



Name _____

Hour _____

Chemical Concoctions Lab

Question

Whole Group Question: How can the elements on the Periodic Table make up everything we know in the universe?

Small Group Question: What happens to the properties of substances when they chemically combine?

Knowledge Probe

A PROPERTY is a quality or characteristic that can be used to describe a substance.

What are 3 things you already know about this topic?

- *
- *
- *

Read the article The Molecule. Write the definition of the word molecule along with one other thing that helps you answer the small group question.

Definition of molecule: _____

1. _____

Prediction

A prediction is what you think the answer to the small group question is.

because_____

Investigation Plan

For this investigation, you can choose from any of the following substances:

- *rubbing alcohol
- *baking soda
- *washing soda
- *peroxide
- *lemon juice
- *dish soap
- *vinegar
- *indicator solution
- *sugar

In this activity, you will be using household substances to investigate chemical reactions and the formation of new molecules. You may use up to 20 grams of any combination of solids and up to 50 mL of any combination of liquids. You must metrically measure your ingredients. Your goal is to find the reaction that:

- *gives off the most heat (exothermic) ~ put a fire symbol in the observation box
- *gets the coldest (endothermic) ~ draw a snowman in the observation box
- *gives the biggest OOOOOOH-AAAAAAAAAAH factor ~ draw fireworks in the observation box

Choose wisely, you only have 6 chances to succeed!

Observations

Fill in the table below as you proceed through your investigation. Use one box for each reaction.

| Reactants (Ingredients before being mixed together) | | | Products (after being mixed together) |
|---|--------|--------------------------|---------------------------------------|
| Ingredient | Amount | Qualitative Observations | Qualitative Observations |
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| Reactants (Ingredients before being mixed together) | | | Products (after being mixed together) |
|---|--------|--------------------------|---------------------------------------|
| Ingredient | Amount | Qualitative Observations | Qualitative Observations |
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Explanation

Look back at the prediction you made on page 1.

*Do your observations support your prediction?

*Restate your prediction as a claim.

*Use evidence from the investigation to support your claim.

CLAIM: _____

EVIDENCE: _____
