



Chemical Reactions Ws #1: Chapter 7 Reading Guide

Direction: Complete each blank with a term, short phrase or a number.

A chemical change always involves a (1) of the ways in which the atoms are grouped. A chemical change is called a (2). A chemical reaction can be concisely represented by a chemical (3). The substances that undergo a chemical change are the (4) and the new substances formed in a chemical reaction are the (5). The arrow indicates the direction of the change and is read as (6) or produces.

The products contain the same (7) as the reactants but they are associated in different ways. A chemical reaction involves (8) the way atoms are grouped. In a chemical reaction, atoms are neither (9) nor (10). All atoms present in the reactants must be accounted for among the (11).

Special symbols are used to show the physical state of a substance in a reaction. The symbol for a liquid is (12); for a solid (13); and for a gas (14). A substance dissolved in water is designated (15).

A chemical equation must be balanced. In balancing an equation, (16) are placed in front of the reactants and products so that the number of each atom of each (17) are on each side of the equation. In balancing equations, it is important to remember that (18) are conserved in a chemical reaction and that the (19) of the compounds must never be changed.

1. rearrangement
2. reaction
3. equation
4. reactants
5. products
6. yields
7. atoms
8. changing
9. created
10. destroyed
11. products
12. l
13. s
14. g
15. aq
16. Coefficients
17. element
18. atoms
19. formula or identity

20. What kind of visual evidence indicates that a chemical reaction has occurred?
Color change, formation of ppt, release of a gas
21. Do all reactions produce visual evidence that they have taken place?
No, many times the evidence is not obvious (ex, neutralization rxns)
22. What are the substances indicated to the left of the arrow in a chemical equation?
reactants
23. What are the substances indicated to the right of the arrow in a chemical equation?
products
24. How are the physical states of reactants and products indicated when writing chemical equations?
Liquid (l), solid (s), gas (g) and aqueous solution (aq)
25. When balancing a chemical equation, can you change the coefficients or the subscripts?
Coefficients

