

### **Lab Supplies Needed For Module # 1**

A small 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 it will most likely kill you! A 1.5 Volt flashlight battery will not work.)

Two 9-inch pieces of insulated wire. The wire itself must be copper.

A pair of scissors

Tape (preferably electrical tape, but cellophane or masking tape will work)

A long piece of string

A large table top (like 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.)

A spoon

### **Lab Supplies Needed For Module # 2**

Hydrogen peroxide (sold at any drug store)

Baker's yeast

Vinegar

Baking soda

Two cotton balls

Tap water

A small glass, like a juice glass

A reasonably large glass or jar

A bottle (A plastic, 1-liter soda bottle, for example)

A teaspoon

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 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

A balloon

Two clear ZIPLOC sandwich bags

### Lab Supplies Needed For Module # 3

Food coloring (any color)

Ice

Water

A tall, clear jar or glass (It should either be straight, or it should be tapered so that the top of the jar is smaller than the bottom. Do not use a jar that is tapered so that the top is bigger than the bottom, as this will reduce the effect you are trying to see.)

Plastic bottle (The best volume would be 1 quart or 1 liter, but any size will work.)

A bowl

A candle

A candle holder

Some matches

A balloon

### Lab Supplies Needed For Module # 4

Vegetable oil

Epsom salts (You can get these at any drug store or large supermarket.)

Sugar

Sand

Table salt

A stick of butter or margarine (It must be fresh from the refrigerator so that it is solid.)

Water

An ice cube

Four glasses

Two small glasses

A deep bowl (It must be deep enough so that when it is nearly full of water, the battery can stand vertically in the bowl and still be fully submerged in the water.)

A tablespoon

A measuring spoon that measures 1/2 of a teaspoon

A knife (A serrated one works best. You will use it to cut the butter.)

A 9-Volt battery (Newer ones work better.)

**Two test tubes (You can purchase these at a hobby store. If you cannot get them, you can skip the experiment that uses them.)**

A styrofoam or paper cup

A comb

A pen

Stove

A saucepan

A spoon

A sewing needle

Some thread

Dish soap

**Lab Supplies Needed For Module # 5**

Water

Salt

Ice

A tablespoon

A small saucepan

A saucepan lid or frying pan lid larger than the saucepan used

A large bowl (It should not be plastic, as it will get hot.)

Potholders

A zippered plastic sandwich bag

Stove

A measuring cup

A plastic bowl that holds more than 2 cups of water

Freezer

A teaspoon

A small plate

A strainer

A small glass or cup

A clear plastic 2-liter bottle (the kind that soda pop comes in) with the lid

A match

**Lab Supplies Needed For Module # 6**

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

Water

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.)

A steel or iron nail

A metal paper clip

Aluminum foil

A hard-boiled egg

A dull knife, like a butter knife

A marker or something else that will make a mark on the egg shell

### **Lab Supplies Needed For 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 (It may be hard to find this. If nothing else, find a source with the current atmospheric pressure.)
3. Amount of precipitation for yesterday

**PLEASE NOTE:** Experiment 7.1 is a 28-day long experiment. Plan your time accordingly

### **Lab Supplies Needed For Module # 8**

A balloon  
A dark room

### **Lab Supplies Needed For Module # 9**

Four eggs  
Two strips of reasonably strong cardboard (Like the cardboard you find on the back of writing tablets)  
Many books  
A pair of scissors  
Lots of newspaper 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 ball or rock (something heavy so that air resistance won't be a factor)  
A chair or small stepladder  
A tape measure (A meterstick or yardstick will work, if you do not have a tape measure.)

### **Lab Supplies Needed For Module # 10**

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  
An 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  
 Many books  
 A ruler  
 A plastic, 2-liter bottle (like the kind soda comes in)  
 A stopper that fits the bottle (It could be rubber or cork, but you cannot use the screw-on lid. 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. You could also try a large wad of gum, as long as the gum has dried out and has the texture of firm rubber.  
 Vinegar  
 Baking soda  
 Aluminum foil  
 Four pencils

### **Lab Supplies Needed For Module # 11**

A mechanical pen  
 A black marker  
 A thin string or thread (preferably white)  
 5 metal washers, all the same size  
 A stopwatch  
 Something to cover your eyes, such as safety goggles or safety glasses  
 A pair of 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

### **Lab Supplies Needed For Module # 12**

Three balloons (Round balloons work best, but any kind will do.)  
 Some thread  
 Cellophane tape  
 A glass  
 A plastic lid that fits over the glass (It 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

Two 5-cm x 1.5-cm strips of aluminum foil (the thinner the foil the better)  
A pair of pliers  
A 1.5 Volt battery (Any AA, A, C, or D-cell battery will work. Do not use any battery other than one of those, though, because a **higher voltage will make the experiment dangerous.**)  
Aluminum foil

### **Lab Supplies Needed For Module # 13**

NONE. The nature of the subject precludes experiments.

### **Lab Supplies Needed For Module # 14**

Plastic wrap  
A pair of scissors  
Some tape  
A candle (It needs to either be in a candle holder or be able to stand up securely on its own.)  
Some matches  
A plastic 1-liter or 2-liter bottle (the kind soda comes in)  
A large pot  
A wooden spoon  
A large bowl  
Some rice  
Two medium-sized rocks  
A stopwatch  
A 250-meter stretch of sidewalk, pavement, gravel road, or lawn that is relatively straight  
A tape measure, meterstick, or yardstick  
Water  
A 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.)  
A car with a horn and a parent to drive the car  
If you have access to a stringed instrument such as a violin, guitar, cello, or banjo, that's all you need for this experiment. If you do not have access to such an instrument, you will need a rubber band and a plastic tub like the kind that margarine or whipped cream comes in.

### **Lab Supplies Needed For Module # 15**

A flat pan, like the kind you use to bake a cake  
A medium-size mirror (4-inch by 6-inch 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

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 flashlight

Some black construction paper or thin cardboard

Some tape

A square or rectangular glass or clear plastic pan (If you have a flat bottle, that will work as well. It just needs to be something with clear, flat sides that can hold water.)

Water

Milk

A spoon

A flashlight with the same cover you used in Experiment 15.2

A sheet of plain white paper

A pen

A protractor

A ruler

A quarter

A bowl that is reasonably deep and not transparent

Water

A pitcher or very large glass to hold the water

Two plain white sheets of paper (there cannot be lines on them)

A bright red marker (A crayon will also work, but a marker is better.)

### **Lab Supplies Needed For Module # 16**

A balloon

Two colors of markers (You need to be able to write on the balloon with the markers.)





# *Exploring Creation With Physical Science*

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