



## WORKSHEET 19

School: Ba Sangam College

Year/level: 10

Subject: Basic Science

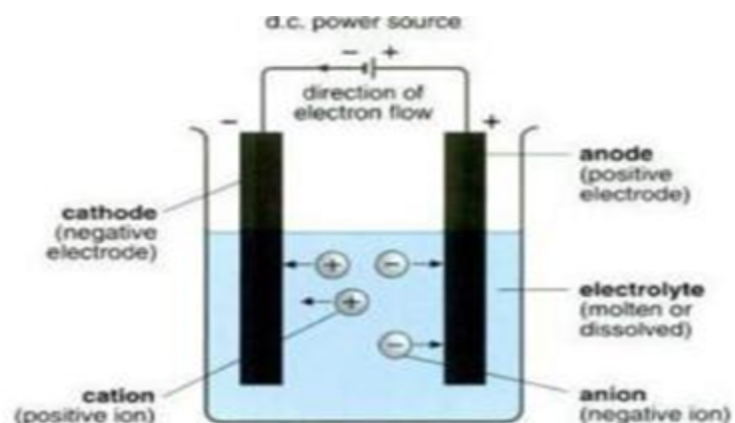
NAME: \_\_\_\_\_

Strand 2	Matter
Sub Strand 2.2	Materials
Content Learning Outcome	Investigate the different types of chemical reactions and discuss the factors that affect the rates of reactions.

### Lesson Notes –Types of Reactions

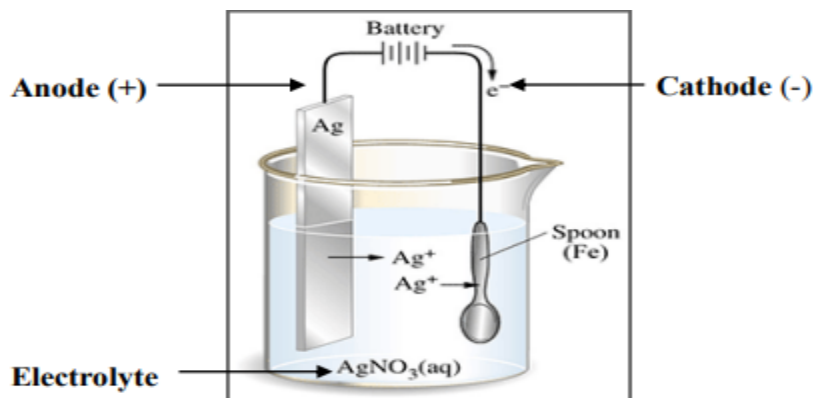
#### Electrolysis – Electroplating

- Electrolysis is the decomposition of compound using electricity.



**Electrolyte** – is the compound which conducts electric current in molten or when dissolved in water (aqueous solution).

- ❖ **Electrode** – is a rod or plate where electric current enters or leaves electrolyte during electrolysis. Reaction occurs at electrodes.
  - ❖ **Anode** – is the **positive electrode**; **anion** – is **negative ion** (attracted to anode)
  - ❖ **Cathode** – is the **negative electrode**; **cation** – is **positive ion** (attracted to cathode)
- **Electroplating** - the process of coating a metal object with a thin layer of another metal by means of electrolysis. Example, chromium, zinc, nickel, gold over cheap metal like iron, copper, brass using electrolysis process.



The liquid electrolyte always contains a compound of the metal to be plated e.g. silver nitrate ( $\text{AgNO}_3$ ). The plating metal (anode) gradually dissolves and eventually gets deposited on the object to be plated (cathode).

### Uses of electroplating

- ✓ Surface protection (prevent the metal from rusting) e.g. nickels plating of iron to prevent corrosion.
- ✓ Makes the article attractive e.g., electroplating of silver or gold on brass etc.
- ✓ Repair of finer machine parts

### Exercise

1. What is electrolysis? (1 mark)

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2a. Define electroplating: (1 mark)

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b. State 2 uses of electroplating. (2 marks)

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3. Differentiate between anode and cathode. (2 marks)

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TOTAL: \_\_\_\_/6