

Field Study: Mangrove Ecosystems

Activity Outline

Aim

In this activity students explore the ecology of mangrove ecosystems and gain an appreciation for the diversity of life which they possess. Students will examine the the varying characteristics and adaptations that these life forms posses. Students will look at the whole ecosystem level and identify both positive and negative links between the study sites and adjacent ecosystems.

Key Understandings

- Ecosystems consist of both living and non-living components.
- Living things can be differentiated and identified using various characteristics.
- Energy continually flows through ecosystems.
- Matter cycles within ecosystems (i.e. carbon, oxygen and nitrogen)
- Human development and natural events can impact on the flow of energy and matter through different ecosystems.
- Appropriate ecosystem management relies upon an understanding of the varying relationships both within and between ecosystems.

Key terms

Abiotic, biotic, buoyancy, detrital, taxonomy, phylum, class, community, diversity, abundance, distribution, ecology, organisms, energy, sustainable management, ecosystem, environment, human impact, interaction, interconnectedness, matter, biogeochemical cycles, carbon, nitrogen, oxygen, dissolved oxygen, salinity, turbidity, water.

Human Society and its Environment (HSIE K-6) 2006

Strand Outcomes Relevant to Discovery Assisted School Activities:

- ENES1, ENES1.5, ENES2.5, ENES3.5: *Patterns of place and location*
- ENES1.6, ENES2.6, ENES3.6: *Relationships with places*

Science and Technology K-6 1993

Content Strands Relevant to Discovery Assisted School Activities:

- Living Things
- The Earth and its Surroundings

Geography Years 7-10 2003

Focus Areas and Outcomes Relevant to Discovery Assisted School Activities:

- *Investigating the World, Global Environments*: 4.1, 4.5, 4.6, 4.7, E4.5, E4.6

Science Years 7-10 2003

Focus Areas and Outcomes Relevant to Discovery Assisted School Activities:

- *The Applications and uses of Science*
- *Implications for society and the environment*
- 4.3, 4.4, 4.8.2, 4.8.4, 4.10, 5.9.4, 5.10, 5.11.2, LS.2, LS.4, L.S12, LS.14

Key competencies

- Working scientifically
- Collecting, analysing and organising information
- Communicating ideas and information
- Using technology
- Using mathematical ideas and techniques
- Working with others and in teams