

Year 6 Science

Achievement

By the end of Year 6, students compare and classify different types of observable changes to materials. They analyse requirements for the transfer of electricity and describe how energy can be transformed from one form to another to generate electricity. They explain how natural events cause rapid change to the Earth's surface. They describe and predict the effect of environmental changes on individual living things. Students explain how scientific knowledge is used in decision making and identify contributions to the development of science by people from a range of cultures.

Students follow procedures to develop investigable questions and design investigations into simple cause-and-effect relationships. They identify variables to be changed and measured and describe potential safety risks when planning methods. They collect, organise and interpret their data, identifying where improvements to their methods or research could improve the data. They describe and analyse relationships in data using graphic representations and construct multi-modal texts to communicate ideas, methods and findings.

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 and analysing data and information, Evaluating, Communicating.

Delivery (mode, time requirements, lessons)

Students have access to a 45 minute scheduled lesson each week. Lessons are delivered via Collaborate and teleconferencing. 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 Blackboard.

Student Requirements

Computer, access to internet, email, printer, scanner, telephone or headset with microphone, exercise book, digital camera, stationery and the science kit.

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		Units and Learning Experiences, Summative Assessment, Criteria Assessed, Approximate timing/due date of summative assessment
Semester 1	Term 1	<p>Unit 1 Chemistry: Making changes Investigating changes that can be made to materials, how these changes are classified as reversible or irreversible and how this is used to solve problems that directly affect peoples' lives.</p>
		<p>Summative assessment, criteria assessed, approximate timing/due date: • Assignment/Project: Apply knowledge of reversible and irreversible changes of materials to investigate a claim (Chemical sciences, Planning and conducting, Evaluating, Communicating) Week 9</p>
	Term 2	<p>Unit 2 Physics: Energy and Electricity Students will learn that energy from a variety of sources can be used to generate electricity. They will investigate electrical circuits as a means of transferring and transforming electricity. Students design and construct electrical circuits to perform specific tasks.</p>
		<p>Summative assessment, criteria assessed, approximate timing/due date: • Assignment/project: Identify the requirements for the transfer of electricity in a circuit, and describe energy transformations in the generation and use of electricity (Physical sciences, Use and influence of science, Communicating) Week 9</p>
Semester 2	Term 3	<p>Unit 3 Earth and space sciences: Our changing world Students explore how sudden geological and extreme weather events can affect Earth's surface. They consider the effects of earthquakes and volcanoes on the Earth's surface and how communities are affected by these events. They gather, record and interpret data relating to weather and weather events. Students explore the ways in which scientists are assisted by the observations of people from other cultures, including those throughout Asia.</p>
		<p>Summative assessment, criteria assessed, approximate timing/due date: • Exam: Explain how natural events cause rapid changes to the Earth's surface, identify contributions to the development of science by people from a range of cultures, and identify where research can improve data (Earth and space sciences, Nature and development of science, Communicating) Week 9</p>
	Term 4	<p>Unit 4 Biology: Life on Earth Students explore the environmental conditions that affect the growth and survival of living things. They use simulations to plan and conduct fair tests and analyse the results of these tests. Students pose questions, plan and conduct investigations into the environmental factors that affect the growth of bean seeds. Students consider human impact on the environment and how science knowledge can be used to inform personal and community decisions. They will also recommend actions to develop environments for native plants and animals.</p>
		<p>Summative assessment, criteria assessed, approximate timing/due date: • Develop an investigable question, plan and conduct an investigation, analyse data to identify environmental factors that contribute to mould growth in bread and apply this knowledge to practical situations (Biological sciences, Questioning and predicting, Planning and conducting, Processing and analysing data and information, Communicating) Week 6</p>

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