2 small paper plates
• marker
• glue
• 10 pieces of small candy (like Nerds)
• 10 pieces of large candy in one color and 8 pieces in another color (like peanut M&M’s or Gobstoppers)
• pile of Legos
• 2 wire coat hangers
• 12 small fruits (blueberries, grapes, cherry tomatoes, or any other small, roundish fruit)
• masking tape
• 2 pieces of copy paper
• 3 cups butter, softened
• 4 cups white sugar
• 8 eggs
• 2 teaspoons vanilla extract
• 10 cups all-purpose flour
• 4 teaspoons baking powder
• 2 teaspoons salt
• 2 cups powdered sugar
• 4 teaspoons milk
• 4 teaspoons light corn syrup
• pastry tube

Lesson 4
• magnifying glass or microscope
• ½ cup salt
• water
• pan
• stove
• notebook or notebooking journal
• pencil
• safety goggles
• ½ teaspoon borax
• 1 tablespoon cornstarch
• 1 tablespoon white glue or clear school glue
• a few drops of food coloring
• 9 small plastic cups
• spoon
• timer
• zippered plastic bag
• rubber band
• string
• balloon
• bamboo skewer
• several Styrofoam cups
• glass bowl or casserole dish
• ¼ cup pure acetone (available as nail polish remover at beauty supply store)
• saucer
• paper towel
• vinegar
• 5 copper pennies (made before 1981)
• ¼ cup milk
• ¼ cup lemon juice
• ¼ cup Milk of Magnesia
• ¼ cup baking soda
• ¼ cup ammonia-based glass cleaner
• litmus paper
• 2-liter bottle of Diet Coke
• package of mint Mentos
• hot glue gun
• 2 glass jars with lids
• 2 thermometers that will fit inside the glass jars
• 2 steel wool pads
• 2 bowls
• sink
• ½ cup potassium nitrate (stump remover)
• aluminum foil
• ½ cup sugar
• water
• wick
• empty toilet paper tube
• duct tape
• protective gloves
• box of alum
• large glass measuring bowl
• large drinking glass
• thread or nylon fishing line
• skewer or pencil
• magnifying glass

**Lesson 5**
• ½ cup flour
• ½ cup sugar
• ½ cup melted butter
• ½ cup old-fashioned oats
• ½ cup chocolate chips
• greased baking sheet
• mixing bowl
• large mixing spoon
• oven
• 8 ounces of a clear carbonated drink
• 1 glass
• 8 raisins
• ¼ cup cooking oil
• running water
• soap
• glass pie plate or similar high-lipped dish
• ½ cup milk
• 1 drop each of red, yellow, blue, and green food coloring
• cotton swab
• a few drops of dishwashing liquid
• aluminum foil
• ½ cup heavy whipping cream
• small glass jar (like a baby food jar) with lid
• powdered chocolate drink mix
• spoon
• large glass of milk
• 4 Crayola markers (original classic colors: black, brown, violet, green)
• 4 white Crayola sidewalk chalk sticks
• 4 plastic cups
• ½ gallon of swamp water or muddy lake water
• 2 two-liter soda bottles with caps
• large glass beaker or glass vase with wide mouth
• 2 teaspoons alum
• ½ cup fine white play sand or beach sand
• ½ cup coarse or industrial sand
• ½ cup small pebbles, like aquarium rocks
• coffee filter
• rubber band
• stopwatch
• scissors

**Lesson 6**
• 6 pennies
• 1 index card
• table
• 1 glass
• water
• tin pie pan
• raw egg
• empty toilet paper tube
• smooth, flat surface
• 2 rulers
• tape
• 13 marbles
• 1 large shooter marble
• easy-to-squeeze bottle
• clay
• coffee stirrer straw
• wide straw
• sidewalk chalk

**Lesson 7**
• bicycle with hand brakes
• small toy car
• glass or wooden table
• water
• 1 tablespoon soap or oil
• 3 pieces of copy paper
• window
• shoe box or other small box
• 20-inch string
• small rock
• tape
• 15–20 pencils
• few small toys or objects
• table
• chair
• video camera
• baseball
• tennis ball
• ledge
• penny
• balloon
• small pail with handle
• 3 pieces of heavy card stock
Lesson 8
- 2 rubber bands (1 thin)
- 2 pencils
- an object to use as a drum, such as a can with a plastic lid or a large cookie tin
- safety goggles
- wooden spool with large hole
- electrical or duct tape
- washer
- toothpick
- scissors
- tennis ball
- basketball
- zippered plastic bag
- kitchen counter near sink
- 2 straws cut at an angle to make a sharp point
- water
- 3 shoe boxes (1 that is white or light on the inside and outside)
- 2 small bottles of water
- thermometer
- black paint (enough to cover the inside and outside of a shoebox)
- 6–10 eggs
- sand (enough to fill 1 shoe box halfway)
- 1-foot sheet of aluminum foil
- bamboo skewer
- baking soda
- vinegar
- black powder paint
- small funnel
- plastic cup

Lesson 9
- large casserole dish
- water
- several pieces of Cheerios cereal
- set of dominoes
- flat surface like a table or counter
- long cardboard tube (such as a gift wrapping paper tube)
- balloon
- rubber band
- paper
- tape
- scissors
- candle
- lighter
- long garden hose
- piece of thick paper (like card stock)
- 2 metal spoons
- Sheetrock wall
- car hood
- large container filled with water (like an aquarium or plastic bucket)
- wooden table
- drinking straw
- large metal can
- small metal can
- table
- chair
- shoebox
- materials that will absorb sound (carpet, foam, cardboard, plastic, fabric, carpet padding, etc.)
- glue
- object that produces sound, like an iPod, cell phone, alarm clock, or small radio

