

Honors Chemistry Thanksgiving Break Assignment

The Importance of Everyday Chemistry

Chemistry plays a vital role in our daily lives, far beyond the walls of the classroom. This assignment is designed to help you connect what you've learned in class to real-world applications at home. By performing hands-on experiments, you will explore the significance of chemical reactions in everyday life.

Assignment Instructions

Choose Five Experiments

Select five different experiments involving chemical reactions that can be performed using materials from home.

Examples include baking soda and vinegar reactions, making a battery with a lemon, or observing the oxidation of an apple.

Variables for Each Experiment

Identify the following variables:

Independent Variable: The factor you will change.

Dependent Variable: The factor you will measure.

Constants: Factors that remain unchanged throughout the experiment.

Control: The standard for comparison in your experiment.

Conduct the Experiments

Perform the experiments safely and thoroughly.

Record your observations, including:

Physical changes (e.g., color, texture, state of matter).

Chemical changes (e.g., gas release, temperature change).

Balanced chemical equations representing the reactions.

Collect Data

Gather both qualitative data (descriptions of what you see) and quantitative data (numerical measurements like temperature or mass changes).

Represent your data visually using graphs, charts, and tables.

Document the Process

Record videos of each experiment, capturing the setup, procedure, and outcomes.

Upload the videos to YouTube and save the links for submission.

Write a Report

Compile your work into a comprehensive report that includes:

Experiment descriptions and objectives.

Identification of variables.

Detailed observations and chemical equations.

Visual data representations (graphs, charts, tables).

Links to your YouTube videos.

Submit the report on Archie! by the Monday after Thanksgiving break.

Grading Criteria

Creativity in experiment selection.

Clarity and accuracy in identifying variables.

Thoroughness of observations and data collection.

Quality and clarity of video documentation.

Organization and presentation of the final report.

Safety Note: Always follow safety guidelines when handling household chemicals.

Wear protective gear (e.g., gloves, goggles) as needed. If unsure about the safety of a procedure, consult your teacher before proceeding.

Enjoy exploring the chemistry in your world, and have fun experimenting!