Year 4 Science

Achievement Standard

By the end of Year 4 students identify the roles of organisms in a habitat and construct food chains. They identify key processes in the water cycle and describe how water cycles through the environment. They identify forces acting on objects and describe their effect. They relate the uses of materials to their properties. They explain the role of data in science inquiry. They identify solutions based on scientific explanations and describe the needs these meet.

Students pose questions to identify patterns and relationships and make predictions based on observations. They plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. They use simple procedures to make accurate formal measurements. They construct representations to organise data and information and identify patterns and relationships. They compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate.

Assessment Criteria

An overall level of achievement in this subject is determined by the teacher's on-balance judgment of the evidence presented in students' summative assessment across the following:

- **Science Understanding:** Biological Sciences, Chemical Sciences, Earth and Space Sciences, Physical Sciences.
- **Science as a Human Endeavour**: Nature and development of science, use and influence of science.
- **Science Inquiry Skills:** Questioning and predicting, Planning and conducting, Processing, modelling and analysing, Evaluating, Communicating

Delivery (mode, time requirements, lessons)

Students have access to scheduled lessons each week. Lessons are delivered via the Learning Management System. Students are also expected to undertake independent study to complete tasks and assessment in accordance with the Work Rate Calendar. Course materials can be accessed in QLearn.

Student Requirements

Computer, internet access, email, printer, scanner, headset with microphone, stationery, resource list and SRS list.

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		Units and Learning Experiences, Summative Assessment, Criteria Assessed, Approximate timing/due date of summative assessment
Semester 1	Unit 1	**Earth and Space Science: Where Does Water Go?** *How does water move through the ocean, sky and landscape?* Students explore the question "Where does water go?" They learn about the water cycle and how water moves through the sky, land and ocean by completing hands-on activities, simple investigations and building models. Students also learn how people, including First Nations Australians, use science to manage and protect water as a valuable resource.
		Summative assessment, criteria assessed, approximate timing/due date: • Your task is to show your understanding of the water cycle and how water moves through the environment. You will explain the key processes in the water cycle, demonstrate where water comes from and where it goes, and describe how First Nations Australians use their scientific knowledge to manage and protect water. You'll share your ideas through labelled diagrams and written explanations using scientific vocabulary.
	Unit 2	**Physical Sciences: What Makes Things Move?** *How can objects affect other objects with or without touching each other?* Students will identify forces acting on objects and describe their effect. They identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects.
		Summative assessment, criteria assessed, approximate timing/due date: • Experimental Investigation: Students will identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects
Semester 2	Unit 3	**Biological Sciences: Food Chains** *How are living things connected in food chains?* Students will identify the roles of organisms in a habitat and construct food chains. They will explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships
		Summative assessment, criteria assessed, approximate timing/due date: • Students will explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships
	Unit 4	**Chemical Sciences: Material Talk** *How do you decide on which material to use for a particular purpose?* Students will relate the uses of materials to their properties. They examine the properties of natural and made materials including fibres, metals, glass and plastics and consider how these properties influence their use
		Summative assessment, criteria assessed, approximate timing/due date: • Experimental Investigation: Students will investigate the properties of natural and made materials and explain how these properties influence their use.

Disclaimer All of the above information is accurate at the time of development.