



# Field Study: Sandy Shores Ecosystems

## Activity Outline

**Year 7-10**

### **Aim**

Within this activity students explore the ecology of coastal sandy shore ecosystems and gain an appreciation for the diversity of life they contain. Students examine the varying characteristics and adaptations that organisms inhabiting coastal sandy ecosystems possess. Students will identify organisms which inhabit sandy shorelines and examine a number of physical environmental factors which influence their distribution and abundance. 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 impact on the flow 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, desiccation, adaptation, predation, competition, herbivore, omnivore, carnivore, taxonomy, phylum, class, community, diversity, abundance, distribution, disturbance, ecology, organisms, sustainable management, ecosystem, environment, human impact, interaction, dissolved oxygen, salinity, redox, water.

### **Outcomes**

This activity is designed to address the outcomes from the following BOS NSW Content Endorsed Course syllabuses;

### **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:

## *Sandy Shores Ecosystems Activity Outline 10.1*

- *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