Directions for Activity:

1. For "First Piles", make stacks of:
   - 10 pennies,
   - 6 nickels
   - 5 dimes
   - 2 quarters.
2. Complete the chart- left side
3. For "Second piles" mix all the coins together and then randomly divide them to make 4 new piles-
4. Complete the right side of worksheet.
5. Answer questions on worksheet- for question 6- answer on your notebook page (under worksheet if you need more room)

The Law of Conservation of Matter

1. What is meant by "conservation of mass?" (pg. 205 middle paragraph) The mass of the _____ equals the mass of the _____ because they are the same _____ ! They have just been rearranged into new _____.

A. Did you lose anything?

	First Piles			Second Piles	
	Number of coins	Cash Value		Number of coins	Cash Value
Pennies			Stack 1		
Nickels			Stack 2		
Dimes			Stack 3		
Quarters			Stack 4		
TOTAL			**TOTAL**		

2. Did the total value of the coins change? _____
   Did the total number of the coins change? _____
   Did rearranging the coins change any one coin's value?_____

3. Do the kinds of atoms (elements) change in a chemical reaction? _____
   Did the total number of the atoms change in a chemical reaction? _____
   Does rearranging the atoms in a reaction change any individual atom? _____

4. If this was a model for a chemical change, what does each represent:
   a. One coin _____ b.FIRST Groups of coins. _____
   c. Rearranging of coins _____ d. SECOND piles of coins. _____

5. Which are conserved? Check those NOT changed in chemical reactions.
   ☐ atoms ☐elements ☐compounds ☐molecules ☐mass

6. Explain how the model of rearranging of coins shows the conservation of matter.

How does the model or rearranging the coins show conservation of matter?

A. I agree with you and…

B. I agree with you but…

C. I disagree with you because….

Science Notebook Layout **DON'T COPY UNDERLINED TEXT**

Mrs. Aguirre's Webpage: http://www.quia.com/profiles/caguirre

Conservation of Mass

1. Mass of the baking soda	
2. 25 mL vinegar. mass	
3. total starting mass.	
4. observations.	
5. ending mass.	
6. mass difference	

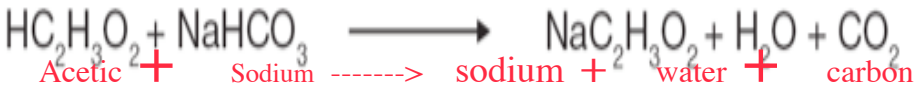
Stop and think

a. Does this experiment agree with the law of conservation of mass? Look at the data that you just recorded. Use it to help you to explain why or why not.

b. Explain why you observed a difference in mass. Where did the missing mass go? Did it really disappear?

c. Modeling the reaction

Scientists write chemical reactions like mathematical formulas. The reactions are on the left of the arrow and the products are on the right of the arrow. Look on page 203-204. Find the reactants and the products of this reaction



Acetic Acid + Sodium bicarbonate -------> sodium acetate + water + carbon dioxide

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