STAGE 3 GEOGRAPHY: Contemporary land use issue

Focus area: Factors that shape places (Case Study – Penrith Lakes Scheme)	
Factors that change environments	**Humans shape places**

Key inquiry questions

- How do people and environments influence one another?

- How do people influence places and the management of spaces within them?

Content focus

Students:

- investigate how people change the natural environment in Australia

- examine ways people influence the characteristics of places, including the management of spaces

Outcomes

A student:

➢ describes the diverse features and characteristics of places and environments **GE3-1**

➢ explains interactions and connections between people, places and environments **GE3-2**

➢ compares and contrasts influences on the management of places and environments **GE3-3**

➢ acquires, processes and communicates geographical information using geographical tools for inquiry **GE3-4**

Overview

The geographical inquiry process will investigate Penrith Lakes Scheme as a contemporary geographical land use issue at a local scale. Through investigation of the issue, students will examine the geographical characteristics of the site, the interconnections between the place and a range of people with varying points of view, the role of government in the issue, and sustainability considerations. Students will also develop understanding of the decision-making processes and roles and responsibilities of the different levels of government.

Assessment

Many of the activities require students to demonstrate their learning. These activities can be used to assess student learning at various stages throughout the inquiry process.

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Factors that change environments	Student-centred inquiry into a contemporary land-use or local planning issue

Students:
 	
• investigate the ways people change the natural environment in Australia: (ACHGK026,
    – examination of how people, including Aboriginal and Torres Strait Islander Peoples, have influenced each country's environmental characteristics eg land clearing, use of fire ✋ 🌿 ✿
 	
Humans shape places
 	
Students:
 	
• investigate how people influence places, for example: (ACHGK029)
    – description of who organises and manages places eg local and state governments 🦘
    – identification of ways people influence places and contribute to sustainability eg roads and services, fire management strategies **F** **ST** 🌿 ✷
    – examination of a local planning issue; the different views about it and a possible action in response to it ⚖️ 🗣️ 🦘
	Students work in small groups to investigate Penrith Lakes Scheme through a variety of hands on activities throughout the day designed to collect data on the site and its management practices. Students preform a role-play in their groups at the end of the day by being an advocate for the recreation, biodiversity and housing. They will be providing a balanced view, that discusses the positive and negative outcomes of the issue.
	
	Acquiring geographical information
	
	(a proposed 5 week unit of work based on Penrith Lakes Scheme)
	
	Questions:
	
	Key Question - How can Penrith Lakes be managed for recreation, housing and biodiversity?
	
	Pre Visit Activities:
	
	– Where is the Penrith Lakes Scheme located? Locate Penrith Lakes on Google Maps and on: http://www.opl.nsw.gov.au/__data/assets/pdf_file/0006/599577/penrith-lakes-aerial.pdf
	– What are the features of the scheme and why was it developed?
	– What was the 'country' like when the traditional Aboriginal people lived in the place?
	– What are the geographical features of the place today?
	– What is the future of the Penrith Lakes Scheme?
	
	Field Work:
	
	– How is the placed organised and used?
	– Why there? Why are recreation, housing and biodiversity areas being established at Penrith Lakes?
	– What are the impacts of the proposed land use change?
	– Who will be advantaged and who will be disadvantaged by the land use change?
	– Why care? How are the Penrith Lakes managed for a sustainable future?
	– What actions are required to ensure that a variety of factors are supported or managed? E.g. sustainability, population changes.
	
	Post Visit (Assessment Task – Communicating Geographically):
	
	– Students create a 3 minute documentary style report using field sketches, maps, photos etc., primary and secondary data resources from the day to communicate the key messages to the public about the Penrith Lakes Scheme.
	
	Acquire data and information:
	
	Decide what sort of information is needed to support the geographical inquiry and where the information can be sourced, e.g.
	
	Office of Penrith Lakes http://www.opl.nsw.gov.au/
	
	Penrith Lakes Corporation http://www.penrithlakes.com.au/home
	
	Support students to develop a system for recording information collected during the research process.

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Examples of data and information sources:

− Source a range of **maps** to describe the location. Use appropriate **spatial technologies** and **visual representations** to describe the place.

− Collect current **photographs** of the place and label the main geographical features.

− **Fieldwork**: visit the site. Draw and label the geographical features in a **field sketch**. Use other fieldwork techniques such as recording human uses through **photographs**, conducting **biodiversity surveys**, assessing vegetation distribution, **water quality testing, mapping** land uses and observing impacts.

− Source appropriate **data** and other **statistical information** relating to the issue, e.g. population growth forecasts, predicted usage estimates.

− Determine the role of government in planning, developing or managing the place.

Processing geographical information

Use geographical tools to collate and review the data and information collected and evaluate for its usefulness, for example:

− On a **topographic map** or **satellite image** as a base map, use **mapping overlays** to describe the current and proposed geographical features of the place. Analyse changes, spatial distributions and patterns.

