

STAGE 2 GEOGRAPHY: Natural environments

Focus area: The Earth's environment	
Different environments	Significance of environments
Key inquiry questions <ul style="list-style-type: none">• How does the environment support the lives of people and other living things?• How can people use places and environments more sustainably?	
Content focus <p>Students:</p> <ul style="list-style-type: none">• explore the climate, natural vegetation and native animals of places in Australia• examine the importance of natural vegetation and natural resources to the environment, animals and people• learn about the ways people value environments, including Aboriginal and Torres Strait Islander Peoples	
Outcomes <p>A student:</p> <ul style="list-style-type: none">➤ examines features and characteristics of places and environments GE2-1➤ describes the ways people, places and environments interact GE2-2➤ acquires and communicates geographical information using geographical tools for inquiry GE2-4	
Overview <p>Through the geographical inquiry process students will investigate the Penrith Lakes Scheme, as a contemporary geographical land use issue at a local scale. Through the investigation of the Scheme, students will examine the geographical characteristics of the site in regards to recreation, housing and biodiversity. This program will also cover: the interconnections between the place and a range of people with varying points of view, the role of government and mining companies in the Scheme development and sustainability issues associated with the Scheme. Students will further develop their fieldwork data collection skills and an understanding of the decision-making processes and the roles and responsibilities of the different stakeholders in the Scheme.</p>	
Assessment <p>Many of the activities require students to demonstrate their learning. These activities can be used to assess student progress at various stages throughout the inquiry process.</p>	

<p>Significance of environments</p> <p>Students:</p> <ul style="list-style-type: none"> investigate the importance of natural vegetation and natural resources to <u>the environment, animals</u> and people, for example: (ACHGK021, ACHGK022, ACHGK024) <ul style="list-style-type: none"> identification of types of natural vegetation eg forests, grasslands, deserts VR explanation of the importance of natural vegetation to animals and the functioning of the environment eg provision of habitats, production of oxygen  <p>Perception of environments</p> <p>Students:</p> <ul style="list-style-type: none"> investigate the ways people, including Aboriginal and Torres Strait Islander Peoples, value environments, for example: (ACHGK022, ACHGK023, ACHGK024) <ul style="list-style-type: none"> discussion of why people value environments differently eg cultural, agricultural, commercial and recreational values <p>Protection of environments</p> <p>Students:</p> <ul style="list-style-type: none"> investigate sustainable practices that protect environments, including those of Aboriginal and Torres Strait Islander Peoples, for example: (ACHGK023, ACHGK024, ACHGK025)  examination of how environments can be used sustainably eg sustainable agricultural, commercial 	<p>Inquiry 2 – Case study of a natural environment – fieldwork investigation - Penrith Lakes</p> <p>Select a specific Australian natural environment that is readily accessible for a fieldwork investigation, e.g. Freshwater Lakes / wetland.</p> <p>Students investigate the environment and produce a fieldwork report describing the importance of the environment to animals and people.</p> <p>Note: The geographical inquiry process will need to be modelled and guided by the teacher.</p> <p>Acquiring geographical information</p> <p>Pre Visit Questions:</p> <p>Inquiry questions should be specific to the natural environment selected for investigation, e.g. How does Penrith Lakes provide for the needs of animals, people and the environment?</p> <ul style="list-style-type: none"> Where is the environment located? What are the characteristics of the environment? What habitats are found in the environment? How do native animals use habitats in the environment? Why is this environment significant? <p>Office of Penrith Lakes http://www.opl.nsw.gov.au/</p> <p>Penrith Lakes Corporation http://www.penrithlakes.com.au/home</p> <p>Acquire data and information:</p> <ul style="list-style-type: none"> Locate the natural environment on a satellite image of the region. Identify other nearby natural environments. View photographs of the environment and identify the main vegetation type. <p>Fieldwork Excursion to Penrith Lakes:</p> <p>Fieldwork – visit the environment. Using tools such as field sketches, maps and invertebrate and vertebrate animal surveys students examine and record the natural and human features of the lakes environment.</p> <p>EG:</p> <p>Field Sketch of Regatta Lake:</p> <ul style="list-style-type: none"> What are human features and uses? <p>Dip netting:</p> <ul style="list-style-type: none"> What invertebrates live in the lake? Describe some food chains and food webs found. <p>Bird Survey:</p> <ul style="list-style-type: none"> What types of birds depend on the lakes and why? <p>Aboriginal and Torres Strait Islander Peoples relationships to the plants and animals in the environment.</p> <p>What are the interconnections?</p> <p>Overall why are Penrith Lakes significant/important?</p>
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Post Visit: Processing and communicating geographical information

Communicate:

Students compile a **fieldwork report** that includes:

- a location map
- labelled field sketch
- annotated photographs
- description of the features of the environment
- plant and animal lists
- interrelationships between animals and plants
- actions that can protect the environment.

