

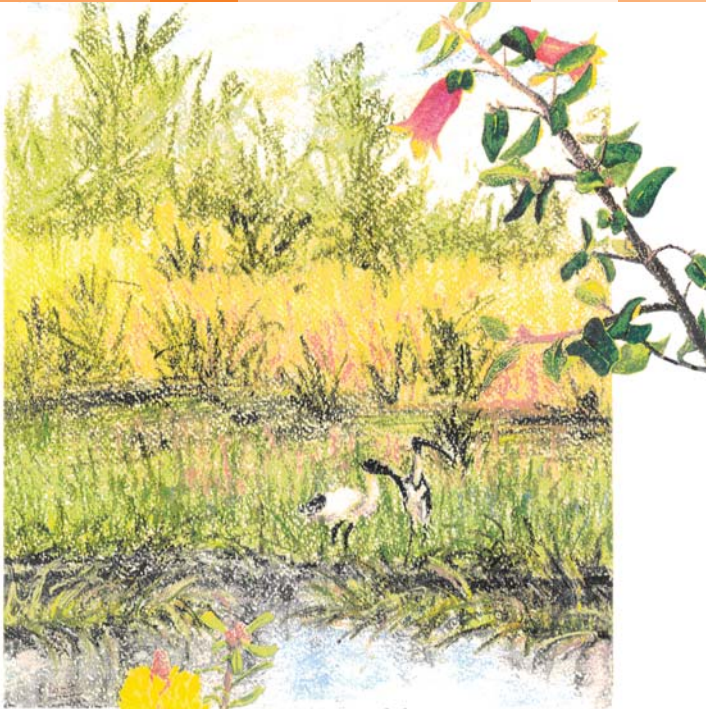


**PORTLAND  
ALUMINIUM**

Partnering Stronger Communities

# birds, beaks & bases

Portland Aluminium Environmental Education



birds, beaks & bases

Helping you protect our environment





## UNIT SUMMARY

This unit of work focuses on the study of birds, both within specific areas of Portland Aluminium Smelter and in the local environment. The proposed activity sequence incorporates elements of an interactive approach to teaching, whereby students use their prior knowledge, explore topics, pose their own questions and report their findings. This unit can be linked to other units within the 'Environmental Education for the South West Resource Kit'.

## LEARNING OBJECTIVES / FOCUS AREAS

Students will be able to:

- Name and describe at least three species of birds which frequent the Portland area
- Understand the different features of a bird and their implications.
- Explain the interrelationship between birds and their environment
- Collect and interpret information

## RESOURCES ATTACHED

- Suggested Teaching Sequence
- Activity Sheet 1 (Mix & Match)
- Activity Sheet 2 (What can you see?)
- Activity Sheet 3 (Data Collection)

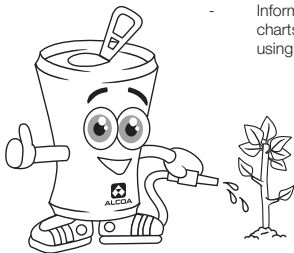
## SPECIALIST MATERIALS

- 'Birds, Beaks & Bases' Teachers booklet available from Portland Aluminium.
- [www.gould.edu.com.au](http://www.gould.edu.com.au)
- First Flight (Urban Activities for Early Birdwatchers); Gould League, 1991
- Field Guide to Wetland and Estuary Birds of the Glenelg Hopkins Region

## LEARNING OUTCOMES

Relevant outcomes from the Victorian Essential Learning Standards;  
Science: Knowledge and Understanding  
Level 3 - 5

- Students gain an appreciation of the effects of the environmental change on living things in ecosystems.
- Students classify animals or plants into their major groups
- Information can be presented in flow charts, as labelled drawings and by using timelines.



## TEACHING SEQUENCE OUTLINES

### Pre-visit (~4 lessons)

- Ask students to discuss their previous experiences with birds.
- Create a class master list of known birds
- Using the master list, have the class classify the birds, using their own system of classification (eg – colour, size, feet, habitat etc.)
- Investigative Activity (Ornithologists at Work). Have the students select a bird they know the least about. Investigate and make a list of questions, which they would like to have answered during their park visit.
- Data Collection Activity. Practise in the school grounds.

