

Name: _____

Electrochemical Cells - Voltaic Cell Simulation

Unit 11 - Topic 4

Model 1: The Zn/Cu Cell

Go to our class web site and then to the Digital Content tab. Scroll down to Unit 11 where you'll find a button *Voltaic Cell Model (Simulation)*. Tap/click on it and allow the simulation to load completely. Please use headphones if listening to the tutorial section in the classroom.

Look carefully at the working model; explore each of the buttons at the bottom of the cell to see a 'close-up view' of each electrode and the salt bridge opening in each beaker. Answer the following questions about the model shown on the web site.

Key Questions

1. In the model shown on the web site, which label (anode or cathode) is attached to the zinc metal and to the copper metal?
2. Which way do electrons flow through the wire? From the anode to the cathode or from the cathode to the anode?
3. What is happening to the zinc atoms in the zinc half-cell? Zinc ions?
4. What is happening to the copper atoms in the copper half-cell? Copper ions?
5. Is the reaction occurring at the anode oxidation or reduction?
6. Is the reaction at the cathode oxidation or reduction?
7. Which ions move through the salt bridge?
8. Why do you think positive ions move through the salt bridge from the anode compartment to the cathode compartment?
9. Why do you think negative ions move through the salt bridge from the cathode compartment to the anode compartment?