LAB SUPPLY LIST

MODULE 1

Experiment 1.1

Alka Seltzer tablet
A small solid object (such as a pebble or eraser)
Magnifying glass
Centimeter ruler
Kitchen balance
Beaker of water
Stirring rod or spoon to stir

Experiment 1.2

String
Masking tape
Stopwatch or other 30 second timer
Pencil
Paper clip
5 Washers
Half a piece of cardstock paper (cut paper in half lengthwise) or cardboard 8.5" × 5.5"
Protractor
Metric ruler

MODULE 2

Experiment 2.1

4 beakers (250 mL) or clear glass cups (The beakers or cups must be the same size.)
Hot and cold water
Ice
Red, blue, green, and yellow food coloring
Measuring cup
Stopwatch (optional)
A helper

Experiment 2.2

Paper towels
4 beakers (250 mL size) or pint sized, large mouth glass jars
1 large quart jar
4 spoons
Measuring cup
Water
Vegetable oil
Corn syrup
Rubbing alcohol (isopropyl alcohol)
Red and blue food coloring
4 Small cork pieces
4 Pennies
4 Grapes (or raisins)
4 Small paper clips
4 Marbles
4 Washers
4 Ice cubes

You Do Science

A balloon
Water

Experiment 2.3

A beaker or a small, clear glass (like a juice glass)
Baking soda
Tap water
A 9 volt battery (the kind that goes in a radio, smoke detector, or toy. DO NOT use an electrical outlet, as that would be quite dangerous! A 1.5 volt flashlight battery will not work.)
Two 9 inch pieces of insulated wire. The wire itself must be copper.
Scissors
Some tape (preferably electrical tape, but cellophane or masking tape will work.)
A spoon for stirring
Eye protection such as goggles or safety glasses

MODULE 3

Experiment 3.1

2 small Styrofoam balls (Balls should be about 2 inches in diameter. Styrofoam balls from craft stores work well.)
Pipe cleaners (white or gray)
Plastic pony beads (These can be found at craft stores.)
2 bamboo skewers
Fishing line
2 wire hangers
Red and blue pushpins

Experiment 3.2

Color cards found in the student notebook
Scissors
Glue or tape

You Do Science

Table salt (sodium chloride)
Distilled water
A clean, clear glass container (a beaker or jam jar)
String
Wooden spoon

MODULE 4

Experiment 4.1

A Styrofoam or paper cup
Glass of water
Vegetable oil
Balloon
Pen
Eye protection such as goggles or safety glasses

Experiment 4.2

Stick of butter or margarine (It must be fresh from the refrigerator so that it is solid.)
2 beakers or microwave-safe glass bowls
Water
Ice cube
Microwave (A saucepan and stove can be substituted for the microwave.)
Knife (A serrated one works best. You will use it to cut the butter.)
Spoon
Eye protection such as goggles or safety glasses

Experiment 4.3

Water
Bowl
4 beakers or clear glasses
Paper towels
Wax paper
Pipette or eyedropper
Straw
2 microscope slides
Metal paper clip (Use a standard-sized paper clip. A big one will probably not work.)
Toilet paper
Dish soap
Vegetable oil
Toothpicks
Scissors
Blue and red food coloring
Spoon
Eye protection such as goggles or safety glasses

MODULE 5

Experiment 5.1

Water
9 volt battery (A new one works best.)
2 test tubes (You can purchase these at a hobby store. If you cannot get them, use the tubes that florists put on the stems of cut flowers.)
Beaker or glass (It must be deep enough so that when it is nearly full of water, the battery can stand vertically in the glass and still be fully submerged in the water.)
Epsom salts (You can get these at any drugstore or large supermarket.)
Tablespoon
Eye protection such as goggles or safety glasses

Experiment 5.2

Beaker or a clear glass
Water
White vinegar
Baking soda (A fresh box will work best.)
Salt substitute (Morton Salt Substitute, Nu-Salt, or NoSalt are brands you can find at your grocery store.)
Epsom salts
Hydrogen peroxide
Steel wool
Quick rising dry yeast (A new packet—check the expiration date—that has been kept refrigerated will work best.)