### The Visit (1/2 Day at Portland Aluminium Wetlands)

- Discuss birds, their habitat and their food sources (Activity Sheet 1)
- From the bird hide, what can you see? (Activity Sheet 2)
- Food Gatherers Relay Race
- Habitat observation & data collection (Activity Sheet 3)

### Post Visit (~3 lessons)

- Have students prepare a collage relating to the habitat they have studied during their visit.
- Investigate, research and report on a unique bird species and its habitat (eg. Brolga)
- Establish a class 'bird' database.

## FURTHER STUDY SUGGESTIONS

- Refer to other units represented in the "Environmental Education for the South West Resource Kit".

## ACTIVITY INFORMATION

During the visit to Portland Aluminium's wetlands students will be:

- Briefed on safety
- Given a background talk about Portland Aluminium's 'Smelter in the Park'
- Divided into small groups of 8-10
- Spending time at 3-4 stations relevant to the Birds, Beaks & Bases unit
- Completing activity sheets relevant to year levels
- Observing, discussing & collecting data relevant to bird habitats.
- Participating in a 'Food gatherers' relay race, which will give students an understanding of how beak shapes relates to birds and their food sources.
- Discussing the problems birds may encounter if their habitat is changed.

## MATERIALS REQUIRED

School - Gumboots, sun-hats, sunscreen, binoculars (optional) & Clipboards  
Portland Aluminium – Guides, Activity Sheets, Ref. Books and ID Charts



## BACKGROUND INFORMATION

### How do I get close and watch birds?

Wear clothing that matches the environment. Sit quietly in one place or watch through a bird hide. Binoculars are handy, but using your eyes is part of the fun.

### How do birds chew their food when they have no teeth?

In their throats they have a special pouch, called a crop that wets and crushes food. Some birds swallow small stones to help crush food in their crop.

**Why do birds sing?** They seem to sing mostly to claim territory or attract mates.

### Why are some birds brightly coloured?

For many social reasons, birds can see colour, unlike many mammals. Their colours may provide signals to other birds of the same species. You will notice that even brightly coloured birds can be hard to see in the trees, so they can still be camouflaged.

### Why don't birds fall off their perch when they are asleep?

They have a special mechanism that locks their toes as their body presses down on their ankles.

**Why is bird poo white?** Birds do not separate wee and poo. It all comes out together. The white part is what would be in a mammal wee.

### What should you do if you find a baby bird?

In almost every case leave it alone. Many baby birds leave the nest before they can fly. This is normal. Their parents will feed them. Even if you can't see the parents they are around. Always leave the baby bird alone unless they are injured. If they are injured ring a vet or wildlife shelter.

### Did the dinosaurs evolve into birds at the end of the age of dinosaurs?

Scientists are not sure. Some dinosaur skeletons are very much like bird skeletons.

**Which birds are the cleverest?** Parrots, cockatoos, ravens and magpies seem to be the cleverest birds.

### Some things you can do to help birds.

- Plant Australian native plants in the right places
- Plant some thickets of prickly bushes to protect small birds.
- Put a birdbath in your garden
- Build some nest boxes.
- Keep your cat well fed and indoors especially at night. Put bells on the cat's collar.
- Only feed a very small amount to garden birds

**Why are there birds, from other countries in Australia?** Last century, many immigrants admired the beauty of native birds but preferred the songs of European birds. They also believed that species from other countries would help farmers by eating insect pests.

**How can birds help to pollinate plants?** Birds such as honeyeaters visit flowers to feed on nectar, they move pollen from flower to flower, which means that the flower can produce seeds.

### What feature of a bird determines the type of food they can eat?

It's the size and shape of a bird's beak. For example the large pointed beak of a heron or egret helps them grab slippery fish or wriggly frogs. Finches have small triangular beaks for eating seeds and birds of prey have sharp hooked beaks for ripping apart their prey.

**Why do birds have different shaped feet?** It all depends of the type of habitat the birds live in. For example, water birds have webbed feet to help them get around a pond. Canopy birds rely on their hooked feet to grip branches.

**Our international tourists.** Many millions of wading birds visit our swamps and coastline to stay over for our summer. Many come from places such as Siberia, China and Japan.

