Plant Systems
Bobbin Head
Stage 4 Science

Program Overview

During the program, the students will work scientifically and geographically to study three distinctive vegetation types at Bobbin Head
Working collaboratively in small groups the students will use scientific equipment to collect data on the biotic and abiotic features of the identified vegetation communities to compare important features of each site.

Inquiry Questions

What factors influence the different plant communities across landscapes?

Key Areas of Investigation

1. Making sense of the green – What types of plant communities live in Sydney?
2. The ecology of vegetation – what factors influence why communities survive in that location?

Learning Experiences

Mangrove Study and aquatic threats

Bobbin Head is home to two species of Mangrove. Students will be required to classify these species by examining each to identify and describe similarities and differences. They will also be required to explain how their features are adaptations for survival and reproduction in their environment.

Using the information they have learnt about Mangrove function, students will be required to identify and discuss threats to this ecosystem.

Dry Sclerophyll Features

Using fieldwork equipment, the students will research the biophysical features of the dry forest. These tests include aspect, soil pH, air temperature and soil temperature. Using plant ID books, the students will then identify a sample of dry sclerophyll plants and relate their features as adaptations for survival.

Rainforest

In the final activity, students will research the abiotic and biotic features of the remnant rainforest and use these findings to compare to the dry sclerophyll study site.

Key Syllabus Outcomes and Content

Outcomes

> relates the structure and function of living things to their classification, survival and reproduction SC4-14LW

Content

LW1 There are differences within and between groups of organisms; classification helps organise this diversity (ACSSU111)
Students:
b. Classify a variety of living things based on similarities and differences in structural features
c. Use simple keys to identify a range of plants and animals
e. Outline the structural features used to group living things, including plants and animals
f. Explain how the features of some Australian plants and animals have adaptations for survival and reproduction in their environment.

LW5 Science and technology contribute to finding solutions to conserving and managing sustainable ecosystems.
Students:
a. Construct and interpret food chains and food webs, including examples from Australian ecosystems
b. Describe interactions between organisms in food chains and food webs, including producers, consumers and decomposers (ACSSU112)
d. Predict how human activities can affect interactions in food chains and food webs, including examples from Australian land or marine ecosystems (ACSSU112)