Group 4 Chemistry SL and Chemistry HL

AIMS

1. appreciate scientific study and creativity within a global context through stimulating and challenging opportunities
2. acquire a body of knowledge, methods and techniques that characterize science and technology
3. apply and use a body of knowledge, methods and techniques that characterize science and technology
4. develop an ability to analyse, evaluate and synthesize scientific information
5. develop a critical awareness of the need for, and the value of, effective collaboration and communication during scientific activities
6. develop experimental and investigative scientific skills including the use of current technologies
7. develop and apply 21st century communication skills in the study of science
8. become critically aware, as global citizens, of the ethical implications of using science and technology
9. develop an appreciation of the possibilities and limitations of science and technology
10. develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge.

ASSESSMENT OBJECTIVES

1. Demonstrate knowledge and understanding of:
   a. facts, concepts, and terminology
   b. methodologies and techniques
   c. communicating scientific information.

2. Apply:
   a. facts, concepts, and terminology
   b. methodologies and techniques
   c. methods of communicating scientific information.

3. Formulate, analyse and evaluate:
   a. hypotheses, research questions and predictions
   b. methodologies and techniques
   c. primary and secondary data
   d. scientific explanations.

4. Demonstrate the appropriate research, experimental, and personal skills necessary to carry out insightful and ethical investigations.

LIST OF TOPICS	
Core (SL) 1. Stoichiometric relationships 2. Atomic structure 3. Periodicity 4. Chemical bonding and structure 5. Energetics/thermochemistry 6. Chemical kinetics 7. Equilibrium 8. Acids and Bases 9. Redox processes 10. Organic Chemistry 11. Measurement and Data processing	**Additional higher Level (HL)** 12. Atomic structure 13. The periodic table - the transition metals 14. Chemical bonding and structure 15. Energetics/thermochemistry 16. Chemical kinetics 17. Equilibrium 18. Acids and bases 19. Redox processes 20. Organic chemistry 21. Measurement and analysis
Options (one is chosen) A. Materials B. Biochemistry C. Energy D. Medicinal chemistry	

ASSESSMENT TYPE	COMPONENT	IBDP WEIGHT %	
		SL	HL
Internal Assessment	**Individual investigation:** Students are assessed on their ability to • personally engage with their research • use scientific exploration skills • use scientific analysis • evaluate their investigation • communicate their findings and its importance.	20	
External Assessment	Paper One	20	20
	Paper Two	40	36
	Paper Three	20	24