Unit 11 NAME

Class Work 5/16/14

11.3 Oxidizing and Reducing Agents

SPARK (take out your 11.2 worksheet to be check!)

1. Complete your SPARK on your guided notes

Objective

SWBAT identify oxidizing agents and reducing agents in a redox reaction.

SPARK

- 2. Which equation represents an oxidation-reduction reaction?

a. $H^+ + OH^- \rightarrow H_2O$

b. $^{238}_{92}U \rightarrow {}^{234}_{90}Th + {}^{4}_{2}He$

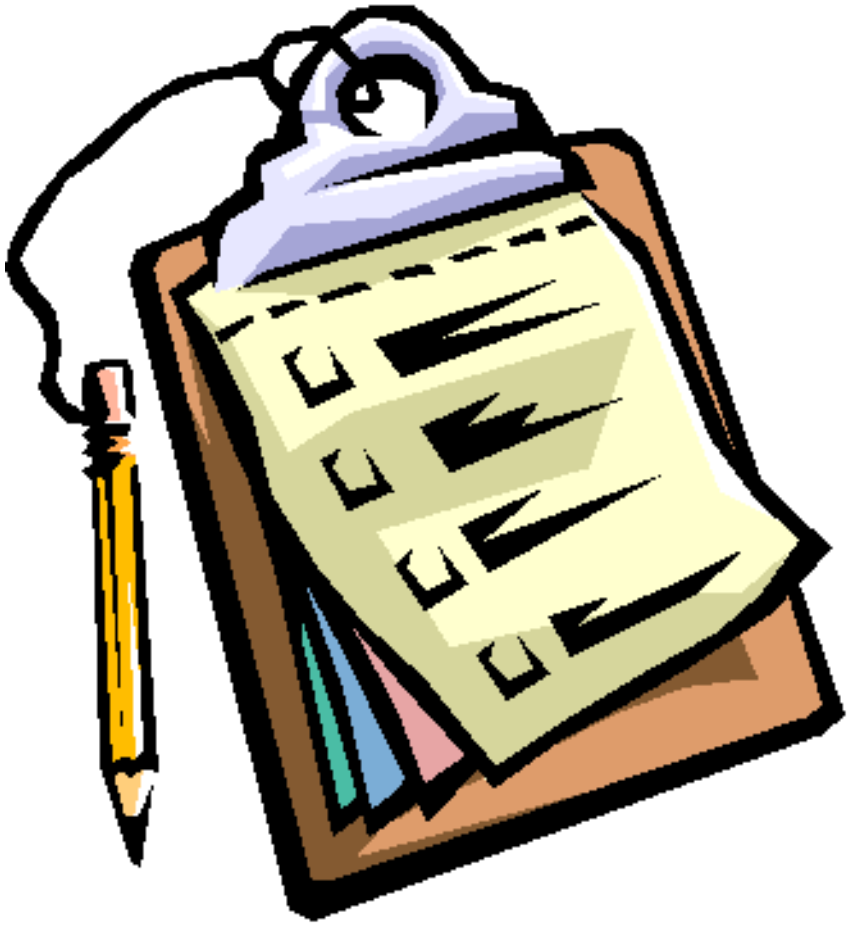
c. $Zn + Sn^{4+} \rightarrow Zn^{2+} + Sn^{2+}$

d. $3AgNO_3 + Li_3PO_4 \rightarrow Ag_3PO_4 + 3LiNO_3$

Objective: SWBAT identify oxidizing agent and reducing agent.

Agenda:

- SPARK/Objective
- Review
- Notes
- Practice
- Homework



Objective: SWBAT identify oxidizing agent and reducing agent.

REVIEW – Show me your fingers!

Example 1: If an atom **gains electrons**, is it:

(1) more positive

(2) more negative

Objective: SWBAT identify oxidizing agent and reducing agent.

REVIEW – Show me your fingers!

Example 2: If an atom **gains electrons**, is it:

(1) transmuted

(2) oxidized

(3) reduced

(4) decayed

Objective: SWBAT identify oxidizing agent and reducing agent.

Review

Redox reaction: Reaction in which both **REDUCTION** (gain of electrons) and **OXIDATION** (loss of electrons) occurs.

Objective: SWBAT identify oxidizing agent and reducing agent.

