

Unit 8

NAME

Class Work

3/19/14

8.2 Factors Affecting Solubility

SPARK (take out 8.1)

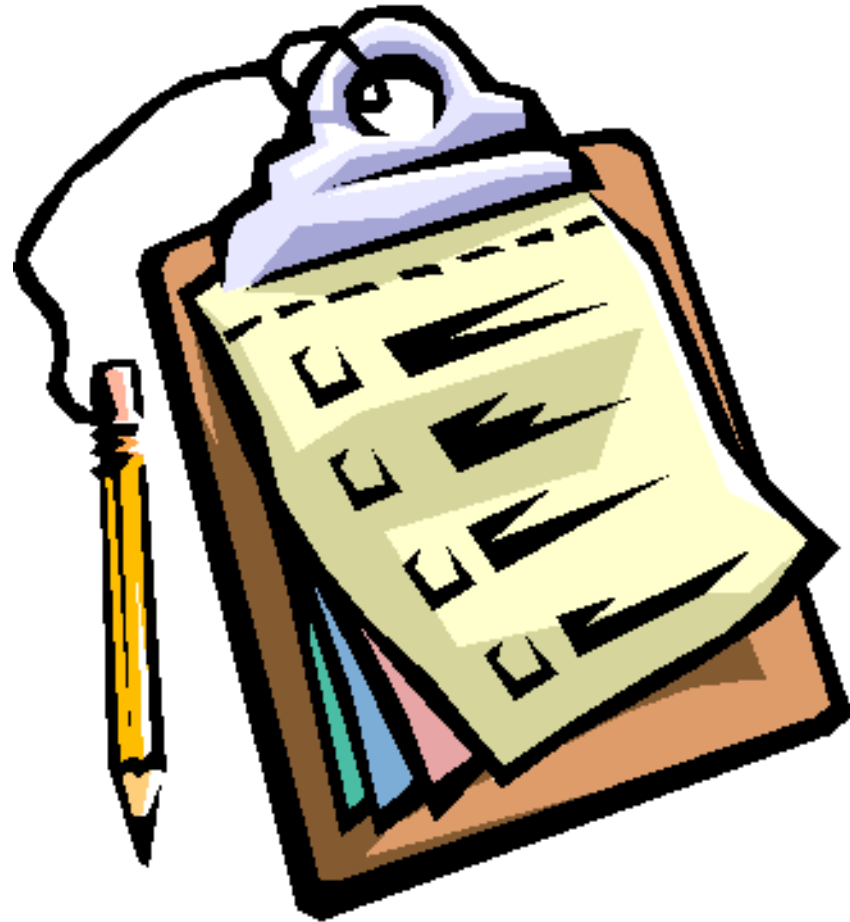
1. List the factors that affect the rate of a reaction.
2. What are the two parts of a solution?

Objective

SWBAT identify and investigate factors affecting solubility

Agenda:

- SPARK/Objective
- Notes
- Practice
- Homework



Objective: SWBAT identify and investigate factors affecting solubility

Review- Solutions

Checklist:

- Homogeneous mixtures
- Clear and do not disperse light
- Can have color
- Do not settle on standing
- Pass through a filter

Objective: SWBAT identify and investigate factors affecting solubility

Notes

- Solubility^{**}: how easily something dissolves
- Soluble^{**} – Something that has high solubility. E.g. Salt is soluble in water.
- Insoluble^{**} – Low solubility. E.g. plastic and water.

Objective: SWBAT identify and investigate factors affecting solubility

Factors Affecting Solubility

Factor	Effect	Exceptions
Temperature	Increase the temperature more soluble	GASES
Pressure	Does nothing	GASES Increase pressure of a gas that's in a liquid, you increase solubility
Polarity	Causes attraction btwn molecules of solute and solvent LIKE DISSOLVES LIKE	

Objective: SWBAT identify and investigate factors affecting solubility

Types of Solvents!

Polar Solvents

- Water, H_2O
- Ethanol, $\text{CH}_3\text{CH}_2\text{OH}$
- Acetone, $\text{C}_3\text{H}_6\text{O}$

Nonpolar solvents

- Hexane, C_6H_{14}
- Benzene, C_6H_6
- Toluene, C_7H_8

Objective: SWBAT identify and investigate factors affecting solubility

Draw an image to represent the second bullet point below:

- Greases, which are nonpolar, won't easily wash off our hands in water, which is polar.
- Soaps have one end that is polar, which allows the soap to dissolve in water. The other end of the soap is nonpolar, and grease will dissolve in it.



Objective: SWBAT identify and investigate factors affecting solubility

Fill in the chart below:

Solute Type	Nonpolar solvent	Polar Solvent
	Soluble	
Polar		
		soluble

Objective: SWBAT identify and investigate factors affecting solubility

Check your work!

Solute Type	Nonpolar solvent	Polar Solvent
Nonpolar	Soluble	insoluble
Polar	insoluble	soluble
Ionic	insoluble	soluble

Objective: SWBAT identify and investigate factors affecting solubility

Classwork

- Complete your 8.2 classwork!

Objective: SWBAT identify and investigate factors affecting solubility

Lab #19

- How do we write a hypothesis?
- What is the independent variable?
- What is the dependent variable?
- What should our graph look like?
- What should be included in the conclusion?

Objective: SWBAT identify and investigate factors affecting solubility

HOMEWORK

Finish 8.2 Classwork

Complete the 8.2 HW sheet

Lab #19

Objective: SWBAT identify and investigate factors affecting solubility