## MIX & MATCH

### Activity Sheet 1

Connect the birds below with their food source:





## WHAT CAN YOU SEE?

### Activity Sheet 2

Refer to the wall charts: List the birds you can see:

#### WETLAND BIRDS

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#### URBAN BIRDS

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Birdwatchers Name: \_\_\_\_\_

Place: \_\_\_\_\_ Date: \_\_\_\_\_

Time: \_\_\_\_\_ Weather: \_\_\_\_\_

## DATA COLLECTION

### Activity Sheet 3

Choose a bird you have seen today. Fill out this sheet by making careful observations.  
Combine with other students to create a class database.

Birdfiler's name: \_\_\_\_\_

Name of bird: \_\_\_\_\_

Is it native or introduced (circle one)

Colour of feathers: \_\_\_\_\_

Size of bird (circle one) Draw its beak shape:

Small      Medium      Large

#### HABITAT (tick box)

This bird is usually found in:

- Gardens
- Parks / Open Spaces
- Areas with buildings
- Wetlands / Ponds
- Tall Trees
- Bushy areas
- Other

#### CALLS (tick box)

of the bird is a:

- Buzz
- Chatter
- Whistle
- Croak
- Warble
- Coo
- Quack

#### NUMBERS (tick box)

This bird is usually found in:

- Ones or twos
- Small Groups (<10)
- Small Flocks (<30)
- Large Flocks (>30)

#### FEEDING (tick box)

This bird:

- Eats food scraps
- Scratches leaf litter
- Probes grass and lawn
- Feeds among flowering plants
- Feeds in water
- Feeds in flight
- Other

#### WALK (tick box)

When this bird walks it:

- Hops
- Walks smoothly
- Walks jerkily
- Runs
- Waddles
- Not seen walking
- Other

#### FLIGHT (tick box)

- Hovers
- Flaps Slowly
- Flaps Quickly
- Flaps & Glides
- Glides / Soars
- Doesn't Fly
- Other



## BIRDS MOST COMMONLY FOUND IN THE PORTLAND AREA

Blackbird	Goshawk (brown)	Rail (buff-banded)
Black-cockatoo (Yellow Tailed)	Grassbird (little)	Raven (forest)
Bronze-cuckoo	Grebe (Australasian)	Raven (little)
Bronzewing (brush)	Grebe (hoary-headed)	Robin (eastern yellow)
Bronzewing (Common)	Greenfinch (European)	Rosella (crimson)
Chat (White-fronted)	Gull (silver)	Scrub-wren (white-browed)
Cisticola (golden-headed)	Harrier (marsh)	Shoveller (Australian)
Cockatoo (sulphur-crested)	Heron (pacific)	Shrike-thrush (grey)
Coot (eurasian)	Heron (rufous night)	Shirke-tit (crested)
Corella (long-billed)	Heron (white-faced)	Silvereye
Cormorant (great)	Hobby (Australian)	Skylark
Cormorant (little black)	Honeyeater (new Holland)	Snipe (latham's)
Cormorant (little pied)	Honeyeater (singing)	Sparrow (house)
Crake (baillon's)	Honeyeater (white-eared)	Spinebill (eastern)
Cuckoo (fan-tailed)	Honeyeater (white-faced)	Spoonbill (royal)
Cuckoo-Shrike (black-faced)	Honeyeater (yellow-faced)	Starling
Currawong (grey)	Ibis (sacred)	Swallow (welcome)
Dotteral (inland)	Ibis (straw-necked)	Swamphen (purple)
Duck (maned wood)	Kite (black-shouldered)	Swan (black)
Duck (musk)	Kookaburra (laughing)	Thornbill (brown)
Duck (pacific black)	Lapwing (banded)	Thornbill (striated)
Duck (chestnut-teal)	Lapwing (masked)	Thornbill (yellow-rumped)
Duck (grey-teal)	Lorikeet (musk)	Wagtail (willie)
Egret (cattle)	Maggie-Lark (Australian)	Warbler (reed)
Egret (great)	Maggie (Australian)	Wattlebird (little)
Emu-wren (southern)	Martin (fairy)	Wattlebird (red)
Falcon (brown)	Moorhen (dusky)	Whistler (olive)
Falcon (peregrine)	Owl (barn)	Whistler (rufous)
Fantail (grey)	Parrot (blue-winged)	Woodswallow (dusky)
Firetail (red-browed)	Pardalote (spotted)	Woodswallow (masked)
Galah	Pipit (Richards)	Wren (blue)
Goldfinch (european)	Plover (black-fronted)	

