

**LESSON**  
**110****CLASSWORK**

# Electron Cravings

## Oxidation-Reduction

Name \_\_\_\_\_

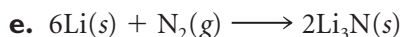
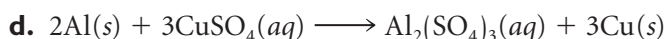
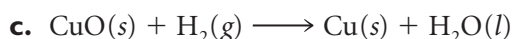
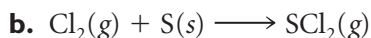
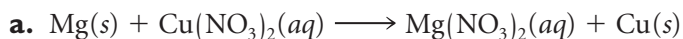
Date \_\_\_\_\_ Period \_\_\_\_\_

**Purpose**

To investigate the transfer of electrons in oxidation reactions and to learn about reduction reactions.

**Questions**

1. In these equations, figure out which atom loses electrons and which atom gains electrons. Use net ionic equations when possible.



2. Imagine that solid zinc, Zn, is added to hydrochloric acid, HCl, resulting in zinc chloride, ZnCl<sub>2</sub>, and hydrogen gas, H<sub>2</sub>.

a. Write the balanced chemical equation for this reaction.

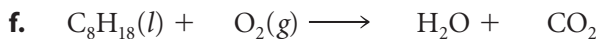
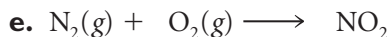
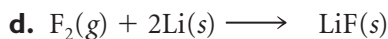
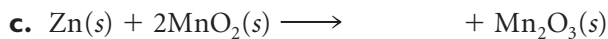
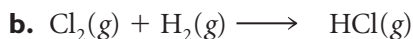
b. Write the ionic equation and the net ionic equation for this reaction.

c. What is being oxidized? How do you know?

d. What is being reduced? How do you know?

Oxidized	
a.	
b.	
c.	
d.	
e.	
f.	

3. Balance these equations. You might need to add another product. Record the atom that is oxidized in the table.



4. Mercury (II) oxide,  $\text{HgO}$ , is decomposed to mercury metal and oxygen gas.

a. Write the balanced equation for this reaction.

b. Which atom is reduced?

c. Which atom is oxidized?

5. **Making Sense** Explain how to determine which atom gains electrons in a reaction.

6. **If You Finish Early** Double exchange reactions usually are not oxidation-reduction reactions. Use the reaction between sodium hydroxide and ammonium chloride to show this.

