

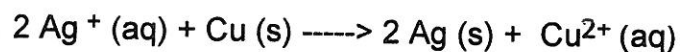
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Chemistry 12  
Electrochemistry Lesson #1 Read pages 189-192 and fill in the following

Electrochemistry is \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Copy the illustration of the ELECTROCHEMICAL CELL pg 189, which is a system that \_\_\_\_\_

Equation:



The above reaction involves the loss and gain of electrons. The reaction has been split so that the  $\text{Ag}^+$  is reacting in the left half of the electrochemical cell, while the copper is reacting in the right.

Each half is called a \_\_\_\_\_ and the reaction that occurs in a half-cell is called a \_\_\_\_\_ or a HALF- REACTION

IMPT: if the \_\_\_\_\_ is removed the reaction STOPS IMMEDIATELY!!!

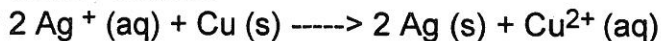
**OXIDATION**- the half reaction in which a \_\_\_\_\_

**REDUCTION**- the half reaction in which a \_\_\_\_\_

Copy out the memory aid "LEO the Lion says GER"

For every reduction reaction there must be a corresponding oxidation reaction, therefore it is called a \_\_\_\_\_ reaction or a \_\_\_\_\_ reaction.

In the reaction:



$\text{Ag}^+$  is said to be the \_\_\_\_\_ that causes Cu to become oxidized  
 $\text{Ag}^+$  = oxidizing agent

Cu is said to be the \_\_\_\_\_ that causes  $\text{Ag}^+$  to become reduced  
Cu = reducing agent

IN OTHER WORDS

The oxidizing agent is \_\_\_\_\_

The reducing agent is \_\_\_\_\_

**How to tell which species is being oxidized or reduced?**

OXIDIZATION = loss of electrons OR becoming more \_\_\_\_\_.

List examples:

Which situation gave rise to the use of the term "Oxidation"?

REDUCTION = gain of electrons OR becoming more \_\_\_\_\_

List examples:

**Example 1:** In the equation  $\text{Zn}^{2+} + \text{Mg} \rightarrow \text{Zn} + \text{Mg}^{2+}$   
write out the two half-reactions:

What is happening to Mg? losing electrons = \_\_\_\_\_

What is happening to  $\text{Zn}^{2+}$  gaining electrons = \_\_\_\_\_

Mg is the reducing agent, while  $\text{Zn}^{2+}$  is the oxidizing agent.

**HOMEWORK: exercises 1 + 2 pg 192**

**PLO: S1**