

Sets (s): Triple LP4 2019-20

YEAR 11

SUBJECT Chemistry

Knowledge Focus: extracting metals, reversible reactions.



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High School

This half term : Skills, Knowledge and Understanding to be developed:

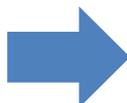
- Extracting metals.
- Reversible reactions and industrial processes.

Key Terms to be learned this half term:

Extraction, ore, displacement, reactivity, oxidation, reduction, ionic equation, electrolysis, electrolyte, electrode, anode, cathode, oxidation, reduction.

Week 1 and 2 Learning Objectives etc:

- the electrolysis of water (including electrode equations)
- Candidates should know that hydrogen gas is collected at the cathode while oxygen gas is collected at the anode and be able to explain why the volume of hydrogen formed is twice that of oxygen.
- Write a balanced equation to show the reaction taking place at the cathode
- **HT should be able to balance the equation (atoms and charges) for the reaction taking place at the anode. You don't need to remember this equation.**
 $2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$
- $2\text{OH}^- \rightarrow \text{O}_2 + 2\text{H}^+ + 4\text{e}^-$



Objective assessments:

Specified practical displacement to find the reactivity series.
Specified practical electrolysis

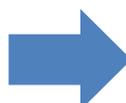
App extracting metals

Homework: Practical

Revision for App - Electrolysis of water

Week 3 and 4 Learning Objectives etc

Explain what is meant by a reversible reaction.
Production of ammonia and sulfuric acid. Be able to interpret data on the best conditions to use for ammonia production. The effect of temperature and pressure on the yield.
Explain why the temperature must not be too low for the production of ammonia even though that would give a better yield.
Conditions used for ammonia and sulfuric acid production.



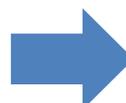
Objective assessments: Electrolysis questions and practical

Question booklet.

Homework:

Data interpretation sheet on conditions of ammonia production.

Week 5 and 6 Learning Objectives etc: Industrial processes and reversible reactions



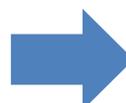
Objective assessments:

Question booklet.

Homework:

Revision and complete any work not yet done

Week 7 Learning Objectives etc: Revision of oil topic from y10.



Revision sheets

Homework: Past paper questions.