− Use photographs and information researched to construct a **futures table** to represent past, present and future uses of the place. Analyse the changes of time and make predictions for the future.

− Assemble and annotate **photographs** to provide a visual representation of the site. Analyse and label interconnections.

− Develop **consequences charts** to explain predicted impacts (positive and negative).

− Construct **multiple graphs** and **précis maps** to represent diversity of flora and fauna (biodiversity), vegetation coverage, water quality results, population data and land use. Analyse and interpret the data.

− Use a **T-chart** to represent data on perceived impacts gathered through surveys. Interpret patterns and trends.

− Construct a **flow chart** or **concept map** to explain the role of government, and other major stakeholders, in the issue. Identify connections among them.

− Ensure students have developed their understanding of ways humans influence places and the different perceptions about the management of places and environments. Hold discussions that support students to develop conclusions about the issue being investigated.

   o Does the information relate to the inquiry questions used to shape the investigation?
   o Has the issue been examined from other people's perspectives?
   o Can conclusions be drawn about the positive and negative

aspects of the issue?

o Has sustainability been considered?

Communicating geographical information

Communicate:

Students work in small groups to develop a three-minute **documentary** to convey their understandings of the issue, put forward arguments and opinions, support a specific course of action and explain the impact of this action on the environment.

The documentary should include:

− A clear description of the issue and some of the consequences for the environment;

− Tools such as maps, satellite images, graphs, statistics, flowcharts, labelled photographs, diagrams, illustrations and other labelled visual representations;

− Information on the traditional use of the place by Aboriginal people and the current perspective on the issue today from local Aboriginal people;

− A description of the role of government in organising or managing the place; and,

− A description and justification of a specific point of view and/or course of action in response to the issue.

Respond:

Describe and justify a specific point of view and/or course of action in response to the issue.

Resources

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

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

Penrith Lakes Environmental Education Centre

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Geographical concepts	Geographical inquiry skills	Geographical tools
Place: *the significance of places and what they are like* eg characteristics of places. **Space**: *the significance of location and spatial distribution, and ways people organise and manage spaces that we live in* eg; how people organise and manage spaces in their local environment. **Environment:** *the significance of the environment on human life, and the important interrelationships between humans and the environment* eg how the environment influences people and places; how people influence the environment; the effect of natural disasters on the environment. **Interconnection:** *no object of geographical study can be viewed in isolation eg how environments influence where people live; ways people influence the characteristics of their environments.* **Scale:** *the way that geographical phenomena and problems can be examined at different spatial levels* eg environmental and human characteristics of places on local and regional scales; the effect of events on people and places locally and regionally. **Sustainability**: *the capacity of the environment to continue to support our lives and the lives of other living creatures into the future* eg extent of environmental change; environmental management practices; sustainability initiatives. **Change:** *explaining geographical phenomena by investigating how they have developed over time* eg changes to environmental and human characteristics of places.	**Acquiring geographical information** • develop geographical questions to investigate and plan an inquiry (ACHGS033, ACHGS040) • collect and record relevant geographical data and information, using ethical protocols, from primary data and secondary information sources, for example, by observing, by interviewing, conducting surveys, or using maps, visual representations, statistical sources and reports, the media or the internet (ACHGS034, ACHGS041) **Processing geographical information** • evaluate sources for their usefulness (ACHGS035, ACHGS042) • represent data in different forms, for example plans, graphs, tables, sketches and diagrams (ACHGS035, ACHGS042) • represent different types of geographical information by constructing maps that conform to cartographic conventions using spatial technologies as appropriate (ACHGS036, ACHGS043) • interpret geographical data and information, using digital and spatial technologies as appropriate, and identify spatial distributions, patterns and trends, and infer relationships to draw conclusions (ACHGS037, ACHGS044) **Communicating geographical information** • present findings and ideas	**Maps – M** • large-scale maps, small-scale maps, topographic maps, flowline maps • maps to identify location, latitude, direction, distance, map references, spatial distributions and patterns **Fieldwork – F** • observing, measuring, collecting and recording data, conducting surveys and interviews • fieldwork instruments such as measuring devices, maps, photographs, compasses, GPS **Graphs and statistics – GS** • pictographs, data tables, column graphs, line graphs, climate graphs • multiple graphs on a geographical theme • statistics to find patterns **Spatial technologies – ST** • virtual maps, satellite images, global positioning systems (GPS) **Visual representations – VR** photographs, aerial photographs, illustrations, flow diagrams, annotated diagrams, multimedia, web tools.

	in a range of communication forms as appropriate (ACHGS038, ACHGS045)	
	• reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge and describe the expected effects of their proposal on different groups of people (ACHGS039, ACHGS046)	

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