

## Guided Reading Chapter 14 Section 1

1. Decide whether each change is a physical change or a chemical change. Write P or C next to each example in the table.

Baking bread	
Breaking a glass	
Burning wood	
Mowing the yard	
Peeling an orange	

2. Physical and chemical changes involve \_\_\_\_\_.
3. A chemical reaction is the process of breaking molecular bonds and reforming them into a new \_\_\_\_\_.  
a) atom                      b) substance                      c) element
4. List four ways that would lead you to believe a chemical reaction had occurred.
5. What are reactants and products in a chemical reaction?
6. Complete the following table:

Symbol	Meaning
(s)	
	Substance is a liquid
(g)	
	Substance is dissolved in a solution

7. The statement, "the total mass of the products must equal the total mass of the reactants" is known as the \_\_\_\_\_.
8. What is the difference between a closed and an open system?
9. Why is it useful to write chemical equations?

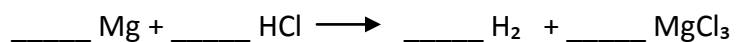
10. In a chemical equation, what does an arrow mean?

11. Draw Figure 14.7 to analyze the unbalanced chemical equation.

12. What needs to happen for the methane equation to be balanced?

13. When balancing a chemical equation you may only change the \_\_\_\_\_, not the subscript.

14. Can you balance this equation using the rules for balancing a chemical equation?



15. Can you balance this equation using the rules for balancing a chemical equation?

