Stage 6 – Geography
Earth's Natural Systems

Rumbalara EEC

Program Overview

Students will explore Rumbalara's diverse landscapes and distinctive physical features. They will investigate the threats and effects of bushfires as a way to understand Earth's natural systems including processes, cycles and circulations connecting natural systems.

The fieldwork will also allow students to understand how natural areas on the Central Coast are managed within the Coastal Open Space System (COSS). The study can also include a focus on human-environment interactions, in particular bushfire and climate change.

Learning Intentions:

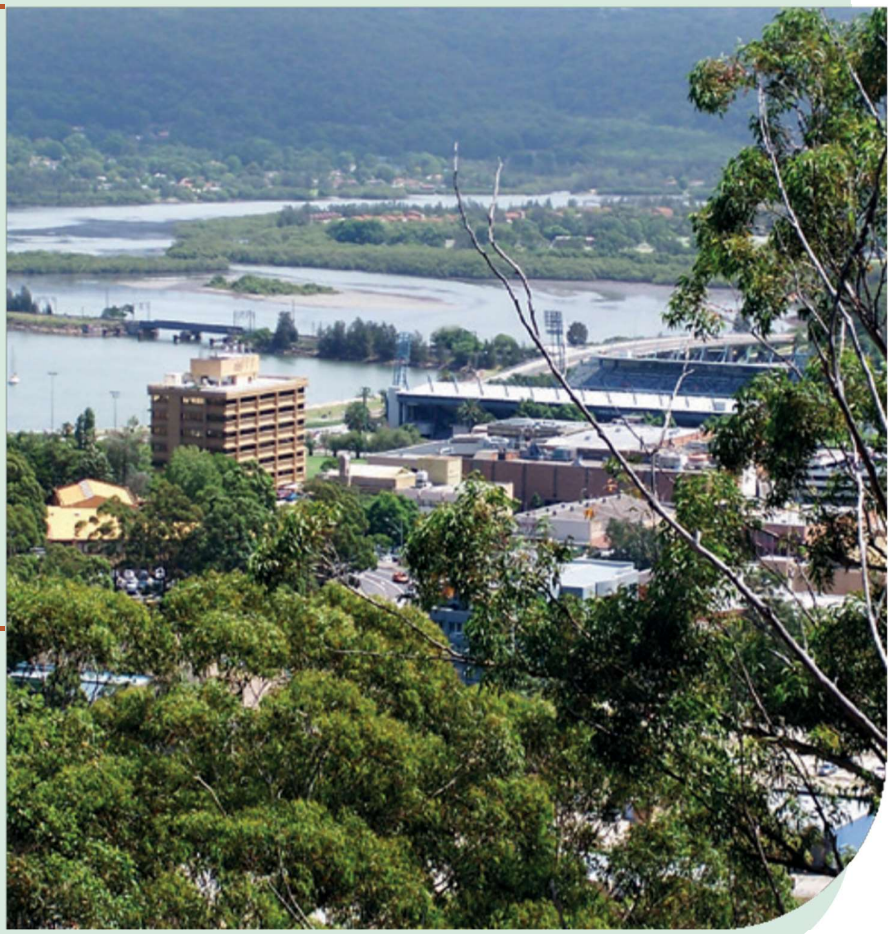
1. Understand the importance of natural processes, such as the carbon and nutrient cycles, in Rumbalara Reserve.
2. Demonstrate how energy flows through ecological systems and identify the trophic levels in the flow of energy.
3. Recognise the characteristics of the Rumbalara Reserve ecosystem and the biotic and abiotic factors that shape them.

Learning Experiences & Content

Geographical Tools

Students will compare two different vegetation communities using a variety of instruments to measure abiotic factors related to understanding natural systems including atmospheric, hydrological, geomorphic and ecological. This includes the use of anemometers, light meters, clinometers, soil testing and water testing equipment.

The vegetation present will be identified and compared to the Bells Vegetation descriptions for identifying vegetation communities and represented in a vegetation profile.



Location Study

Before visiting Rumbalara students will have access to a Google Site that contains supporting information such as spatial information and maps, historical weather data, historical bushfire data, Aboriginal use of Rumbalara and flora & fauna survey information.

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Outcomes

Geography – Stage 6

A student:

- examines places, environments and natural and human phenomena, for their characteristics, spatial patterns, interactions and changes over time GE-11-01
- explains geographical processes and influences, at a range of scales, that form and transform places and environments GE-11-02
- analyses and synthesises relevant geographical information from a variety of sources GE-11-05
- identifies geographical methods used in geographical inquiry and their relevance in the contemporary world GE-11-06
- applies geographical inquiry skills and tools, including spatial technologies, fieldwork, and ethical practices, to investigate places and environments GE-11-07
- applies mathematical ideas and techniques to analyse geographical data GE-11-08
- communicates and applies geographical understanding, using geographical knowledge, concepts, terms and tools, in appropriate forms GE-11-09

Geography Content

Students learn to:

- investigate the processes, cycles and circulations connecting natural systems including atmospheric, hydrological, geomorphic and ecological systems
- communicate geographically by asking and addressing geographical questions such as;
  - what are characteristics of this system that affects how it functions?
  - what are the effects of human impacts on the functioning of the hydrosphere?
  - how are the processes and cycles of natural systems affected by 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.