

Name: Key  
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Chemistry 11  
Solution Chemistry Intro Lesson

Please read pgs. 283 – 288 in your Chemistry 11 text before attempting to fill in this worksheet.

1. **Define** the following terms in your own words and give an example for each:

- a. solution - a homogenous mixture  
(ex: salt crystals mixed in water)
- b. solvent - in a solution, the substance that does the dissolving (ex: water)
- c. solute - in a solution, the substance that is dissolved. (ex: salt)
- d. aqueous solution - a solution in which water is the solvent.  
(ex: salt + water)
- e. miscible - when two substances (liquids) mix completely  
(ex: Soap<sup>(liquid)</sup> + water)
- f. immiscible - when two substances (liquids) do not mix  
(ex: oil and water)
- g. alloys - a solid ~~mixture~~ mixture of metals  
(ex: gold jewelry.)
- h. solubility - the amount of solute that will dissolve in a given quantity of solvent.  
(ex: 36g NaCl / 100mL H<sub>2</sub>O)
- i. saturated solution - when a solution will no longer dissolve any more solute.  
(ex: hot chocolate sachets)
- j. unsaturated solution - when a solution can still dissolve more solute.  
(ex: black coffee)  
vs  
sugar coffee

2. Read pgs 90 - 91 and describe what makes a molecule "polar" and explain why they are sometimes called "dipolar".

POLAR molecules have one end that is negative and another end that is positive. They are sometimes called dipole because they have a negative pole and a positive pole.

Read pg 292 - 293 and answer the following questions:

3. What is a dipole? Give an example in your answer.

A dipole occurs when two opposite charges are separated by a short distance.



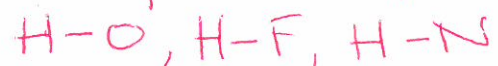
4. Explain and give an example of a "dipole-dipole attraction".

The attraction btwn opposite charges on TWO DIFFERENT POLAR molecules. (INTER-MOLECULAR) BETWEEN "



5. Explain and give an example of a "hydrogen bond"

A special dipole-dipole attraction btwn



6. Explain and give an example of an "ion-dipole attraction"

Attractive forces between an ION and a POLAR molecule

