Name:_____
Blk:_____Date:_____

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:

$$2\ Ag^{+}\ (aq) + Cu\ (s) \text{-----> } 2\ Ag\ (s) + Cu^{2+}\ (aq)$$

The above reaction involves the loss and gain of electrons. The reaction has been split so that the 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 IMEDIATELY!!!

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:
$2\ Ag^{+}\ (aq) + Cu\ (s) \text{-----> } 2\ Ag\ (s) + Cu^{2+}\ (aq)$

Ag^{+} is said to be the _____ that causes Cu to become oxidized
Ag^{+} = oxidizing agent

Cu is said to be the _____ that causes 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 $Zn^{2+} + Mg \text{ ---> } Zn + Mg^{2+}$
write out the two half-reactions:

What is happening to Mg? losing electrons = _____
What is happening to Zn^{2+} gaining electrons = _____

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

HOMEWORK: exercises 1 + 2 pg 192 **PLO: S1**