APPENDIX C
A COMPLETE LIST OF LAB SUPPLIES

Module #1

- Eye protection such as goggles or safety glasses
- 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
- A long piece of string
- A large tabletop (like the top of a kitchen table or a big desk)
- A person to help you
- Some cellophane tape
- A pencil
- Vinegar
- 6 Tums® tablets (You can use another antacid tablet, but it must have calcium carbonate as its active ingredient.)
- Measuring cups
- 3 large glasses (They each must be able to hold at least 2 cups of liquid.)

Module #2

- Eye protection such as goggles or safety glasses
- A small glass, like a juice glass
- Two cotton balls
- Tap water
- A bulb thermometer (It must be able to read room temperature and slightly higher, and it must have a bulb at the end.)
- A small piece of plastic such as a Ziploc® bag or a square cut from a trash bag.
- A reasonably large glass or jar
- A candle (**DO NOT** use a lighter or any other gas or alcohol burner. You must use a candle in order to keep the experiment safe.)
- Matches
- 2 cups of hydrogen peroxide (sold at any drugstore)
- Baker's yeast
- A bottle (A plastic, 1-liter soda pop bottle, for example)
- A balloon
- A teaspoon

- A large, clear Ziploc® freezer bag (It needs to be large enough so that the thermometer can be "zipped" inside it.)
- Sunny windowsill (If it's not sunny today, just wait until it is.)
- Vinegar
- Baking soda

Module #3

- Eye protection such as goggles or safety glasses
- Stove
- Frying pan
- Two empty, 12-ounce aluminum cans (like soda pop cans)
- Two bowls
- Water
- Ice cubes
- Tongs
- Plastic bottle (The best volume would be 1 quart or 1 liter, but any size will work.)
- Balloon

Module #4

- Eye protection such as goggles or safety glasses
- Water
- 9-volt battery (A new one works best.)
- Two test tubes (You can purchase these at a hobby store. If you cannot get them, skip the experiment or use the tubes that florists put on the stems of cut flowers.)
- Juice 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
- Vegetable oil
- A Styrofoam® or paper cup
- A comb
- A pen
- Five glasses
- Two stirring spoons
- Paper towel
- A measuring spoon that measures ½ teaspoon
- Sugar
- Table salt
- Canola oil (or some kind of cooking oil other than olive oil)
- Olive oil
- Stick of butter or margarine (It must be fresh from the refrigerator so that it is solid.)
- Ice cube
- Stove
- Saucepan

- Knife (A serrated one works best. You will use it to cut the butter.)
- Bowl
- Metal paper clip (Use a standard-sized paper clip. A big one will probably not work.)
- Toilet paper
- Dish soap
- Scissors
- A smooth glass surface (The underside of a drinking glass works well.)
- Wax (A candle will work.)
- Sink

Module #5

- Eye protection such as goggles or safety glasses
- Water
- Salt
- Ice
- Tablespoon
- Teaspoon
- Small saucepan
- Saucepan lid or frying pan lid larger than the saucepan used
- Large bowl (It should not be plastic, as it will get hot.)
- Potholders
- Zippered plastic sandwich bag
- Stove
- Measuring cup
- Plastic bowl that holds more than 2 cups of water
- Freezer
- Small plate
- Strainer
- Small glass or cup
- A clear, plastic 2-liter bottle (the kind that soda pop comes in) with the lid
- A match

Module #6

- Eye protection such as goggles or safety glasses
- Two metal spoons
- About 3 feet of string (Nylon kite string is ideal, but any reasonably strong string will work. Thread and yarn do not work well.)
- Large sink with a plug
- Water
- A shallow pan (a pie pan, for example)
- Cornstarch
- Measuring cups
- A 1.5-volt battery (Any size cell [AA, A, C, or D] will do; just make sure it is nothing other than one of those. A battery of higher voltage could be 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 (20 to 30-gauge wire works best. It should not be thicker than 20-gauge.)
- A hard-boiled egg (You might want a second in case you mess up the first time.)
- A dull knife, like a butter knife
- A marker or something else that will make a mark on the egg shell

Module #7

- Daily local weather information source that contains:
  1. High and low temperatures for yesterday
  2. High and low atmospheric (sometimes called "barometric") pressure for yesterday.
  3. Amount of precipitation for yesterday

  If you have a hard time finding this information, check the course website I described in the "Student Notes" at the beginning of the book. You will find links to websites that contain it.

Module #8

- Eye protection such as goggles or safety glasses
- Balloon
- Dark room
- A source that gives you the weather forecast for tomorrow

Module #9

- Eye protection such as goggles or safety glasses
- At least four eggs
- Two pieces of reasonably strong cardboard (like the cardboard found on the back of writing tablets)
- Several books
- A pair of scissors
- A large tray or cooking sheet
- Newspapers or paper towels
- Kitchen table
- A large (at least 21 cm by 27 cm), heavy book
- A small (about 3 cm by 3 cm) piece of paper
- A stopwatch (must read hundredths of a second)
- A chair or small stepladder
- A ball or rock (something heavy so that air resistance won't be a factor)
- A tape measure (A meterstick or yardstick will work, if you do not have a tape measure.)

Module #10

- Eye protection such as goggles or safety glasses
- A coin

- A 3-inch by 5-inch index card (note that I listed the units)
- A small glass (like a juice glass)
- A raw egg
- A hard-boiled egg
- Aluminum pie pan
- A pair of scissors
- A marble or other small ball
- An unfinished board that is at least 2 feet long
- A block eraser
- An ice cube
- A small block of wood
- A relatively flat rock
- Sandpaper
- Several books
- A ruler
- A plastic, 2-liter bottle (like the kind soda pop comes in)
- 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
- Two teaspoons of baking soda
- Aluminum foil
- Four pencils

Module #11

- Eye protection such as goggles or safety glasses
- A mechanical pen
- A black marker
- Thin string or thread (preferably white)
- Five metal washers, all the same size
- Stopwatch
- Scissors
- A soft seat cushion from a couch (A soft bed will work as well.)
- A bowling ball (A heavy rock will work as well.)
- A marble
- Two balls (Baseball-sized balls are best, but any will do.)
- Two people to help you
- A large, open space

Module #12

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

- Cellophane 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 paper clip
- Aluminum foil
- A pair of pliers
- 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.)
- Scissors

Module #13

There are no experiments in Module #13.

Module #14

- Eye protection such as goggles or safety glasses
- Plastic wrap
- Scissors
- Tape
- Candle (It needs to be either in a candle holder or able to stand up securely on its own.)
- Match
- Plastic 1-liter or 2-liter bottle (the kind soda pop comes in)
- Large pot
- Wooden spoon
- Large bowl
- Rice
- 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
- 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.)
- A car with a horn and a parent to drive the car
- A straight street (It could be the one you live on, but it might work better to find one away from peoples' homes.)
- 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 that margarine or whipped cream comes in

Module #15

- Eye protection such as goggles or safety glasses
- A flat pan, like the kind you use to bake a cake
- 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 sunny window (A flashlight will work, but it will not be as dramatic.)
- Five plain white sheets of paper
- Water
- A pen
- A protractor
- A ruler
- A flashlight
- Black construction paper or thin cardboard
- Tape
- A dark room
- 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.)
- Milk
- Spoon
- Quarter
- Bowl that is reasonably deep and not transparent
- Pitcher or very large glass to hold the water
- A bright red marker (A crayon will also work, but a marker is better.)

Module #16

- Balloon
- A marker (You need to be able to write on the balloon with the marker.)