Lesson 10
- straight-sided, thin drinking glass
- water
- 3 sheets of white paper
- duct tape
- 3 bright flashlights
- very dark bathroom
- copy paper box
- knife
- 2 prisms
- sunny day
- glass of water
- ¼ cup of milk
- white wall
- darkened room
- plastic wrap or cellophane (red, blue, and green)
- scissors
- 3 cardboard tubes
- tape
- piece of white cardboard
- sharp pencil
- 6 colors of markers, crayons, or tempera paint (purple, blue, green, yellow, orange, red)
- TV remote control
- bouncy ball
- piece of aluminum foil
- mirror, and something to prop it up with on a table
- table in a dark room
• 2 small square mirrors
• small object (such as a small plastic figure)
• long pencil
• penny
• teacup
• reusable adhesive putty
• one 18-inch length of 2-inch outer diameter PVC pipe
• two 2-inch inner diameter PVC pipe elbow joints
• 2 small, round mirrors measuring 2 inches or less in diameter

Lesson 11
• thermometer
• desk lamp that's turned on
• aquarium or other large transparent container
• room temperature water
• large bowl that will fit into aquarium (or two small bowls)
• 2 plastic film canisters with lids (or 2 four-ounce plastic GladWare containers)
• hammer
• nail
• scissors
• boiling water
• ice water
• red and blue food coloring
• balloon
• pot of boiling water
• empty glass bottle
• ¼ cup peanut butter
• metal spoon
• wooden spoon
• plastic spoon
• container of hot water
• pan
• water
• 5 empty baby food jars with lids
• masking tape
• 4 pieces of insulation material (such as fiberglass, down-filled fabric, cotton cloth, a wool sweater, or wool socks)
• a tissue
• magnifying glass
• pitcher of water
• sunny day
• paved surface outside
• jar with lid
• candle that fits inside the jar
• match
• vinegar
• baking soda
• narrow-necked glass bottle
• plastic straw
• piece of clay
• safety goggles
• 4 small paper cups
• rubbing alcohol
• nail polish remover
• oil
• freezer
• large glass of water
• thin plastic bottle with cap
• 2 cardboard boxes, one smaller than the other so it can fit inside the larger one
• aluminum foil
• glue
• pot or glass jar with lid, painted black, that will fit inside the smaller box
• newspaper
• sheet of cardboard a bit larger than the top of the larger box
• pencil
• piece of plastic wrap or clear sheet of plastic or glass about the size of the top of the larger box
• some food to cook (grilled cheese sandwich, hot dog, etc.)

Lesson 12
• balloon
• mirror
• plate
• coarsely ground black pepper
• pair of wool socks
• large carpeted area
• doorknob
• Wint O Green Life Savers
• very dark room
• 6 pennies dated after 1982
• piece of rough sandpaper
• piece of thick cardboard
• electrical tape
• small LED
• water
• scissors
• 1 teaspoon salt
• vinegar
• 6-volt lantern battery
• 8 pieces of coated copper wire
• 3 small 6-volt light bulbs and sockets
• 4 drinking glasses
• milk
• 2 paper clips
• 4 brass paper fasteners (brads)
• tape
• 2-inch piece of corrugated cardboard
• 2 D batteries
• 2 five-inch pieces of insulated copper bell wire
• 4-inch cardboard tube
• flashlight bulb
• 1-inch x 3-inch cardboard strip
• electrical tape
• bathroom-sized paper cup

Lesson 13
• 2 magnets with north and south markings
• 2 bar magnets
• horseshoe magnet
• round magnet
• 2 pieces of paper
• iron shavings
• table
• different items from around your house (such as keys, bottle caps, nails, paper clips, and metals from your parents’ toolbox)
• very large steel nail
• box of steel paper clips
• hammer
• compass
• rock
• large needle
• pencil eraser
• flame
• plate
• bowl of water
• plastic bottle cap
• long piece of thin, insulated copper wire
• 1 D battery
• small rare earth magnet
• 1 AA battery
• 7-inch piece of 18- or 20-gauge copper wire
• large piece of cardboard
• markers
• several strong magnets
• several small toy cars or trucks
• strong glue for metal and magnets
• base (such as boxes)

Lesson 14
• several large books
• rubber band cut in half
• scissors
• paper clip
• ruler
• duct tape
• sock filled with rocks
• table
• pencil
• board
• piece of paper
• marker
• pencil
• can
• bowl of colored water
• clear packing tape
• clear, plastic tubing (¼ inch in diameter)
• chair
• broom
• can of beans
• full water bottle
• handful of pennies
• yardstick or other long stick
• long string
• coat hanger
• strong wire cutters
• empty spool of thread or ribbon
• small pail
• rope
• safety goggles
• 3 straws
• 4 bamboo skewers
• 4-inch x 6-inch piece of cardboard
• 4 bottle caps (like water bottle caps)
• balloon
• hammer
• nail
• thick rubber band
• 2 spools
• 2 long nails without heads (longer than the spools)
• board
• bicycle