

Redox and Electrochemistry

1. **Oxidation** is the **loss of electrons** by an atom or ion. The oxidation number *increases* as a result. The electrons are on the *right side* of the reaction arrow.



2. **Reduction** is the **gain of electrons** by an atom or ion. The oxidation number *decreases* (is reduced!) as a result. The electrons are on the *left side* of the reaction arrow.

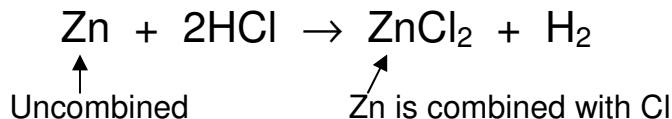


3. Redox reactions **always** involve the exchange of **electrons**.

4. Remember.... "LEO says GER!"

Lose	Gain
Electrons	Electrons
Oxidation	Reduction

5. **Identify redox reactions** by seeking an uncombined element on one side of a reaction that is in a compound on the other side.



6. **Oxidizing agents** are what *get reduced* in a redox reaction.
Reducing agents are what *get oxidized* in a redox reaction.

7. **Electrochemical cells** produce electricity with a *spontaneous* redox reaction.

8. The *left electrode* is usually the site of *oxidation* in an electrochemical cell diagram.

9. Memorize this saying... "I have **AN OX** and a **RED CAT**."

In electrochemical cells, the **AN**ode gets **OX**idized and **RED**uction occurs at the **CAT**hode.

10. **Electrolytic cells** use an applied electrical current to force a nonspontaneous redox reaction to take place.

11. Electrolytic cells are usually used for metal plating of objects.

USE THE REFERENCE TABLES!!!