



St Paul's International College Science Department Scope and Sequence Stage 5 Year 10 2024

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Term 1 1	The Periodic Table and Chemical Reactions										
	Approximately 35 Hours										
	Chemistry in our world is synonymous with the Periodic table and chemical reactions or changes that are part of our everyday lives. The Periodic table is an iconic symbol and students have already learned about the existence of atoms and elements but they have yet to explore how they are arranged in the Periodic Table and the significance of their position in the table. Chemical reactions are varied and abundant in our lives: some are responsible for our very existence and well-being, some provide us with useful materials and resources that we need to maintain our lifestyles, some happen without us even noticing and some simply bring us enjoyment. Through the teaching in this unit, students will learn to identify some of the commonplace reactions in our lives and their importance in our world.										
	Outcomes: SC5-1VA, SC5-3VA, SC5-4WS, SC5-5WS, SC5-6WS, SC5-7WS, SC5-8WS, SC5-9WS, SC5-16CW, SC5-17CW										
	Assessment: Research and presentation skills on Elements, Understanding the concept of shells, Mid Term test, Group practical investigation										
Term 2 2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
	The Universe										
	Approximately 30 Hours										
	In the first part of this unit, students learn about the universe and what we know about it. The theories about the evolution of the universe are discussed; in particular there is a comparison between the steady state theory and the big bang theory. There is also an examination of some of the technological advances that have helped scientists to better understand the universe. In the final part of this unit, students learn about good experimental design. They will be assessed on a student research project where they have to plan, carry out and write a report on their investigation.										
	Outcomes: SC5-1VA, SC5-4WS, SC5-5WS, SC5-6WS, SC5-7WS, SC5-8WS, SC5-9WS, SC5-12ES										
Assessment: Summarising and pictorially representing information on stars, Researching and presenting a timeline, End of Unit Test, Preparing for and completing the Mandatory Student Individual Practical Investigation											



St Paul's International College Science Department

Scope and Sequence Stage 5 Year 10 2024

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Term 3	Genetics and Evolution										
	Approximately 33 Hours										
	This unit is about genetics and evolution. Students study the structure of DNA and the role of genes in passing characteristics from generation to generation during reproduction. They also learn about the mechanism of natural selection and its role in evolution.										
	Outcomes: SC5-1VA, SC5-3VA, SC5-6WS, SC5-7WS, SC5-9WS, SC5-14LW, SC5-15LW, SC5-16CW										
	Assessment: Building a model, Research and Presentation, End of section Tests										
Term 4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8			
	Ecosystems and the Environment										
	Approximately 25 Hours										
	The first section of this unit is about ecosystems. Students identify biotic and abiotic factors and study the flow of energy and the cycling of matter. They look at the importance of biodiversity and investigate human impact on ecosystems. The second part of this unit looks at society's impact on global system. The carbon cycle and greenhouse effect is studied. Students then investigate the problem of climate change.										
	Outcomes: SC5-1VA, SC5-2VA, SC5-3VA, SC5-4WS, SC5-5WS, SC5-6WS, SC5-7WS, SC5-8WS, SC5-9WS, SC5-11PW, SC5-13ES, SC5-14LW										
Assessment: Mid Term test, Research and Poster presentation, Extracting information from Video and other sources.											