Thermometer
Tablespoon
Timer
Eye protection such as goggles or safety glasses
Optional—Acetone (Some fingernail polish removers contain acetone. You may be able to find it at a drug or grocery store, read the labels for ingredients.)
Optional—Styrofoam packing peanut

You Do Science

1 or 2 liter soda bottle
½ cup hydrogen peroxide
¼ cup dishwashing soap
Food coloring
Measuring cup
A packet of active yeast
Warm water

MODULE 6

You Do Science

A helper
A yard stick, meter stick, or tape measure
Masking tape
A stopwatch

Experiment 6.1

At least 4 eggs
2 pieces of reasonably strong cardboard (like the cardboard found on the back of writing tablets)
Several books
A pair of scissors
Ruler
A large tray or cookie sheet
Paper towels
Kitchen table
Eye protection such as goggles or safety glasses

Experiment 6.2

A large glass jar with a lid
Some dirt of outside (Dig straight down into the ground to get dirt from many depths.)
Some sand
Some gravel composed of various sizes of rocks
Water

MODULE 7

Experiment 7.1

A large heavy book (at least 21 cm by 27 cm)
A small piece of paper (about 3 cm by 3 cm)
Eye protection such as goggles or safety glasses

You Do Science

A stopwatch that reads hundredths of a second (many smartphones have this feature)
A chair or stepladder
A rock or other heavy object to reduce air resistance (make sure your choice will not damage your floor)
A tape measure

Experiment 7.2

A coin (nickels work well)
A 3 inch by 5 inch index card (note the units listed)
A small beaker or glass (like a juice glass)
A raw egg
A hard-boiled egg
An aluminum pie pan
A pair of scissors
A marble or other small ball
Eye protection such as goggles or safety glasses

Experiment 7.3

A plastic, 2 liter bottle
A stopper that fits the bottle (It could be rubber or cork, but you cannot use the screw-on cap. It has to be something that plugs up the opening of the bottle but can be pushed out by a pressure buildup inside the bottle. Modeling clay can work as well. You could also try a large wad of gum, as long as the gum has dried out and has the texture of firm rubber.)
A cup of vinegar
2 teaspoons of baking soda
Aluminum foil
Four pencils
Eye protection such as goggles or safety glasses

You Do Science

A balloon
some string or fishing line
A plastic drinking straw
Some scotch tape

MODULE 8

Experiment 8.1

1–5 rubber bands (all must be the same thickness and length)
A metric ruler
Tape measure (one with metric units on it would be best)
Masking tape
Safety glasses or goggles

You Do Science

A basketball (a soccer ball will also work)
A tennis ball
A yard stick or tape measure

Experiment 8.2

A 1 lb hand weight (You can also use a 16 ounce box of spaghetti or other 1 lb substance.)
A piece of string 70 cm long
Pencil or dowel rod
Tape
Tape measure or metric ruler
Stopwatch
Bathroom scale
A clear stairway (You will be running up the steps so make sure the area is safe and you have proper shoes on.)
A helper

MODULE 9

Experiment 9.1

Plastic wrap
Scissors
Tape
Match
Plastic 1 liter or 2 liter bottle (the kind soda pop comes in)
Candle
Large pot
Wooden spoon
Large bowl
Rice
Eye protection such as goggles or safety glasses

You Do Science

A balloon

Experiment 9.2

Two medium-sized rocks
A person to help you
A stopwatch
A 250 meter stretch of sidewalk, pavement, gravel road, or lawn that is relatively straight
A tape measure, meterstick, or yardstick

Experiment 9.3

Eye protection such as goggles or safety glasses
If you have access to a stringed instrument such as a violin, guitar, cello, or banjo, use it for this experiment. If you do not have access to such an instrument, you will need:
Rubber band
Plastic tub (like the kind whipped cream comes in)

You Do Science

A licensed driver
A vacant street or parking lot

Experiment 9.4

Water
Glass or plastic bottle (A glass bottle is best, and 2 liter is the ideal size. It must have a narrow neck. A jar will not work well.)
Eye protection such as goggles or safety glasses

MODULE 10

Experiment 10.1

A flat pan, like the kind you use to bake a cake
A medium-sized mirror (4 inches by 6 inches is a good size)
A sunny window (A flashlight will work, but it will not be as dramatic.)
A plain white sheet of paper
Water
Eye protection such as goggles or safety glasses

You Do Science

A prism (or a CD cut in half)
A thermometer (if you have 2 or 3 that is even better)
A plain white piece of paper
Black paint, or a black magic marker

