

## *environmental studies*

### **Environmental Studies**

*Develop students' knowledge and understanding of the environment and of the various processes which operate within it. This awareness should help the student as a learner to realize that every living thing depends on the environment and on its relationships with other living things. Students participate in a field trip to Moreton Island, providing hands-on exploration of rocky shore, sand dunes, forest, and reef studies.*



# Short Term Program

## "Environmental Studies"

### Environmental Studies

This unit is designed to develop the students' knowledge and understanding of the environment and of the various processes which operate within it. This awareness should help the student as a learner to realize that every living thing depends on the environment and on its relationships with other living things. Students should develop a sense of personal responsibility to care for the environment. Means of including environmental education in the school curriculum are considered.

#### Objectives:

At the completion of this unit students will be able to:

- Develop a knowledge and understanding of the main concepts of ecology in relation to the components and dynamics of the biosphere
- Recognise and explain inter-relationships within and between the various dynamic systems which constitute the environment
- utilise learned skills and abilities to enhance their awareness of environmental components and processes
- identify and explain interactions between human life and the environment
- understand the need for a commitment to the maintenance of environmental diversity, stability, and quality
- recognise the contribution that they as individuals can make to the care of the environment

#### Content:

The content will include:

- The physical environment: geophysical, atmospheric and hydrological systems and nutrient cycles
- The biological environment: ecosystems, ecological succession, energy flow, communities and populations
- The relationships between humans and the environment: climate change, population pressure on the biosphere and resource imbalance, pollution, energy use, chemical use.

The theoretical and practical segments of the Environmental Studies unit will be based on the national water quality monitoring program Waterwatch and on Bushland Regeneration.

#### Teaching organization:

A variety of techniques will be used. These will include lectures, tutorials, laboratory sessions, workshops and fieldwork.

#### Assessment procedures:

Assignment 1: Report - Nudgee Waterholes	50%
Assignment 2: Moreton Island Field Studies Report:	50%

### Sample Itinerary

Day 1	Lecture: What is Environmental Education? Introduction to Waterwatch. Workshop: Catchment activity; Water Story; Map grid references; Herbarium collection.
Day 2	Lecture: Riparian zone, benthic macro-invertebrates Field Trip: Catchment area of sites. Bank stability, riparian zones, stream cover, soil infiltration rat.
Day 3	Lecture: Indicators of water quality Workshop: Water quality tests of the 2 sites
Day 4	Lecture: Communities and Bushland Biomes & local communities. Moreton Island Studies Field Trip: Benthic macro-invertebrates, vegetation assessment and fauna
Day 5	Field trip: Moreton Island: Rocky shore, sand dunes, forest & reef studies
Day 6	Data discussion – Moreton island. History & formation of Moreton Island
Day 7	Lecture: Soils Workshop: Soil tests – Nudgee Waterhole Catchment soils
Day 8	Lecture: Water Catchment Management

#### Alternative: customise a study program

A customised study program can be coordinated to meet your individual request.