

# Australian Curriculum: Science — Year 6

## Year level plan- 2023

CURRICULUM	SEMESTER 1		SEMESTER 2	
	Term 1	Term 2	Term 3	Term 4
<b>Unit name</b>	Energy and electricity	Life on Earth	Our changing world	Making changes
<b>Unit description</b>	In this unit students investigate electrical circuits as a means of transferring and transforming electricity. They design and construct electrical circuits to make observations, develop explanations and perform specific tasks, using materials and equipment safely. Students explore how energy from a variety of sources can be used to generate electricity and identify energy transformations associated with different methods of electricity production. They identify where scientific understanding and discoveries related to the production and use of electricity have affected people's lives and evaluate personal and community decisions related to use of different energy sources and their sustainability.	In this unit 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 living things. They gather, record and interpret observations relating to their investigations. Students consider human impact on the environment and how science knowledge can be used to inform personal and community decisions. They recommend actions to develop environments for native plants and animals.	In this unit students explore how sudden geological changes and extreme weather events can affect Earth's surface. They consider the effects of earthquakes and volcanoes on 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. Students construct representations of cyclones and evaluate community and personal decisions related to preparation for natural disasters. They investigate how predictions regarding the course of tropical cyclones can be improved by gathering data.	In this unit students investigate changes that can be made to materials and how these changes are classified as reversible or irreversible. They plan investigation methods using fair testing to answer questions. Students identify and assess risks, make observations, accurately record data and develop explanations. They suggest improvements, which can be made to their methods to improve investigations. Students explore the effects of reversible and irreversible changes in everyday materials and how this scientific understanding is used to solve problems that directly affect people's lives.

ASSESSMENT	SEMESTER 1		SEMESTER 2		
	Exploring energy and electricity –AT1	Investigating mouldy bread- AT2	Explaining changes to the surface of the Earth- AT3	Testing change: Reversible or irreversible?- AT4	
Range and balance of summative assessment conventions	<b>Technique</b>	Exam	Experimental Investigation	Exam	Experimental Investigation
	<b>Text types</b>	Short answer response	Scientific report	Short answer response	Scientific report

	Mode	Written	Written	Written	Written
	Conditions	<ul style="list-style-type: none"> <li>Materials provided by teacher for testing in Part A</li> <li>Complete individually</li> </ul>	Group work and discussion Individual work Booklet completed under test conditions.  Each student will complete an individual assessment booklet	Booklet completed under test conditions. Each student will complete an individual assessment booklet. Resource needed: assessment task <i>Explaining changes to the surface of Earth: Student resource (Beaufort wind scale)</i> pencil, eraser and ruler Completed in 2 parts (1 lesson per part)	Supervised (groups and individually)

### Aspects of the achievement standard

compare and classify different types of observable changes to materials					✓
analyse requirements for the transfer of electricity and describe how energy can be transformed from one form to another when generating electricity	✓				
explain how natural events cause rapid change to Earth's surface				✓	
describe and predict the effect of environmental changes on individual living things		✓			
explain how scientific knowledge helps us to solve problems and inform decisions and identify historical and cultural contributions	✓			✓	
follow procedures to develop investigable questions and design investigations into simple cause-and-effect relationships	✓		✓		✓
identify variables to be changed and measured and describe potential safety risks when planning methods			✓		✓
collect, organise and interpret their data, identifying where improvements to their methods or research could improve the data			✓	✓	✓
describe and analyse relationships in data using appropriate representations and construct multimodal texts to communicate ideas, methods and findings			✓	✓	✓

Term 1
Term 2
Term 3
Term 4
✓

indicates opportunities that summative assessments provide for students to demonstrate evidence against aspects of the achievement standard