Review

LEO the Lion goes **GER**

Loss of **E**lectrons is **Oxidation**

Gain of **E**lectrons is **Reduction**

<u>Recognizing redox reactions</u>

1. Assign oxidation numbers to each atom
2. If both reduction and oxidation occurs, it is a redox reaction

Objective: SWBAT identify oxidizing agent and reducing agent.

REVIEW EXAMPLE

$Cu^{2+} + Zn \rightarrow Cu + Zn^{2+}$

	Reactant Side	Product Side
Element	Ox. State	Ox. State

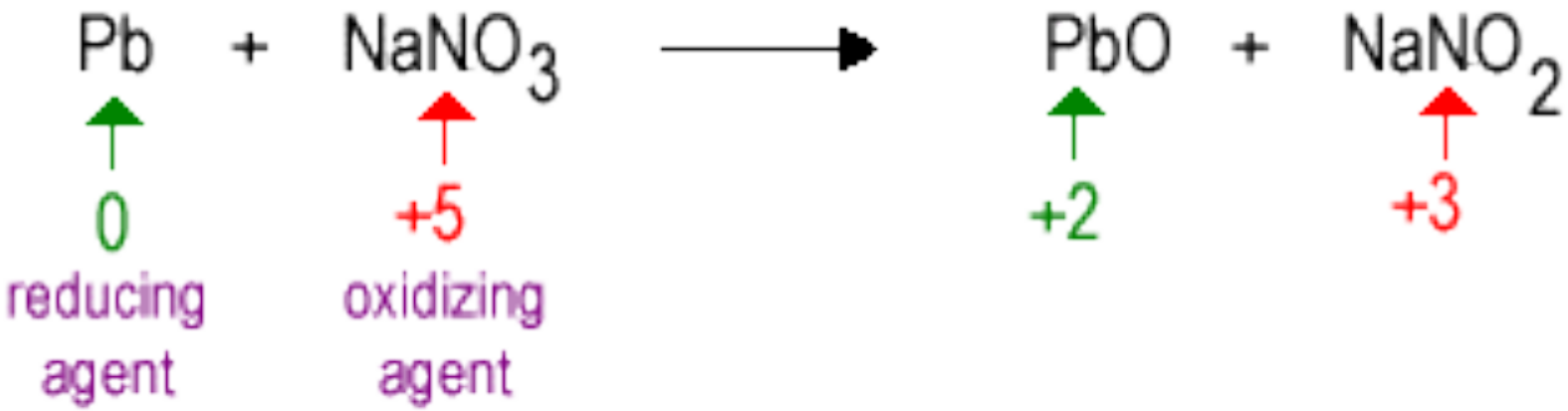
The Cu^{2+} is reduced (ox. # decreased).
The Zn is oxidized (ox. # increased).

Objective: SWBAT identify oxidizing agent and reducing agent.

Oxidizing and Reducing "Agents"

- Agents are ALWAYS reactants

Reducing Agent	**OXIDIZED**
Oxidizing Agent	**REDUCED**



Objective: SWBAT identify oxidizing agent and reducing agent.

CHECK YOURSELF

- In review example what was being reduced?

_____.

This is the oxidizing agent!

Objective: SWBAT identify oxidizing agent and reducing agent.

Way to Remember

- Given these three words

Ox. Red. Agent

- If the substance is Oxidized it is the Red. Agent.

Or

- If the substance is Reduced it is the Ox. Agent.

Objective: SWBAT identify oxidizing agent and reducing agent.

Think-Write-Pair-Share

- **Quick check:** Does the reducing agent gain or lose electrons? How do you know?

Objective: SWBAT identify oxidizing agent and reducing agent.

PRACTICE

- Document camera!

Objective: SWBAT identify oxidizing agent and reducing agent.

INDEPENDENT PRACTICE

- Working on this on your own.
- Remember our Regents Question techniques!
- Raise your hands if you have a question!

Objective: SWBAT identify oxidizing agent and reducing agent.

Exit Ticket

- 3 minutes
- Independent
- You may use your notes!

Objective: SWBAT identify oxidizing agent and reducing agent.

HOMEWORK

Finish the rest of the 11.3 Practice!

Objective: SWBAT identify oxidizing agent and reducing agent.