

PENANG SANGAM HIGH SCHOOL

P.O.BOX 44, RAKIRAKI

LESSON NOTES

WEEK 8

Year/Level: 13A/B

Subject: Chemistry

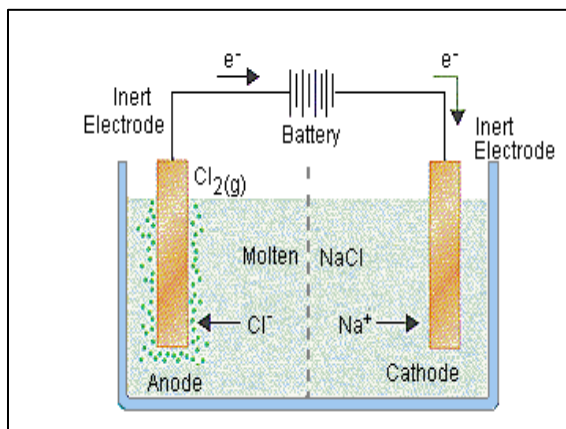
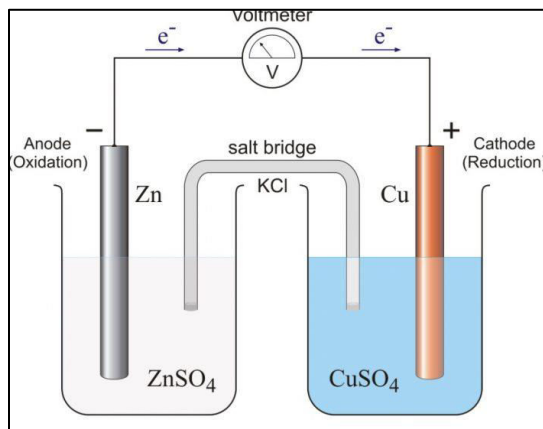
<b>Strand 3</b>	<b>Reactions</b>
<b>Sub Strand 3.1</b>	<b>Electrochemistry</b>
<b>Content Learning Outcome</b>	By the end of this lesson students should be able: •Distinguish between galvanic and electrolytic cell

The following table discusses the difference between two types of electrochemical cells:

Galvanic Cells	Electrolytic Cells
<b>Spontaneous</b> redox reactions convert the chemical energy to an electric energy	<b>Non-spontaneous</b> redox reactions convert the electric energy to a chemical energy
Electric energy is <b>generated</b> by redox reactions	Electric energy brings about the chemical reaction <b>with the help of an external source</b> (dry cells)
The <b>cathode</b> is the positive electrode and anode is the negative electrode	The <b>anode</b> is the positive electrode and cathode is the negative electrode
The process of oxidation takes place at the <b>anode</b> and the reduction process occurs at the <b>cathode</b> (this is a similarity)	<b>Here, the oxidation process occurs at the anode while the reduction process takes place at the cathode</b>
Half cells are set up in <b>different containers</b> and are connected through <b>salt bridges</b>	Electrodes are kept in the <b>same container</b> in a molten or solution electrolyte
Application lies in Batteries	Application lies in purifying copper and electroplating materials.

Components Of An Galvanic Cell

Components Of An Electrolytic Cell



### Exercise 1

- The resistance of the conductor in the electrolytic cell \_\_\_\_\_ with an increase in temperature.  
A. Increase   B. Decrease   C. Slightly increase   D. Do not change
- The process of decomposition of an electrolyte by passing electric current through its solution is called as \_\_\_\_\_.  
A. Electrolyte   B. Electrode   C. Electrolysis   D. Electrochemical cell
- Differentiate between galvanic and electrolytic set up in terms of energy.

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Note: all vocabularies can be found at the back of Year 13 Chemistry textbook.

**The End**