

Unit
11
Lesson
5

AIM

- What are electrochemical cells?

AGENDA

- Electrochemical cell reading/questions
- Table J Practice
- U11L5 video

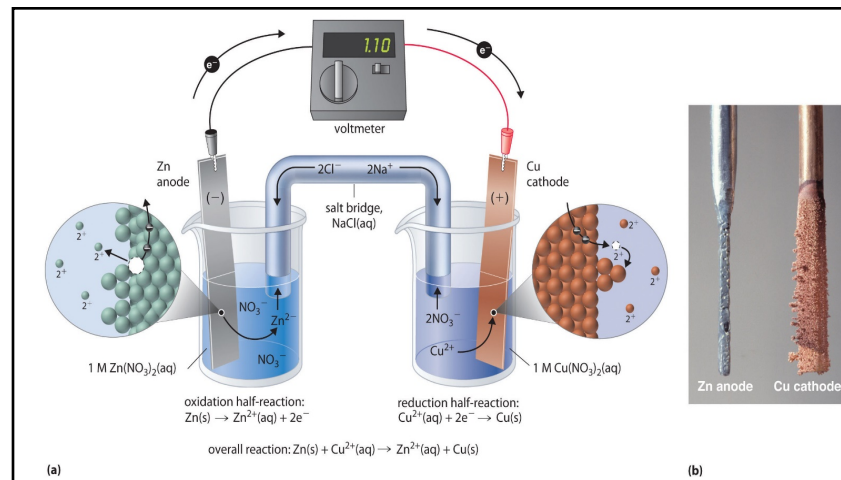
YOYO

- Pull up the U11L5 (unit 11 lesson 5) video on YouTube

HOMEWORK

- Nothing tonight
- Follow the calendar

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Table J
Activity Series**

Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
	Ba		
	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
Least Active	Au		Least Active

**Activity Series is based on the hydrogen standard. H₂ is not a metal.

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Comprehension Questions

- What is a voltaic cell?
- What is an electrolytic cell?

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Comprehension Questions

- Which electrochemical cell is spontaneous? Which electrochemical cell is non-spontaneous?
- What happens when something is oxidized? What happens when something is reduced?

5

Comprehension Questions

- What occurs at the anode? What occurs at the cathode?
- What is the function of the salt bridge?

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Comprehension Questions

- Which way do the electrons travel to?
- How can Table J be used to determine the anode and cathode?

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Using Table J Questions

- Cu & Zn
 - _____ is the anode and is being _____ because electrons are _____.
 - _____ is the cathode and is being _____ because electrons are _____.

**Table J
Activity Series****

Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
	Ba		
	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Pb & Zn

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

Table J Activity Series**			
Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
	Ba		
	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Ba & Li

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

Table J Activity Series**			
Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
	Ba		
	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Au & Pb

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

Table J Activity Series**			
Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
	Ba		
	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Mn & Zn

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

Table J Activity Series**			
Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
	Ba		
	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Fe & Zn

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

Table J Activity Series**			
Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
	Ba		
	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Co & Ca

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

Table J Activity Series**			
Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
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	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Co & Ni

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

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Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
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	Sr		
	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Cu & Mg

- _____ is the anode and is being _____ because electrons are _____.
- _____ is the cathode and is being _____ because electrons are _____.

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	Li	F ₂	
	Rb	Cl ₂	
	K	Br ₂	
	Cs	I ₂	
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	Ca		
	Na		
	Mg		
	Al		
	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
	Au		
Least Active			Least Active

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Using Table J Questions

• Zn & Al

• _____ is the anode and is being
_____ because electrons are
_____.

• _____ is the cathode and is being
_____ because electrons are
_____.

**Table J
Activity Series****

Most Active	Metals	Nonmetals	Most Active
	Li	F ₂	
	Rb	Cl ₂	
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	Cs	I ₂	
	Ba		
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	Ti		
	Mn		
	Zn		
	Cr		
	Fe		
	Co		
	Ni		
	Sn		
	Pb		
	H ₂		
	Cu		
	Ag		
Least Active	Au		Least Active

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