



### Program Overview

The focus of the two day program is to undertake a scientific investigation of the mangrove ecosystem at Bobbin Head.

During program, the students will work collaboratively in small groups to explore the local environment, use scientific equipment to study the flora and fauna of the ecosystem and use technology to create a short film of their findings.

The program will cover key syllabus and content areas and will include the following:

- ✓ pre-visit research information
- ✓ night activities
- ✓ accommodation in bunks
- ✓ all meals (option to self cater)

### Suggested Timetable (subject to tides)

Time	Activity
Day 1 Morning	A local Ecosystem Investigation
Day 1 Afternoon	Canoe Exploration or Field Techniques
Day 1 Evening	Night Biodiversity Survey
Day 2 Morning	Filmmaker
Day 2 Afternoon	Depart

### Key Syllabus Outcomes and Content

#### Biology

#### students:

- choose equipment or resources and undertake a field study of a local terrestrial or aquatic ecosystem to identify data sources and:
  - measure abiotic variables in the ecosystem being studied .....
  - estimate the size of a plant population and an animal population in the ecosystem using.....

### Learning Activities

#### A Local Ecosystem Investigation

The students will investigate the mangrove environment at Bobbin Head with a focus on the Grey Mangrove and Semaphore Crab. Using field study techniques, the students will use quadrats and transects to measure abundance and distribution of these key species.

#### Canoe Exploration

A canoe trip along the Cowan Creek allows the students to venture further into the estuarine ecosystem and enables the them to compare studies areas to that which have less human impact.

#### Night Biodiversity Survey

During a night walk, students will learn about and employ a variety of techniques that can be performed at night time during a biodiversity survey.

#### Field Techniques

Students will learn about other field techniques used by scientists, including plankton sampling

#### Filmmaker

After all of their learning, the students will be asked to put a short film together about the local

- collect, analyse and present data to describe the distribution of the plant and animal species.....
- describe two trophic interactions .....
- identify data sources and gather, present and analyse data by:
  - ▶ tabulation of data collected in the study
  - ▶ calculation of mean values with ranges
  - ▶ graphing changes with time .....
  - ▶ evaluating variability.....
- gather information from first-hand and secondary sources to construct food chains and food webs .....
- process and analyse information and present