



Stage 6 – Geography

Biophysical Environments

Rumbalara EEC

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).

Key Questions:

1. What is the nature and functioning of the four components: the atmosphere, hydrosphere, lithosphere and biosphere at Rumbalara Reserve.
2. What are the biophysical interactions which occur between components of the biophysical environment.
3. What would be the impact on the biophysical interactions with increasing central coast population and development.

Learning Experiences & Content

Geographical Tools

Students will compare two different vegetation communities using a variety of instruments to measure abiotic factors including anemometers, light meters, clinometers and soil testing instruments. The vegetation present will be identified and compared to the Bells Vegetation descriptions for identifying vegetation communities and represented in a vegetation profile

Water Quality

Students will use 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.

Location Study

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. They will view the near-by residential apartment



blocks, assess human impact and consider the impact of future development on the reserve.



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Outcomes

Geography – Stage 6

Preliminary Course Objectives:

- ✿ P3 explains how a specific environment functions in terms of biophysical factors
- ✿ P7 formulates a plan for active geographical enquiry.
- ✿ P8 selects, organises and analyses relevant geographical information from a variety of sources
- ✿ P9 uses maps, graphs and statistics, photographs and fieldwork to conduct geographical inquiries
- ✿ P11 applies geographical understanding and methods ethically and effectively to a research project.
- ✿ P12 communicates geographical information, ideas and issues using appropriate written and/or oral, cartographic and graphic forms.

Geography Content

Students learn to:

- ✿ investigate and communicate geographically by asking and addressing geographical 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?
 - how is the biophysical environment changing in response to climatic variations?
- ✿ use geographical skills and tools such as identifying, collecting and recording data about erosion and deposition from primary sources
- ✿ identify geographical methods applicable to, and useful in, the workplace such as collecting and analysing field data, environmental mapping.

