

### Activity: Introduction to Rocky Reefs (Gr 1 – 10)

**Overview:** The DEP website provides a general introduction to rocky reef and intertidal habitats in the Derwent estuary. This activity provides an introduction to the role each habitat plays in supporting biodiversity, and maintaining a clean and healthy waterway. This introduction covers definitions of 'rocky reefs' and the 'inter-tidal zone', as well as reef locations within the Derwent estuary. It also introduces what type of plants and animals live in them and what some common challenges are for inter-tidal zone organisms.

**TASK:** Present a mini-lesson to the class on rocky reefs and inter-tidal zones of south-eastern Australia, and then focus in on the Derwent estuary. Break up into small groups and ask students to explore the website to answer a range of general exploratory questions. The available information provides an introduction to habitats, communities, species, with links to other helpful websites. Regroup and contribute to shared answers on the board.

Students of different age groups can browse the website in one of three ways.

Grades 1 – 3: can interact with the conceptual diagram of a habitat by clicking on the animals to see information about that species, and learn about their role in the community (i.e., where they live, what they eat, and who eats them). This approach provides the opportunity to follow links to their relevant vegetation community to learn about other key species that live there.

Grades 4 – 10: can follow the menu items browsing the website students become familiar with the hierarchy, or organisation of species within ecosystems. For each key habitat type (e.g., tidal wetlands) a closely associated habitat is described, and the various vegetation communities occurring within those habitats are introduced. Following this, common species to each or multiple vegetation community types are introduced, with brief captions about where they live and feed. The vital role played by each habitat type is demonstrated by providing examples of their functional roles, as well as their cultural and/or economic importance. Key threats and ways to protect each habitat type are also outlined in this material, with links to classroom activities, factsheets, or other online material provided.

Grades 4 – 10: can also follow the menu items from Educational Resources>For students> to read about catchments, estuaries, and key habitats, animals and plants in the Derwent estuary.

Some initial questions may include:

- Why are reefs important to us (some major functions)?
- Why does seaweed differ in colour (red, green and brown)?
- What are some general threats to reefs?
- What are some specific threats to different types of reef animals?
- What are some threatened Tasmanian species that live on reefs or in the intertidal zone?
- What are the traditional uses of reef and intertidal areas by the local Aboriginal people?
- What surrounds the local wetlands and what impact is that having on the ecosystem?

Perhaps generate some discussion around how animal and plant diversity and density in reefs may compare to nearby sandy soft sediment, or seagrass beds.

- Would you expect more or less animals? Why?
- How would animals in rocky reefs differ from neighbouring habitats?
- What does increased structural complexity of reefs provide to animals?
- What does it take to live in the inter-tidal zone where you are exposed to air and the threat of desiccation?