NUEVO COLEGIO DEL PRADO

Science 8th Grade

Guía de Trabajo Semana 7, 18-22 mayo de 2020

Email: mrscience@gmail.com



1. **Attend** the video class and listen to the explanations of the teacher.
2. **Write** notes on your notebook about the lesson "Types of Chemical Reactions"
3. **Complete** the activity in class.
4. **Gather** the materials for the laboratory experience.



Project: Analyze a Chemical Reaction.

1. **Analyze** the **Laboratory Experience** Guide.
2. **Attend** the class on Friday to ask questions and review the elements of the experience and the concepts of chemical reactions.
3. You have 2 weeks to do the laboratory experience. You may **send** pictures or a video, but you have to appear on it. 😊 **Due date: May 31st 2020**





Science rocks!

NUEVO COLEGIO DEL PRADO

Res. Licencia de Funcionamiento No.305 de dic. 02 de 1994 y
Res. No. 00819 de 17 de abril de 2007.

EFQM Recognised for Excellence 3 Star - 2018

LABORATORY GUIDE No. 2
OBSERVING A CHEMICAL REACTION

Teacher: John Muñoz **Date**: .... **Grade**: 8 ...

1. KEYWORDS: reactants, products, exothermic, endothermic, scale, beaker, raisin.

2. OBJECTIVES:

- To become familiar with the observable signs of chemical reactions.
- To identify the products formed in chemical reactions

3. MATERIALS

Materials

3 Balloons
Plastic Bottle 500 mL
Transparent glass
Raisins
Thermometer (optional)
Rag (to clean)
Spoons

Reactants

Bottle of white vinegar
Medium Bag of Baking Soda
(Sodium Bicarbonate)

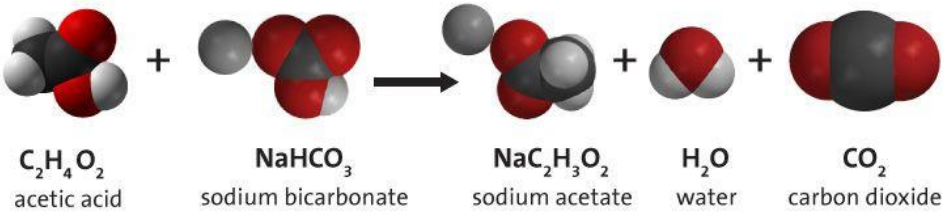







4. THEORETICAL FRAMEWORK

When the baking soda meets the vinegar, there is a chemical reaction as carbon dioxide gas is created and fills the balloon causing it to inflate. Carbon dioxide is an important gas in the earth's atmosphere. Carbon Dioxide plays a vital role in regulating the earth's temperature. Baking soda and vinegar have an acid-based reaction, which results in the gas that fills the balloon.
The reaction between baking soda and vinegar actually occurs in two steps, but the overall process can be summarized by the following word equation:



The carbon dioxide escapes the solution as bubbles. The bubbles are heavier than air, so the carbon dioxide collects at the surface of the container or overflows it.

5. METHOD

PART A – Carbon dioxide balloon.

1. Gather your materials
2. Place 3 or 4 spoons of baking soda in the funnel. You may use a funnel made of paper or something to help you put that baking soda inside the balloon.
3. Fill the balloon half way or so
4. Fill the plastic bottle with a cup of white vinegar. (Acetic acid)
5. Place the balloon opening around the mouth of the bottle
6. Hold the balloon up so the baking soda falls into the bottle
7. Observe the temperature after the reaction, is it cold? Is it hot? & grab some paper towels to clean.
8. Repeat adding more vinegar, or more baking soda. It's your choice.

PART B – Dancing raisins.

9. Fill half the glass cup with water.
10. Put some raisins in the cup.
11. Add baking soda.
12. Add some vinegar to the solution.
13. Observe what happens.
14. Clean up everything you have used and help your parents not leaving anything messy in the house.

5. QUESTIONS FOR ANALYSIS
(Optional: Answer these questions on your notebook)

1. What are the reactants and products of the reaction?
2. Why is Carbon Dioxide So Important?
3. How Do Humans Interact with Carbon Dioxide?
4. What happens when you switch up the ratios a bit?
5. What happens if you add dish soap or food coloring to the baking soda & vinegar explosion?
6. Why do the raisins dance after the reaction?
7. What do you think are the aspects that are involved in the duration of the reaction?
8. Is the reaction endothermic or exothermic? Explain.

Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life.

~ Marcus Aurelius