The report could be digital and/or multimodal, combining photographs, videos, sketches, diagrams and verbal or written explanations.

Resources

Office of Penrith Lakes <http://www.opl.nsw.gov.au/>

Penrith Lakes Corporation <http://www.penrithlakes.com.au/home>

[Environmental and Zoo Education Centres NSW](#) (DoE fieldwork opportunities)

Australian Museum, [Field Guide to NSW Fauna Mobile App](#)

Field of Mars EEC, [Habitat Multitouch Book](#)

Learning connections:

Science and Technology K–6 Syllabus: Living world (Living things depend on each other and the environment to survive.)

Geographical concepts	Geographical inquiry skills	Geographical tools
<p>Place: <i>the significance of places and what they are like</i> eg natural and human features and characteristics of different places and their similarities and differences; how people's perceptions about places influence their responses and actions to protect them.</p> <p>Space: <i>the significance of location and spatial distribution, and ways people organise and manage spaces that we live in</i> eg settlement patterns within Australia, neighbouring countries and other countries.</p> <p>Environment: <i>the significance of the environment in human life, and the important interrelationships between humans and the environment</i> eg how climate and environment influence settlement patterns; interconnections between people and environments; differing ways people can use environments sustainably.</p> <p>Interconnection: <i>no object of geographical study can be viewed in isolation</i> eg interconnections between people, places and environments; influence of people's values on the management and protection of places and environments and the custodial responsibilities of Aboriginal and Torres Strait Islander Peoples.</p> <p>Scale: <i>the way that geographical phenomena and problems can be examined at different spatial levels</i> eg types of settlement across a range of scales; the influence of climate across a range of scales.</p> <p>Sustainability: <i>the capacity of the environment to continue to support our lives and the lives of other living creatures into the future</i> eg ways in which people, including Aboriginal and Torres Strait Islander Peoples, use and protect natural resources; differing views about environmental sustainability; sustainable management of waste.</p>	<p>Acquiring geographical information</p> <ul style="list-style-type: none"> develop geographical questions to investigate (ACHGS019, ACHGS026) collect and record relevant geographical data and information, for example, by observing, by interviewing, conducting surveys, or using maps, visual representations, the media or the internet (ACHGS020, ACHGS027) <p>Processing geographical information</p> <ul style="list-style-type: none"> represent data by constructing tables, graphs and maps (ACHGS021, ACHGS028) represent information by constructing large-scale maps that conform to cartographic conventions, using spatial technologies as appropriate (ACHGS022, ACHGS029) interpret geographical data to identify distributions and patterns and draw conclusions (ACHGS023, ACHGS030) <p>Communicating geographical information</p> <ul style="list-style-type: none"> present findings in a range of communication forms, for example, written, oral, digital, graphic, tabular and visual, and use geographical terminology (ACHGS024, ACHGS031) reflect on their learning to propose individual action in response to a contemporary geographical challenge and identify the expected effects of the proposal (ACHGS025, ACHGS032) 	<p>Maps – M</p> <ul style="list-style-type: none"> large-scale maps, world map, globe, sketch maps maps to identify location, direction, distance, map references, spatial distributions and patterns <p>Fieldwork – F</p> <ul style="list-style-type: none"> observing, measuring, collecting and recording data, conducting surveys or interviews fieldwork instruments such as measuring devices, maps, photographs <p>Graphs and statistics – GS</p> <ul style="list-style-type: none"> tally charts, pictographs, data tables, column graphs, simple statistics <p>Spatial technologies – ST</p> <ul style="list-style-type: none"> virtual maps, satellite images, global positioning systems (GPS) <p>Visual representations – VR</p> <ul style="list-style-type: none"> photographs, illustrations, diagrams, story books, multimedia, web tools

