

Name: \_\_\_\_\_

Blk: \_\_\_\_\_ Date: \_\_\_\_\_

Chemistry 12  
Solubility Lesson #1  
**A Review of SOLUBILITY**

**THE SOLUBILITY OF SALTS:**

A salt is defined as an \_\_\_\_\_ compound which can not be classified as an ARRHENIUS \_\_\_\_\_ (compounds that begin with "\_\_\_\_") or an ARRHENIUS \_\_\_\_\_ (compounds that end with "\_\_\_\_").

An IONIC compound is one that is made up of a \_\_\_\_\_ and a \_\_\_\_\_, whereas a MOLECULAR compound is one that is made up of \_\_\_\_\_.

**GENERAL RULES FOR DISTINGUISHING BETWEEN AN IONIC AND MOLECULAR COMPOUND:**

1. "IONIC" – a. metal + non-metal Ex.  
b. polyatomic metal + non-metal  
c. metal + polyatomic non – metal  
d. polyatomic metal + polyatomic non-metal
2. "MOLECULAR" - a. non-metal + non-metal Ex.  
b. ORGANIC compounds
3. An ionic compound will undergo 100 % DISSOCIATION when placed in water, whereas a molecular compound will not.

**IONIC:**

**MOLECULAR:**

4. Ionic compounds are therefore classified as \_\_\_\_\_ (as they can conduct an electric current. While molecular compounds are classified as \_\_\_\_\_ (as they DO NOT conduct an electric current).

**THE FOLLOWING ARE A LIST OF IMPORTANT TERMS USED IN THIS UNIT:**

**SOLUBILITY** is defined as \_\_\_\_\_  
\_\_\_\_\_.

**SATURATED SOLUTION** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

**MOLAR SOLUBILITY** is used to express the solubility of a substance in terms of \_\_\_\_\_.

**SOLUBILITY** can also be expressed in the terms of \_\_\_\_\_.

IN ORDER FOR A SOLUTION TO BE CONSIDERED **SATURATED**:

1.

2.

A Saturated solution is expressed as an **EQUILIBRIUM** between the undissolved solid and its component ions:

You can break down the above **EQUILIBRIUM EQUATION** to show the two individual reactions:

1. THE FORWARD REACTION (THE DISSOLVING REACTION)

2. THE REVERSE REACTION (THE CRYSTALLIZATION REACTION)

**SEATWORK/HOMEWORK:** Exercises 1 – 7 pgs 74 + 76 in HEBDEN  
**PLO's : G1- G4 + G6**