

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:

<p>Step 1:</p>  <p>Pour two droppers full of vinegar into a test tube.</p>	<p>Step 2:</p>  <p>Lie a Kleenex flat on your table. Separate it out the Kleenex so that there is only one layer or ply.</p>	<p>Step 3:</p>  <p>Use a spatula or plastic spoon to place half a spoonful of baking soda in the middle of the Kleenex.</p>
<p>Step 4:</p>  <p>Pull up the sides of the Kleenex and twist to enclose the baking soda.</p>	<p>Step 5:</p>  <p>Place the baking soda-filled Kleenex into the test tube and seal it loosely with a rubber stopper. Make sure the Kleenex filled baking soda is placed just above the vinegar (do not let it touch the vinegar).</p>	<p>Step 6:</p>  <p>When it is your turn, aim your test tube at the target and shake the test tube with the rubber stopper on. Do NOT begin shaking your test tube until you have it aimed at the target!</p>

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Post-Lab Questions:

1. Circle the three most important lab safety procedures for this lab below:

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

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

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?
