

## Lab Safety Lab Activity 2 – Student Edition

# SODA CANNONS

### Introduction:

Wearing the proper personal protective equipment is important. In this lab we will learn how goggles, lab aprons, and gloves can protect you from chemicals.

### Learning objectives:

By the end of this lesson students will be able to:

- Describe the importance of wearing goggles and aprons in the lab.
- Outline the first aid procedures for chemicals coming into contact with skin and eyes in the lab.
- Correctly use chemical wash stations and the eye wash stations.

### Materials:

- Test tubes
- Test tube holders
- Test tube racks
- Test tube brushes
- Rubber stoppers for each test tube
- Kleenex tissue or toilet paper
- Baking Soda
- Household vinegar
- spoons/spatulas
- Pipettes
- Beakers

### Safety

1. Ensure you and your partner correctly have:
  - closed toed shoes
  - long hair tied back neatly and out of the way.
  - safety goggles, lab apron and gloves on.

**Note:** Do not remove any of these until your lab is completed, cleaned up, and you are instructed to do so by your teacher!

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2. Read all the instructions and do not pick up any lab equipment or begin until you are instructed to do so!

### Procedure:

1. Pour two droppers full of vinegar into the test tube.
2. Lie a Kleenex flat on your table and separate it out the Kleenex so that there is only one layer or ply.
3. Use a spatula or plastic spoon and place about a half of a spoon of baking soda in the middle of the Kleenex.
4. Pull up the sides of the Kleenex and twist to enclose the baking soda.
5. Place the baking soda filled Kleenex in the test tube and then seal with the rubber stopper.
6. Make sure the Kleenex filled baking soda is placed just above the vinegar (do not let it touch the vinegar).
7. Approach the “firing line” when your teacher tells you to do so.
8. Aim your test tube at the target.
9. Shake the test tube with the rubber stopper on it while aiming it at the poster or target (Do NOT begin shaking your test tube until you have it aimed at the target!)

### Post-Lab Questions:

1. Circle the three most important lab safety procedures for this lab below:
  - A. Read instructions or lab procedures first.
  - B. Put on lab safety goggles, apron, and gloves.
  - C. Clean up lab messes
  - D. No eating in the lab
  - E. Wear close toed shoes
  - F. Have hair pulled back
  - G. Make sure you know where the eye wash station is.
  - H. Make sure you waft chemicals
  - I. Keep lab organized

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

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2. Describe what had to happen for the baking soda canon to explode.

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3. List 3 things you should do if someone gets chemicals on their skin, clothing or in their eyes.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

4. What kind of gas is created when you mix the baking soda and vinegar?

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