

LABORATORY EQUIPMENT

Exploring Creation with Astronomy Laboratory Equipment by Module

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® 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

- ¼ 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
- Items Needed To Complete Each Lesson Every child will need his own notebook, blank paper, lined paper, and colored pencils.

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



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