

Hato Petera



JUNIOR SCIENCE

SCIENCE YEAR 9 & 10

This programme allows students to observe, investigate, debate with others, and explain our natural world and develop understanding of the world based on scientific processes and scientific theories.

Term /Strands	Topics/Units to be Covered	Curriculum Level	Curriculum Statement /Learning Outcomes Students are able to:
Term 1 Nature of Science	Investigating in Science	4-5	<ul style="list-style-type: none"> • Explain safety in the Laboratory; • Make data tables and Plot graphs; • Interpret simple line graphs
		5-6	
Material World	Matter: Mixing and separating	4-5	<ul style="list-style-type: none"> • Begin to develop an understanding, and describe the particle nature of matter • Use this to explain observed changes in matter. • Observe, describe and compare physical and chemical properties of common materials and changes that occur when materials are mixed, heated or cooled.
Term 2 Living World	Classifying living things	3-4	<ul style="list-style-type: none"> • Begin to group plants, animals and other living things into science-based classifications • Explain the interdependence of living things in an ecosystem
		5	
	The Cell Structure	4-5	<ul style="list-style-type: none"> • Describe the cell structures • Describe the life processes of plant and animal cells. • Identify and explain the key structural features and functions in the life of plant and animal
	Plant Reproduction	3-4	<ul style="list-style-type: none"> • Describe the structures and processes involved in plant reproduction.
Term 3 Physical World	Energy: Pushes, Pulls, Twists	4-5	<ul style="list-style-type: none"> • Identify and describe the effect of forces (contact and non-contact) on the motion of objects.
	Energy uses and conservation	3-4	<ul style="list-style-type: none"> • Identify the uses of energy • Identify energy changes/transformation • Suggest practical ways of energy conservation
		5-6	
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Term /Strands	Topics/Units to be Covered	Curriculum Level	Curriculum Statement /Learning Outcomes Students are able to:
Term 4 Material World	Atoms/ Elements and Compounds/ Periodic Table	4	<ul style="list-style-type: none"> Group materials in different ways based on the observations and measurements of the characteristic chemical and physical properties of a range of different materials. Distinguish pure and mixed substances Investigate the properties of groups of substances
		5	
Planet Earth and Beyond	Earth systems	6	<ul style="list-style-type: none"> Appreciate that water, air, rocks and soil, and life forms make up our planet and recognise that these are also Earth's resources.
	The Earth's family and neighbours		<ul style="list-style-type: none"> Appreciate the place of the earth in the solar system Investigate and describe the conditions in other members of the solar system

Assessment:

Assessments are on- going throughout the year, Practical and Summative, Research, Portfolio or report, Research a member of the solar system and compare it with the earth