

Fieldwork Connections

Stage 6: In-school, Geographical Fieldwork

Year 11

- Geographical Investigation Seminar.
- Earth's Natural Systems - Contamination Assessment.
- Earth's Natural Systems - Crosslands, Hornsby.
- Other topics on location design.

Year 12

- Eco. and Global Biodiversity - Great Southern Reef, land based investigation, Long Reef.
- Other topics on location.



fieldworkconnections.com.au

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DISCOVERING, UNDERSTANDING AND PROTECTING PLANTS
AUSTRALIAN INSTITUTE OF BOTANICAL SCIENCE

SYDNEY ROYAL BOTANIC GARDENS

CENTRE FOR EDUCATION AND ENGAGEMENT

At the Centre for Education and Engagement, we are passionate about inspiring with botanical science. By sharing our knowledge and expertise we ignite curiosity about plants, their importance and the need for their conservation. Through talks, panels and hands-on experiences we engage students, teachers and the wider community to understand the critical role plants play in the sustainability of our natural and built environments.

Community Engagement

The Centre for Education and Engagement offers a range of learning opportunities for everyone, focusing on our world leading research addressing some of the most critical challenges of our time. Through tours, hands-on workshops and discussions, visitors gain first-hand experience and learn from world-renowned experts and leaders in their field.

First Nation Cultural Knowledge

The Centre's team of First Nation Educators have significant cultural knowledge of plants and their origins and offer visitors unique perspectives and insights on the Australian continent and our place in the world. Sharing traditional knowledge and making connection to country highlights the powerful and complex relationships between people, plants, animals and place.

Education

Our inquiry-based primary and secondary school programs are curriculum aligned, focused on cutting edge botanical science and environmental conservation. Our team of highly skilled Educators inspire students' curiosity about the natural world and encourage students to take positive action for a sustainable future. We collaborate across AIBS to promote STEM and the next generation of researchers.



FIELDWORK PROVIDERS

Geography fieldwork Stage 4 - 6



Conduct premium geographical fieldwork with NSW DoE qualified teachers.

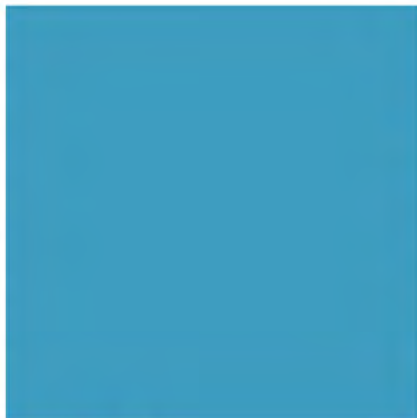
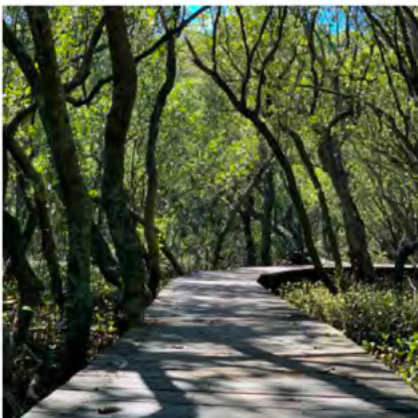
Students engage in fieldwork techniques to gather primary data within natural and human environments. They use environmental assessment equipment and sampling methodology to sample biophysical data. Geographical tools such as mapping and spatial technology are used to investigate human processes.

Stage 4 - Landscapes and landforms; Place and liveability

Stage 5 - Environmental change and management

New Stage 6 syllabus (Year 11) - Earth's natural systems with a focus on the processes, cycles and circulations within the Lane Cove River catchment; People, patterns and processes focusing on your local area; Human–environment interactions with a focus on climate change.

Maximum 10 classes. Experience, engage, enable, enjoy.



FIELD OF MARS
ENVIRONMENTAL EDUCATION CENTRE
EXPERIENCE ENGAGE ENABLE





RUMBALARA ENVIRONMENTAL EDUCATION CENTRE

Central Coast

BIOPHYSICAL INTERACTIONS: STAGE 6

NOTE: This program is being adapted for the new Stage 6 Focus Area: Earth's Natural Systems.

