

Instructions for Setting Up Family Challenge Activities

Homemade Cleaner Setup Notes

Setup Materials (Participant materials listed on activity handout.)

- vinegar
- tablespoon or other volume measure
- tap water
- 1-quart spray bottle
- scissors
- mirrors
- supplies for making a label
- liquid vegetable oil or spray cooking oil
- (optional) calculator

Homemade Glass Cleaner

Ingredients: 2 tablespoons vinegar and 1 quart water

Setup Procedure

1. Make a simple glass cleaner by combining 2 tablespoons vinegar with 1 quart water in a clean spray bottle.
2. Make a label for the homemade glass cleaner similar to the one shown on the right. (Note that the commercial cleaners should also be in quart-sized bottles to allow for easy price comparisons.)
3. Smear or spray the mirrors with a light coating of oil. Re-coat mirrors as needed after each test.
4. Leave (or place) price labels on the commercial cleaners so participants can see the costs of each item. Representative costs for homemade cleaner components are provided.

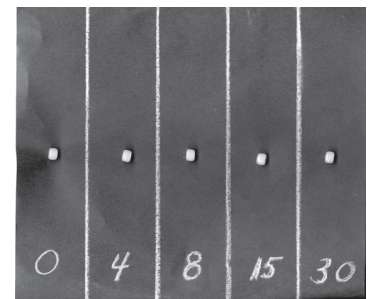
UV Beads Setup Notes

Setup Materials (Participant materials listed on activity handout.)

- UV detection beads (available from science and teacher supply stores)
- black construction paper
- cardboard
- scissors
- glue
- gallon-sized zipper-type plastic bag

Setup Procedure

1. If your UV beads are a multicolor assortment, examine the beads in the sun and choose a single color of bead to use in this activity. (Don't select yellow beads because their shade changes are the hardest to observe.)
2. Go back inside to prepare the test beads. Cut a piece of black paper so it fits in a gallon-sized plastic bag. To add stability, glue the paper onto a piece of cardboard cut to the same size. Evenly space the five UV detection beads on the black paper, one bead for each sun



protection product you will test and one bead for the control (no sun protection product). Glue the beads to the paper, making sure not to get glue on the tops of the beads. Let the glue dry.

3. Label the paper next to each bead with the SPF rating of a sun protection product you are going to test. One bead will have no sun protection product (0 SPF) and will be the control. Slide the construction paper into the gallon-sized plastic bag.

Water Taste Test Setup Notes

Setup Materials (Participant materials listed on activity handout.)

- 5–6 different room-temperature enhanced water beverages (such as Propel, SmartWater™, and Fruit2O®)
- small, clear glasses or plastic cups (one for each sample for each taste tester)
- self-stick labels
- pencil or odor-free marking pen

Setup Procedure

1. Label the set of cups using A, B, C, and so on.
2. Do not fill the cups in front of the taste tester. The identity of each sample should be kept secret until step 6 of the procedure. After creating an answer key for yourself in the table below, pour a small amount of each enhanced water into the appropriate cup. Keep the samples at room temperature.
3. List the price per unit volume of each enhanced water sample in the table below. (Be sure to include units in the table.) Many stores show unit prices (such as price per ounce) on the shelf near the product.

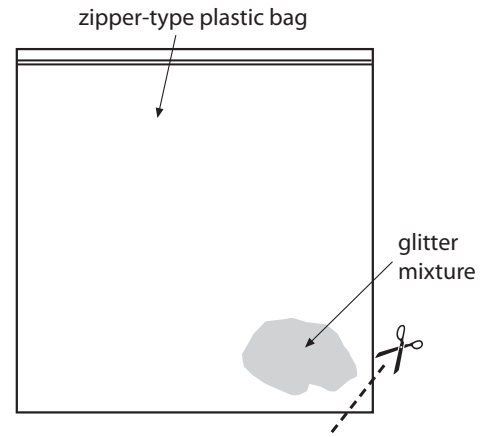
Enhanced Water Taste Test Answer Key				
Sample	Brand	Price per Bottle	Ounces or Milliliters in Bottle	Price per Unit Volume
A				
B				
C				
D				
E				
F				

4. On a separate piece of paper, prepare a general list that includes the brands of all the enhanced water samples you placed in the cups. Be sure to switch the order of the names around and do not identify which sample goes with which cup. Taste testers will use this list in step 5.

Why Wash? Setup Notes

Setup Materials (Participant materials listed on activity handout.)

- petroleum jelly (such as Vaseline®)
- ultra-fine cosmetic-grade glitter (Available from many sources online. Dark-colored glitter, such as red or green, works best. Do not use craft glitter.)
- zipper-type plastic bag
- measuring spoons
- scissors
- (optional) Glo Germ™ gel and ultraviolet (UV) light (Glo Germ is available at www.glogerm.com.)



Setup Procedure

1. Prepare a glitter mixture in a zipper-type plastic bag by adding two parts petroleum jelly and one part ultra fine glitter. Gently knead the bag to mix the glitter into the petroleum jelly. To dispense the mixture, cut a corner out of the bag as shown. A pea-sized portion works well for adult-sized hands.
2. As an alternative, Glo Germ gel can be used instead of glitter mixture. Since Glo Germ can only be seen under a UV light, using this gel will add an element of surprise. Practice with Glo Germ ahead of time to determine the best amount of gel to apply.