

Name: _____

Date: _____

Notes: Types of Solutions

What can water dissolve well? _____

Why is water a good solvent? _____

What about water never changes? _____

What happens to a substance when it dissolves? _____

Describe the key characteristic of each type of solution below:

Saturated solution: _____

Unsaturated solution: _____

Supersaturated solution: _____

Describe how to supersaturate a solution? _____

What is a **seed crystal**? _____

1. If 30 grams of NaCl were dissolved in 100 grams of water at 20°C, which of these terms would best describe the solution?

A saturated

B unsaturated

C supersaturated

2. If 150 grams of NaClO₃ were dissolved in 100 grams of water at 50°C, which of these terms would best describe the solution?

A saturated

B unsaturated

C supersaturated

3. If 40 grams of NaCl were dissolved in 100 grams of water at 105°C, which of these terms would best describe the solution?

A saturated

B unsaturated

C supersaturated

Define **conductivity**: _____

Does water conduct electricity very well? _____

Define **electrolyte**: _____

Why is water so dangerous around electricity? _____

What two things make a compound an electrolyte?

1. _____

2. _____

What must happen to these compounds before they will be able to conduct electricity?

Steps to determining if a substance is an electrolyte:

Step 1: Determine if the substance is ionic or covalent.

If it is covalent, it is NOT an electrolyte. If it is ionic, continue to step 2.

Step 2: Determine if the ionic compound is soluble.

If the compound is insoluble, it is NOT an electrolyte.

IF THE COMPOUND IS SOLUBLE AND IONIC, THEN IT IS AN ELECTROLYTE.

Is CuSO_4 an electrolyte? Explain. _____

Is $\text{C}_{12}\text{H}_{22}\text{O}_{11}$ an electrolyte? Explain. _____

Is CaCO_3 an electrolyte? Explain. _____

Why doesn't water conduct electricity very well? _____

Mark each electrolyte with an E, mark each nonelectrolyte with an X.

CO _____	PbI_2 _____	Na_2CO_3 _____	$\text{Pb}(\text{NO}_3)_2$ _____
$\text{AgC}_2\text{H}_3\text{O}_2$ _____	AgCl _____	SiCl_4 _____	Li_2CrO_4 _____
SiS_2 _____	PBr_3 _____	CaBr_2 _____	NaNO_3 _____