Experiment 10.2

Eye protection such a goggles or safety glasses
A flat mirror. The mirror can be very small, but it needs to be flat. You can always tell if a

mirror is flat by looking at your reflection in it. If the image you see in the mirror is neither magnified nor reduced, the mirror is flat.
A white sheet of paper
A pen
A protractor
A ruler
A flashlight
Black construction paper or thin cardboard
Scissors
Tape
A dark room

Experiment 10.3

A square or rectangular glass or clear plastic pan (If you have a flat bottle, it will work as well. It just needs to be something with clear, flat sides that can hold water.)
Water
Milk
Spoon
Flashlight with the same cover you used in Experiment 10.2
A sheet of plain white paper
Pen
Protractor
Ruler
Eye protection such as goggles or safety glasses

You Do Science

A quarter
An opaque bowl
Some water in a pitcher or very large glass

Experiment 10.4

2 plain white sheets of paper (there shouldn't be any lines on them)
A bright red marker (A crayon will also work, but a marker is better.)
Timer or stopwatch

MODULE 11

Experiment 11.1

2 balloons (Round balloons work best, but any kind will do.)
Thread
Cellophane tape
Eye protection such as goggles or safety glasses

Experiment 11.2

Tape
A clear glass
A plastic lid that fits over the glass. This lid can be larger than the mouth of the glass, but it cannot be smaller. The top of a margarine tub or something similar works quite well.
A paperclip
Two 5 cm × 1.5 cm strips of aluminum foil (the thinner the better)
A balloon
A pair of pliers
Eye protection such as goggles or safety glasses

Experiment 11.3

A 1.5 volt battery (Any AA-, C-, or D-cell battery will work. Do not use any battery other than one of those, though, because a higher voltage can make the experiment dangerous.)
Aluminum foil
Scissors
Eye protection such as goggles or safety glasses

Experiment 11.4

A 1.5 volt battery (Any AA-, C-, or D-cell battery will work. Do not use any battery other than one of those listed, though, because a higher voltage can make the experiment dangerous.)
Tape (Electrical tape works best, but cellophane tape will do.)
Large iron nail (at least 3 inches long)
Metal paper clip
2 feet of insulated wire (24 gauge wire works best. It should not be thicker than 18 gauge.)
Eye protection such as goggles or safety glasses.

MODULE 12

Experiment 12.1

A shallow pan (a pie pan, for example)
Cornstarch
Measuring cups
Water
Spoon for stirring
Eye protection such as goggles or safety glasses

Experiment 12.2
Water
Salt
Ice
Tablespoon
Small saucepan
Saucepan lid or frying pan lid larger than the saucepan used
Large bowl (It should not be plastic and heat safe, as it will get hot.)
Potholders
Zippered plastic sandwich bag
Stove
Eye protection such as goggles or safety glasses

You Do Science
A pumice stone
A zippered bag
Water

You Do Science
2 pieces of chalk
Some white vinegar or lemon juice
A medicine dropper
Water
2 plates or bowls

MODULE 13

Experiment 13.1
Thermometer (It needs to read from slightly lower than room temperature to slightly higher than room temperature.)
A large, zippered freezer bag (It needs to be large enough so that the thermometer can be fully zipped inside.)
Sunny windowsill (Perform this experiment on a sunny day.)
Bottle (a plastic 1 liter soft drink bottle, for example)
Vinegar
Baking soda
Teaspoon
Eye protection such as goggles or safety glasses

Experiment 13.2
Stove
Frying pan
2 empty, 12 ounce aluminum cans (like soft drink cans)
2 bowls
Tablespoon
Water
Ice cubes
Tongs
Eye protection such as goggles or safety glasses

You Do Science
A plastic cup
An index card
Water
A sink

Experiment 13.3
Ice
Water
Clean, dry plastic bottle (The best volume would be 1 quart or 1 liter, but any size will work.)
Balloon
Bowl (heat and cold safe)
Optional: rubber band
Eye protection such as goggles or safety glasses

MODULE 14

You Do Science
30 marshmallows
70 raisins (or craisins)
50 toothpicks

Experiment 14.1
Tincture of iodine—1 ounce bottle (You can find this at any drug store.)
Lemon juice
Apple juice
Orange juice
Grapefruit juice or pineapple juice (or another juice of your choosing)
100 mg vitamin C pill
Medicine dropper
A 1 quart jar
Measuring cup with milliliter markings
Water
Five 8 ounce clear plastic cups

You Do Science
A funnel (or an empty 2 liter soda bottle)
A ping-pong ball