Wetlands Environmental Education Centre

Stage 3

Science and Technology – Living Wetlands and Mangroves

Science and Technology outcomes

› plans and conducts scientific investigations to answer testable questions, and collects and summarises data to communicate conclusions ST3-1WS-S
› examines how the environment affects the growth, survival and adaptation of living things ST3-4LW-S
› explains how food and fibre are produced sustainably in managed environments for health and nutrition ST3-5LW-T

Learning across the curriculum: Aboriginal and Torres Strait Islander histories and cultures Sustainability Ethical understanding Information and communication technology capability Numeracy

Content

Living World

Growth and survival of living things

Inquiry question: How do physical conditions affect the survival of living things?

- describe how changing physical conditions in the environment affect the growth and survival of living things, for example:
  - Aboriginal Peoples' use of fire-stick farming
  - temperature of water in aquatic environments
- test predictions by gathering data and use evidence to develop explanations of events and phenomena (ACSHE081, ACSHE098) SciT
- understand that scientific and technological knowledge is used to solve problems and inform personal and community decisions (ACSHE083, ACSHE100) SciT

Adaptations of living things

Inquiry question: How do the structural and behavioural features of living things support survival?

- describe adaptations as existing structures or behaviours that enable living things to survive in their environment (ACSSU043) SciT
- describe the structural and/or behavioural features of some native Australian animals and plants and why they are considered to be adaptations, for example: ComT SciT
  - shiny surfaces of leaves

Sustainably managing environments to source food and fibre

Focus question: Why is it important for food and/or fibre to be produced sustainably?

- explain a sustainable practice used by Aboriginal and/or Torres Strait Islander communities to manage food and fibre resources

Program Description

Students will investigate a wetland ecosystem, measure water quality and weather, examine wetland animal and plant species along with their adaptations which assist their survival. A comparison will be made with mangroves at another location on site. Traditional land use and management practices will also be discussed.

Activities:

Introduction including history and traditional land use of the Hunter Wetlands.

- wetland animals – structural features and adaptations - pond animal collection and identification (including sensitivity)
- physical conditions – weather and water quality - BHP Pond – measurement of elements of weather and water quality

- physical conditions – weather and water quality – Canoe Channel - water quality testing at two sites weather measurements at two sites
- structural features and adaptations of mangroves – examination of mangroves and the adaptations which assist their survival
- Aboriginal use of wetland plants and animals.

This program is delivered over 4hrs from 10am to 2pm.

Location

Wetlands Environmental Education Centre (WEEC) located at
Hunter Wetlands Centre, 412 Sandgate Rd, Shortland, Newcastle.
Please use School entry.

Site Description

Wetlands Environmental Education Centre is located at the Hunter Wetlands Centre, which is a managed wetland reserve with natural and artificial water features accessed by decks and established walking tracks. Wetlands Environmental Education Centre have a purpose built education centre including theatre, wet room and classroom.
The WEEC is a NSW Department school and staff are trained DoE teachers specialising in Environmental Education.

Excursion information

What to bring: Printed student workbook, clipboard and pencil, recess and lunch, refillable water bottle, hat, sunscreen, covered walking shoes plus any special requirements of the group. (Wet weather gear when necessary). Non-aerosol insect repellent is advisable.

WEEC teachers rely on the participation of visiting teachers to meet recommended supervision levels. Visiting teachers are ultimately responsible for behaviour of students, students with existing medical conditions or special needs.