OREL VINE SCHOOL

Course Outline

Cambridge IGCSE (Year 10)

CHEMISTRY

Term I		**Term II**		**Term III**	
Topic/Subtopic	**Contents**	***Topic/Subtopic***	**Contents/Objectives**	***Topic/Subtopic***	**Contents/Objectives**
States of matter ***(4 hours)***	• Solids, liquids and gases • Diffusion	***Chemical energetics*** ***(3 hours)***	• Exothermic and endothermic reactions	***Metals*** ***(4 hours)***	• Properties of metals • Uses of metals • Alloys and their properties • Reactivity series • Corrosion of metals • Extraction of metals
Atoms, elements and compounds ***(6 hours)***	• Elements, compounds and mixtures • Atomic structure and the Periodic Table • Isotopes • Ions and ionic bonds • Simple molecules and covalent bonds • Giant covalent structures • Metallic bonding	***Chemical reactions*** ***(5 hours)***	• Physical and chemical changes • Rate of reaction • Reversible reactions and equilibrium • Redox	***Chemistry of the environment*** ***(4 hours)***	• Water • Fertilisers • Air quality and climate

Stoichiometry ***(5 hours)***	• Formulae • Relative masses of atoms and molecules • The mole and the Avogadro constant	***Acids, bases and salts*** ***(4 hours)***	• The characteristic properties of acids and bases • Oxides • Preparation of salts	***Organic chemistry*** ***(8 hours)***	• Formulae, functional groups and terminology • Naming organic compounds • Fuels • Alkanes • Alkenes • Alcohols • Carboxylic acids • Polymers
Electrochemistry ***(4 hours)***	• Electrolysis • Hydrogen–oxygen fuel cells	***The Periodic Table*** ***(4 hours)***	• Arrangement of elements • Group I properties • Group VII properties • Transition elements • Noble gases	***Experimental techniques and chemical analysis*** ***(4 hours)***	• Experimental design • Acid–base titrations • Chromatography • Separation and purification • Identification of ions and gases

Resources

- Cambridge International IGCSE Biology Course book second edition
- Cambridge International IGCSE Chemistry course book
- Cambridge IGCSE Biology past papers
- Cambridge IGCSE Chemistry past papers
- Ezy Education e-learning platform

Methodology

- Discovery method
- Experimentation
- Field study
- Integration of Information technology (IT)
- Research work
- Use of primary and secondary data from various sources

Mode of assessment

- Daily exercises from the coursebook
- End of month tests
- End of unit tests set from Cambridge IGCSE Chemistry past papers
- End of unit tests set from Cambridge IGCSE Biology past papers
- Mid - term & end of term assessments
- Quizzes and assignments on the LMS
- Weekly homework assignments
- Ezy education e - learning platform.