



INTERNATIONAL SCHOOL OF SOUTH AFRICA
AS & A LEVEL CHEMISTRY – YEARLY OVERVIEWS

Rationale

The key concepts on which the syllabus is built are outlined below.

- **Atoms and forces**
 - **Experiments and evidence**
 - **Patterns in chemical behaviour and reactions**
 - **Chemical bonds**
 - **Energy changes**
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- It is important that students do not regard the different topics as being totally self-contained and unconnected or studied in complete isolation from one another.
 - The key concepts in chemistry will allow teachers to join together parts of the syllabus that have common ideas, particularly in terms of the skills of handling, applying and evaluating information.
 - By keeping the key concepts to the fore, teachers can strongly encourage learners to regard the subject as a set of interconnected themes.
 - Practical work is an essential part of Chemistry.
 - The skills developed through practical work provide a good foundation for those wishing to pursue science further, as well as for those entering employment or a non-science career.
 - The course is designed for students who have studied and passed an IGCSE or O Level Chemistry with at least a C Grade, or Physical Science course with at least a B Grade.
 - The schemes of work are divided into two sections AS and A Level.
 - AS is studied in the first year of AS levels while A Level in the second year.
 - The content of the AS Level learning outcomes is assumed knowledge for the A Level components.



OUTLINE OF AS & A LEVEL CHEMISTRY TOPICS

AS CHEMISTRY	A LEVEL CHEMISTRY
TERM 1	
1. Atoms, Molecules and Stoichiometry.	Energetics & Born Haber cycles
2. Atomic Structure	Group 2
3. Chemical Bonding	Transition Metal Elements
4. States of Matter	Ionic Equilibria
5. Periodicity	Reaction Kinetics
6. Group 2	
7. Group 7	
8. Nitrogen & Sulphur	
9. Reaction Rates.	
TERM 2	
1. Equilibria	Arenes
2. Introduction to Organic Chemistry	Phenol
3. Hydrocarbons	Acyl Chlorides
4. Halogen Derivatives	Amines
5. Hydroxy compounds	Polymers
6. Carbonyl Compounds	Synthesis
7. Carboxylic Acids	Analytical Techniques
TERM 3	
1. Revision	Revision