

Stage 5: Protecting habitat

Concepts:

- Students will gain an understanding of habitat protection, and why it is needed.
- Investigate island habitats, why is protection of these places so important and how can this be achieved.

Student inquiry:

- What is habitat protection?
- What natural values need protecting?
- Who is responsible for protecting threatened species habitat in Western Australia?
- Why are islands so important?
- What protection measures can help protect important habitat?

AUSTRALIAN CURRICULUM – SCIENCE

Year 4

Living things depend on each other and the environment to survive (ACSSU073)

Year 5

Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)

Year 6

The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)

AUSTRALIAN CURRICULUM – GEOGRAPHY

Year 4

The importance of environments to animals and people, and different views on how they can be protected (ACHASSK088)

Year 5

The way people alter the environmental characteristics of Australian places (e.g. vegetation clearance, fencing, urban development, drainage, irrigation, farming, forest plantations, mining) (ACHASSK112)



Above left: Muiron Islands. Photo – DBCA Above right: Osprey nest. Photo – Carolyn Williams/DBCA

WA marine parks and reserves



Background information for teachers

What are protected areas?

Terrestrial and marine protected areas are vital as they provide protection of habitat essential for the survival of native flora and fauna, particularly threatened and migratory species.

In Western Australia, more than 31-million hectares of terrestrial and marine environments are protected through a system of national parks, marine parks, nature reserves and state forests. The Department of Biodiversity, Conservation and Attractions is responsible for managing these parks and reserves in accordance with the *Conservation and Land Management Act 1984*. These protected areas are managed to reduce threats such as feral animals, weeds, disturbance to species and habitat while maintaining access for scientific research and support social, recreational, cultural and spiritual values.

Why do islands need protection?

Western Australia has more than 3500 islands off its coast, more than any other state or territory in Australia. More than a third of Australia's critically endangered and endangered species rely on these islands for all or part of their life. They provide refuge for a number of small mammals that have been lost from the mainland. Islands also offer breeding, resting and foraging habitats for marine turtles, shorebirds, seabirds and seals. For these reasons many Western Australian islands are nature reserves, conservation parks or national parks.

Islands are highly valued as they provide habitat free from many of the pressures and types of disturbance found on the mainland including:

- Non-indigenous fauna species (foxes, cats, black rats, house mice, cane toads)
- Non-indigenous flora species (buffel grass and kapok bush)
- Minimal human disturbance from recreation, development, light pollution.



Above left: Sunday Island. Photo – DBCA Above right: Fairy tern. Photo - Grant Griffin/DBCA

Teacher direction:

1. Ask students to describe what they think a protected habitat is? Discuss what national parks, marine parks and nature reserves are. What are their benefits? (Conservation of flora and fauna, social, recreational, cultural, spiritual and health and wellbeing.) As a class investigate which is your closest national park, marine park or nature reserve. What threatened or migratory species are found there? What activities can you do there?
2. Read to the class the background information for teachers explaining protected areas and how they are managed.
3. As a class, discuss what an island or islet is? What are some of its key features? (For example isolated by water, small sandy beaches, rocky shores.)
4. Show the students the map of Western Australia's marine parks and reserves. Point out the area where the Pilbara islands are. Ask the students to describe to you what they may look like? What sort of climate do they have? What species might use these islands?
5. Ask students if they think islands are important habitats? Why/why not? What is different on uninhabited islands compared to the mainland? (Infrastructure, lights, cars, humans etc.) As a class brainstorm and list what can impact the islands ecosystem. Are they natural or human impacts? What would be the consequence of these impacts? Discuss what solutions could be used to minimise these impacts?
6. Provide the students with Activity sheet 5.1 and work in small groups to complete.
7. Have the student present their plans to the class. Discuss the different outcomes.
8. What values were protected?

Resources:

- Resource 1: Species profile – Posters 1, 2, 3, 4
- Resource 2: Habitats – Poster 5
- Resource 3: Pressures – Poster 6

Additional resources:

- Pilbara inshore island nature reserves
parks.dpaw.wa.gov.au/park/pilbara-inshore-islands
- Montebello Islands Marine Park
parks.dpaw.wa.gov.au/park/montebello-islands
- Dirk Hartog Island National Park
parks.dpaw.wa.gov.au/park/dirk-hartog-island

