

## Items Needed To Complete Each Lesson

Every child will need his own notebook, blank paper, lined paper, and colored pencils.

### Lesson 1

- ◆ Balloons of many sizes and colors (Very small balloons, like water bomb balloons, and very large balloons, the bigger the better)
- ◆ Scissors
- ◆ Thumbtacks
- ◆ Thread, ribbon, or string
- ◆ Markers or paint
- ◆ Measuring tape (If you do not have a measuring tape, you can use string cut to the lengths listed in the project.)
- ◆ Construction paper

### Lesson 2

- ◆ A magnifying glass
- ◆ A refrigerated chocolate bar (Any candy bar that has a lot of chocolate in it will do.)
- ◆ A flashlight
- ◆ A globe (or round ball)
- ◆ A Styrofoam<sup>®</sup> ball (or any small ball) on a string
- ◆ A box
- ◆ Scissors
- ◆ White paper
- ◆ A pin or needle
- ◆ Tape
- ◆ Aluminum foil

### Lesson 3

- ◆ A large bowl
- ◆ White flour
- ◆ Several pebbles of different size
- ◆ A large bowl
- ◆ A marble or pebble
- ◆ A pencil
- ◆  $\frac{1}{4}$  cup of salt
- ◆ 1 teaspoon cooking oil
- ◆  $\frac{1}{4}$  cup of water

### Lesson 4

- ◆  $\frac{1}{4}$  stick of butter or margarine
- ◆ Some flour
- ◆ A large plate
- ◆ A small bowl (like a custard dish) or a small cup
- ◆ A saucepan
- ◆ A stove
- ◆ A shoe box or other square box
- ◆ A piece of cloth, such as a dish cloth or strong paper towel, that will cover the box and drape down its side.
- ◆ A large rubber band and perhaps some tape
- ◆ Newspaper
- ◆ Plaster of Paris or flour and water
- ◆ Bamboo skewer (or a long, skinny stick with a point)
- ◆ Markers, crayons, or colored pencils (Markers work best.)
- ◆ Ruler or measuring tape

### Lesson 5

- ◆ A baseball
- ◆ A tennis ball
- ◆ Lamp
- ◆ Globe
- ◆ A cork
- ◆ A permanent marker
- ◆ A lid from a yogurt or sour cream container (Try to find one that has a high lip.)
- ◆ A sewing needle
- ◆ A magnet

### Lesson 6

- ◆ Lamp
- ◆ Lightly-colored ball
- ◆ Compact Disc (CD)
- ◆ Two magnifying glasses (One should be stronger than the other. Reading glasses will work also.)
- ◆ Cardboard tube (Mailing tubes, paper towel rolls, and wrapping paper rolls all work well.)
- ◆ Strong tape (Masking tape and duct tape work best.)
- ◆ Scissors (For thick cardboard tubes, you might need a knife.)
- ◆ Tape measure
- ◆ Paper with writing or an image on it

### **Lesson 7**

- ◆ Construction paper (Some of it should be green.)
- ◆ Sticks
- ◆ Long, thin strips of cardboard
- ◆ Plastic cling wrap or wax paper
- ◆ A small plastic bottle, such as a vitamin or aspirin bottle
- ◆ A large baking pan (not a cookie sheet) or aluminum foil
- ◆ Vinegar (White vinegar works best because it won't interfere with the color.)
- ◆ Rocks (optional)
- ◆ Baking soda
- ◆ Red food coloring
- ◆ Dish washing liquid
- ◆ 1½ cup of white flour
- ◆ ¼ cup of salt
- ◆ 1 tsp. cooking Oil
- ◆ ¼ cup of water

### **Lesson 8**

- ◆ A ball that is about the size of a soccer ball
- ◆ Three tiny round sprinkles or large grains of salt or sand
- ◆ Several sugar sprinkles that are smaller than the round sprinkles above
- ◆ Two “red hots” (red cinnamon pieces for cookie decorating) or two small, whole allspice
- ◆ A pecan or large marble

- ◆ An acorn or large marble (a bit smaller than the one above)
- ◆ Two pinto beans or lima beans, one smaller than the other

### **Lesson 9**

- ◆ Two plastic soda bottles
- ◆ Electrical or duct tape
- ◆ 1-inch washer
- ◆ Water

### **Lesson 10**

- ◆ Alka-Seltzer Tablet
- ◆ Eye protection
- ◆ Film Canister (inside enclosure)
- ◆ Water
- ◆ Tape
- ◆ Paper
- ◆ Scissors

### **Lesson 11**

- ◆ A ball (no larger than a tennis ball)
- ◆ A glass Jar
- ◆ A match
- ◆ Ice
- ◆ A Ziploc® bag large enough to cover the opening of the jar
- ◆ Hot water

### **Lesson 12**

- ◆ 2 tablespoon powdered sugar
- ◆ ½ cup whipping cream (Whole milk or half-and-half will work.)
- ◆ ¼ teaspoon vanilla
- ◆ 6 tablespoons rock salt
- ◆ 1 pint-size Ziploc® plastic bag
- ◆ 1 gallon-size Ziploc® plastic bag
- ◆ Several ice cubes

### **Lesson 13**

- ◆ Cardboard
- ◆ Clear plastic wrap
- ◆ Tape
- ◆ Scissors
- ◆ A shoe box
- ◆ A marker
- ◆ A bamboo skewer or ice pick
- ◆ A flashlight
- ◆ Scissors
- ◆ A dark room

### **Lesson 14**

Creative materials for building a space station model, such as:

- ◆ wires
- ◆ paper towel rolls
- ◆ empty soda bottles
- ◆ craft sticks
- ◆ straws
- ◆ lids