Program overview

Students will investigate the four components of the biophysical environment at Rumbalara Reserve. They will use their data collected to consider the environmental impacts of an increasing central coast population on Rumbalara Reserve and other reserves within the Coastal Open Space System (COSS).

Before visiting Rumbalara students will have access to population statistics, maps and past fauna survey information to understand the location of current development in the area and the importance of wildlife corridors.

Activities include:

- comparing two different vegetation communities using a variety of instruments to measure abiotic factors including anemometers, light meters, clinometers and soil testing instruments
- using water testing equipment to measure the quality of the water at Rumbalara Reserve and explain how the hydrosphere effects the rest of the biophysical environment.
- assessing human impact at Rumbalara Reserve

Download our [Stage 6 Biophysical Environments](#)



Avoca Lagoon

ECOSYSTEMS AT RISK: STAGE 6

NOTE: This program is being adapted for the new Stage 6 Focus Area: Ecosystems and Global Biodiversity.

Program overview

At Avoca Lagoon students will investigate the endangered Green and Gold Bell Frog, urban impacts on water quality, and conduct a kayak based survey of impacts and endangered ecological communities.

Activities include:

- using water testing equipment to measure the quality of the water at Avoca Lagoon and discussion how this impacts ecosystems
- using field work instruments to assess the habitat of the Green and Gold Bell Frog, includes pH, salinity and water temperature
- kayak survey to assess human impact along the riparian zone of Avoca Lagoon and view an endangered Grey Headed Flying Fox colony



Porters Creek Wetland

At Porters Creek Wetland students will study the management and impacts of stormwater runoff from a rapidly expanding urban area. Students investigate stormwater treatment devices, wetland ecosystems and measure water quality and the impact of changed hydrology on plants.

- using water testing equipment to measure the quality of the water at Porters Creek and discussion how this impacts ecosystems
- using field work instruments to measure abiotic factors including anemometers, light meters, clinometers and soil testing instrument
- bushwalk through Porters Creek Wetland and vegetation quadrat of endangered Woolly Butt Trees
- site visit to residential area in Watanobbi to view the effects of excess stormwater runoff on ecosystems.



Observatory Hill Environmental Education Centre is a specialist DoE school staffed by experienced DoE geography teachers. It offers a range of low-cost fieldwork options for S6 geography. Fieldwork options are currently available for Urban Places, People and Economic Activity, and Ecosystems at Risk. All fieldwork options include extensive support websites with introductory activities to familiarise students with the topics being covered, and resource materials for further study and/or assessment tasks. Book early to ensure your fieldwork coincides with your programming schedule. Non-DoE schools can also be catered for. Current fieldwork options include:



Urban Dynamics at Green Square, Barangaroo or Pyrmont

These fieldwork options focus on the urban dynamics of renewal and consolidation. Students investigate the impact of the urban dynamic on each suburb and assess the sustainability and liveability of each case study using 'best practice' planning principles, in order to answer a fieldwork question. Some fieldwork activities include:

- undertaking a guided tour with specialist geography teachers
- collecting evidence of urban dynamics, including their economic, social and environmental outcomes
- mapping skills
- assessing liveability and sustainability using a rating index

People and Economic Activity at Taronga Zoo and Sydney Harbour Youth Hostel in The Rocks

These fieldwork options focus on a case study of an economic enterprise within the global tourism industry. Students listen to a presentation on the enterprise by Taronga Zoo educators, and observe and record aspects of its operations in the field.

Ecosystems at Risk – Kelp forests of SE Australia at Chowder Bay Sydney Harbour

Through an investigation of kelp forests in Chowder Bay, students learn about:

- how kelp forest ecosystems function
- where kelp forests are located
- how kelp forest ecosystems are changing
- the nature and rate of change affecting kelp forest ecosystems
- the human impacts on kelp forests
- current and future management strategies.

Students undertake fieldwork skills and methodologies that can be used to investigate kelp forest ecosystems including snorkelling and undertaking a transect to identify factors affecting kelp ecosystems.

Revised S6 Geography Syllabus– Proposed fieldwork options

Observatory Hill EEC is developing a range of fieldwork options to support the revised S6 geography syllabus. These include:

Year 11: People, Patterns and Processes (Millers Point)

Syllabus link: Study 3, Place and Cultural Change – one place at a local scale

A case study highlighting place and cultural change at a local level using geographical skills and tools.

