



Program Overview

Students will utilise geographical tools to increase their understanding of the nature and functioning of the four components of the biophysical environment by investigating two different vegetation communities: mangroves and dry sclerophyll.

Students will then use what they have learnt to develop an environmental impact assessment for a fictitious proposed development of a function centre in the mangrove forest.

Students may communicate their findings by making an iMovie (overnight programs only).

Inquiry Questions

What is the environmental impact on the biophysical processes and interactions of a proposed development at Bobbin Head?

- What is the nature and functioning of the four components: the atmosphere, hydrosphere, lithosphere and biosphere in two vegetation communities
- What are the biophysical interactions which occur between components of the biophysical environment?
- What would be the impacts on the biophysical interactions from a proposed development?

Learning Experiences

Map Study

The day commences with the students orientating themselves using a compass and topographic map. Students will be required to locate grid coordinates, estimate distance and describe the topography of the local area.

Investigation of two vegetation communities

Students will investigate and compare 2 different vegetation communities. At each site, students will:

- identify dominant plants using ID books
- use fieldwork equipment to measure biophysical features, including slope, aspect, light intensity, temperature, humidity, soil pH and soil temperature
- record observations of each layer of the vegetation

EIA - Proposed Development

Students will prepare an EIA (Environmental Impact Assessment) for a proposed **restaurant/wedding function centre** to be built in the mangrove forest to the south of the foot-bridge at the south end of Bobbin Head picnic area.

The EIA will include:

- A precis map of the development
- Primary data collected from the four spheres in the mangrove forest
- An analysis of the biophysical interactions in the mangrove forest
- A final recommendation identifying the stakeholders, the likely impacts of the development and options to minimise environmental damage

Key Syllabus Outcomes and Content Geography Stage 6

students learn about:

the biophysical environment

- the nature and functioning of the four components: the atmosphere, hydrosphere, lithosphere and biosphere in a specific biophysical environment
- the interactions between, and the human impacts on, the functioning of the atmosphere, hydrosphere, lithosphere and biosphere.

biophysical processes and issues

- a case study investigating ONE issue in ONE of the biophysical components,

- understanding of biophysical processes contributes to sustainable management in the environment

students learn to:

investigate and communicate geographically by

- asking and addressing questions such as;
 - what are the biophysical interactions which occur between components of the biophysical environment?
 - what are the effects of human impacts on the functioning of the hydrosphere?

identify geographical methods applicable to, and useful in, the workplace such as

- contributing to Environmental Impact Assessments
- collecting and analysing field data