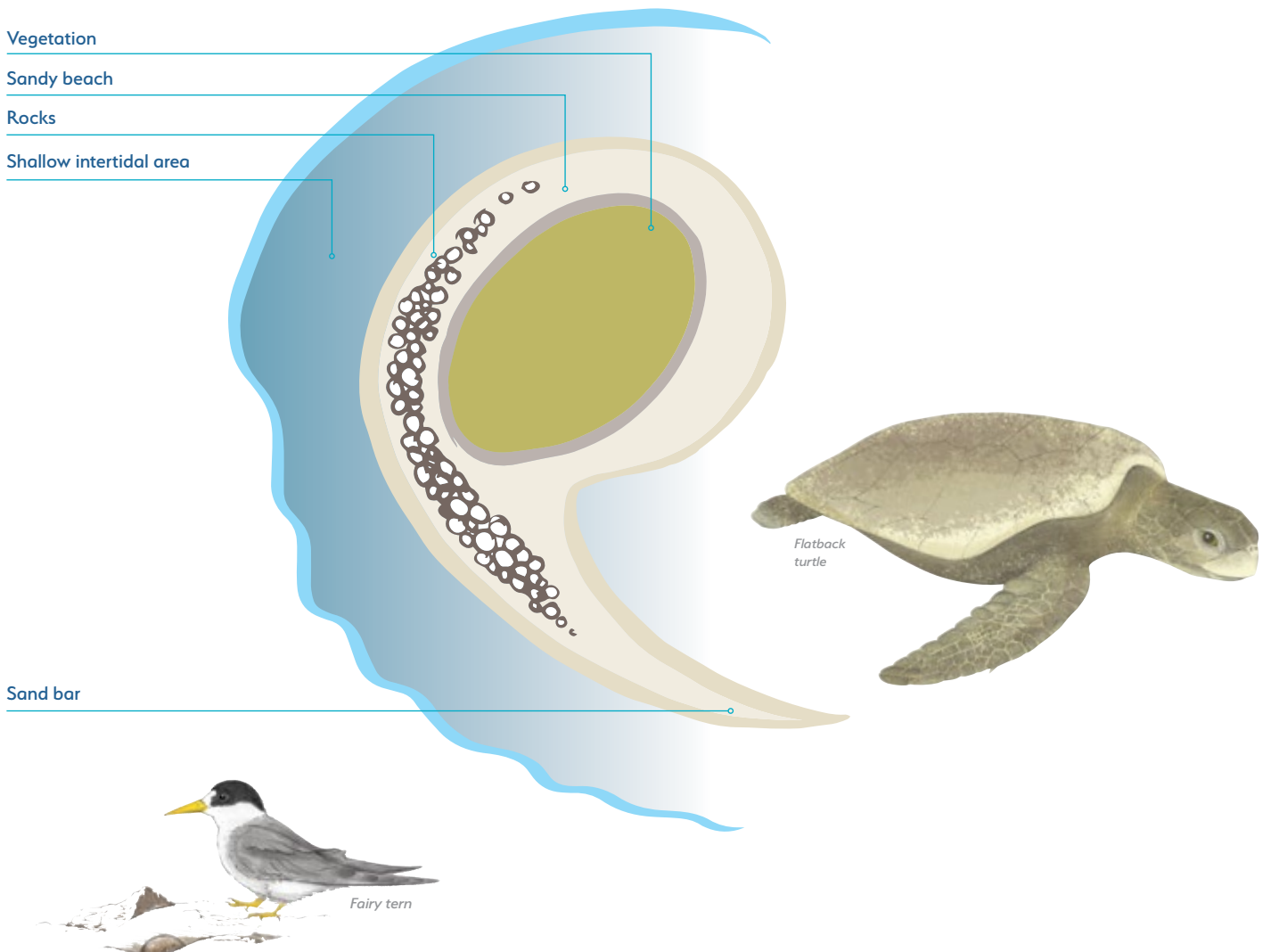


Activity sheet 5.1: Protecting island habitat

It has been discovered that Seabird Island has important natural and social values. How can you protect this island to ensure it remains a healthy habitat for nesting turtles and nesting, foraging and roosting shorebirds and seabirds as well as a place where future generations can enjoy nature?

Look at the map of Seabird island, using what is known about the island (key below) can you come up with a plan that will help protect important habitat and also allow people to also enjoy it.

- Flatback and green turtles nest on the islands from October to April each year.
- Wedge-tailed shearwaters nest in burrows in the vegetated section of the islands. They arrive in July, lay eggs in November, rear their young and depart in April.
- Fairy terns have been seen nesting on the island.
- Migratory and resident shorebirds including the ruddy turnstone and the red-capped plover are known to use the island.
- People have been seen camping on the island in January, March, July and late December. Campers use bright lights at night and have camp fires.
- Rope, bait bags, water bottles and food packaging has been seen washing up on the island.



STAGE 5: PROTECTING HABITAT
STUDENT ACTIVITY SHEET

The following questions will help guide your plan.

1. What are the main values of the island?

2. Is there a time of year that the island is vulnerable? Why?

3. Would people visiting the island be disruptive to wildlife?

4. What recreational activities would have the most impact?

5. How could you manage this?

6. Does the entire island need protection?

7. Why?

8. Using the questions above design a habitat protection plan for the island.