Students will:

- Investigate Millers Point highlighting the spatial and cultural characteristics of the suburb and the influences on its cultural identity.
- Observe and interpret perceptions of, and responses to cultural continuity and change.
- Students identify opportunities to enhance environmental sustainability and human well-being.

FIELDWORK PROVIDERS



Year 12: Rural and Urban Places (Either Barangaroo, Green Square or Pyrmont)

Syllabus link: Investigation: Rural and an Urban Place.

A case study of an urban place highlighting:

- The location and character of the place
- Geographical processes, both physical and human, that have shaped the identity of the place
- Cultural, economic and political links to other places
- The nature and changes affecting the place, including social economic, and environmental.

Responses and strategies, including for sustainability.

Year 12: Ecosystems and Global Biodiversity (Kelp Forests)

Syllabus link: Investigation – Ecosystems

A case study of an ecosystem – Kelp forests of south eastern Australia, through a fieldwork investigation of one place within the ecosystem – Chowder Bay, Sydney Harbour. The program will highlight:

- The character of the ecosystem, including its spatial patterns and nature of its biodiversity
- The dynamics of ecosystem functioning including vulnerability, resilience and ecological disturbance
- Human induced modification to the ecosystem
- Responses and strategies including for maintaining ecosystem functioning and actions for sustainability
- Ecosystem management including research and innovation in sustainable management of the ecosystem.

Year 12: Global Sustainability – Tourism

Syllabus link: Global sustainability outcome – A student evaluates responses and management strategies at a local scale, for sustainability

A case study of a range of strategies for sustainability at a local scale, through an examination of a local tourism case study – Taronga Zoo Sydney. This tourism organisation demonstrates a variety of sustainable management practices within the tourism industry at a local scale.

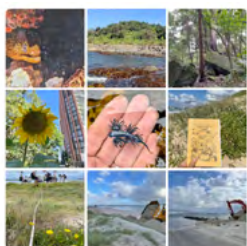
The program will highlight:

- An overview of the global economic activity of Tourism, focussed on sustainability
- A range of strategies for sustainability within a local tourism case study ie Taronga Zoo, and other Zoo's globally. This organisation exemplifies sustainable management practices including conservation of biological diversity and ecological integrity.



Find out more about how Observatory Hill EEC can support your class by visiting the website at:
<https://observatoryhilleec.schools.nsw.gov.au>





AUSECO

Specialists in Environmental Education



Year 11: Earth's Natural Systems

- Choose from a variety of locations in which to collect primary data about atmospheric, hydrological, geomorphic and ecological systems and their functioning. (Long Reef / Dee Why Lagoon, Cronulla, Botany Bay, Bantry Bay, Mt Keira, Camp Courtts)

Year 11: People, patterns and processes

- Study 2: Investigate the impacts of global economic change at Barangaroo, comparing pre-European environmental conditions with those of the modern urban jungle.
- Study 3: Investigate cultural change in central Sydney with a case study of an area that has shed its traditional roots and emerged as a vibrant and diverse modern community.

Year 11: Human-environment Interactions

- Study 1: The Sydney Basin geographical region – investigate responses to the challenge of urban runoff where residential and bushland areas meet. (Bantry Bay, Forestville and Lime Kiln Wetlands, Peakhurst Heights)

- Study 2: Landslip hazard on the Illawarra Escarpment – identify characteristics of the natural environment that predispose the area to landslip, and assess the human and ecological impacts of landslip events. (Mt Keira, Wollongong)

Year 12: Global Sustainability PLUS Ecosystems and Global Biodiversity

- Study fishing as an example of a global economic activity, and evaluate the sustainability of oyster farming in Botany Bay.
- Investigate characteristics and functioning of wetland ecosystems (mangroves and seagrass) and study human modifications and actions for their sustainability.

Year 12: Rural and urban places

- Explore a rural and urban location in the Sydney region, by investigating the geographical processes that have shaped the identity of each, and observing first-hand some changes, human responses and strategies for sustainability.

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<https://www.facebook.com/ausecoeducation/>



Illawarra Escarpment from Stanwell Park lookout