SNC1D **CHEMICAL EQUATIONS**

## A. Chemical Equations

A chemical equation is a shorthand way to describe a chemical reaction. Chemical equations expressed in words are called _____ _____.

magnesium + oxygen --------> _____ _____

- the arrow indicates the _____ of the reaction and is read "_____" or "_____"
- the substance(s) on the left side of the arrow are the _____ (eg. magnesium and oxygen) in the reaction
- the substance(s) on the right side of the arrow are the _____ (eg. _____ _____) in the reaction

## B. Naming Compounds: The "ide" and "ate" Rule

(1) "ide" Rule
The "ide" ending is generally used when a compound is made of _____ elements. The name of the _____ element (right side of periodic table) assumes the "ide" ending (Note: elements on the left side of the periodic table are metals).

copper + sulphur ---------> _____ _____

mercury + oxygen --------> _____ _____

(2) "ate" Rule
The "ate" ending is generally used when a compound contains _____ two elements and one of the elements is _____.

iron + sulphur + oxygen ---------> _____ _____

## C. Word Equations Worksheet

For the following word equations (note the direction of the arrow):

i) fill in the blanks
ii) circle the reactants
iii) box the products

1. potassium + oxygen ------> _____ _____

2. sodium + chlorine -----> _____ _____

3. potassium + sulphur + oxygen ----------> _____ _____

4. _____ + oxygen ---------> iron oxide

5. sulphur + _____ --------> sulphur dioxide

6. magnesium + _____ <-------- _____ oxide

7. calcium + chlorine ----------> _____ _____

8. _____ + _____ ---------> nickel oxide

9. iron + nitrogen + _____ ----------> _____ nitrate

10. lead + _____ <---------- _____ oxide

11. copper + _____ + oxygen ------> _____ sulphate

<u>In some chemical reactions, compounds “switch partners”.</u>

ie. potassium nitrate + lead iodide --------> potassium iodide + lead nitrate

12. sodium bromide + silver nitrate -----> sodium _____ + silver _____

13. sodium hydroxide + potassium chloride -----> sodium _____ + potassium _____

14. ammonium _____ + _____ chloride <---- ammonium chloride + iron sulphate