

CURRICULUM RESOURCE

Early Stage 1: Science and Technology

The Purpose of this Zoo Project is to help students discover the needs of living things through science and technology.

WILDLIFE PATROL - LIVING THINGS



As detectives, students explore their surroundings. Their focus is to identify the local bird species and discover what they do while you are busy in the classroom. Students will observe how birds use the playground and other areas of the school and determine a course of action to improve the playground to better meet the everyday needs of their feathery friends!

At Taronga Western Plains Zoo, students will meet a variety of animals and learn about the basic needs of living things. This information can then be applied back at school to decide what needs to be done to ensure the birds in your playground are happy and healthy.

PROJECT OUTLINE

AT SCHOOL

Introduce your students to local birds by going on a 'Bird Patrol'. Explore the school playground and observe your local bird species as they go about their business.

AT THE ZOO

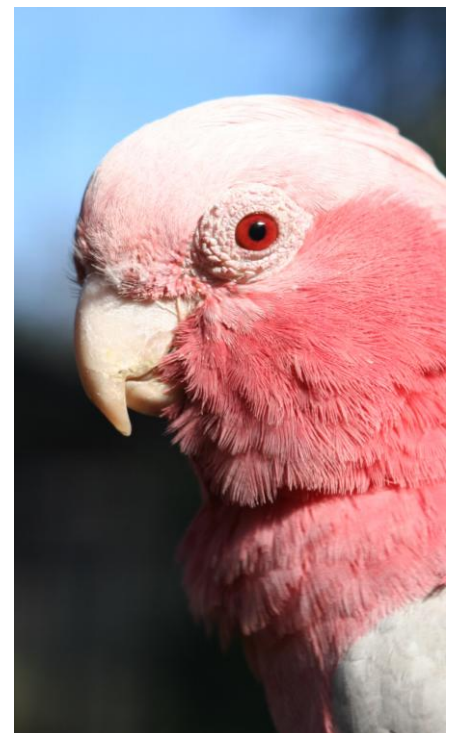
Taronga Western Plains Zoo has several exhibits where your students can observe birds as they interact with each other and their surroundings. There are also opportunities to observe free-ranging exotic bird species, including peacock and guinea fowl, and a plethora of natural spaces with wild native birds.

ZOO WORKSHOP

Our Zoo Educator led workshop will provide an opportunity for your students to meet a wide range of native animals. Throughout this workshop students can examine the features of animals and identify how these help animals meet all of their different needs.

BACK AT SCHOOL

Apply your new bird knowledge to decide how to improve the playground or school areas to encourage and support birds. You might like to start a Bird Patrol Club who become the protectors of your local birds. The club might care for existing bird habitat, build new habitats, remove playground rubbish or even build a bird bath!



AT SCHOOL – BEFORE THE ZOO

Use the playground to survey and discover the local birds at your school. Observe how birds depend on your school for their survival in an urban landscape.

Teacher Note: Why Birds? Birds can be found easily in nearly every school in the state, thus enabling almost every student to observe, learn and care for this group of animals.

WILDLIFE PATROLLING!

The intent of these tasks are to directly connect your school’s playground to the needs of living things, including birds. Students explore their surroundings and ask, “does my school provide for the basic needs of birds?”

BIRD IDENTIFICATION

Learn to identify at least 10 different common birds. Use the tweet sheet or, for a detailed guide, visit Birdlife Australia’s “[Birds in Backyards](#)” webpage and use the bird finder tool.

TWITCHING RECORDING OBSERVING

Q: What is ‘bird twitching’?

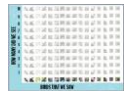
A: Looking for and identifying birds and ticking them off your list once spotted.

- Record your sightings with our ‘[TWPZ Tweet Sheet](#)’.
- Observe them long enough to see them use your playground to meet some of their *basic needs*.

GRAPH AND ANALYSE YOUR ‘TWITCH’

Share results via an individual or class graph. Graph or use it on your interactive whiteboard. ([Print It](#))

Our graph includes many common urban species.



Create another one specific to suit your local birds.

Discuss what students observed and explore their ideas.

Identify the birds by common name. Discuss where they were seen and what were they doing. Did the playground provide food/water/shelter?

HOW CAN I BE A BIRD TWITCHER?

Watch Bird Patroller Kerry as she prepares to twitch for local birds.



[PlayVideo](#)

After a successful ‘twitch’ your students will have observed typical bird behaviours.

Use our “TWPZ Birds Must Have” page to foster questions about birds living in your playground. ([Click Here](#))

TWITCH HINTS

- Make your own binoculars from kitchen tidy towel rolls, ‘camouflage’ paint and a neck strap.
- Make a bird hide for extra camouflage.
- Be quiet! Sneaky detectives see more birds!
- Go early when the playground is quiet.
- Use the ‘TWPZ Tweet-Sheet’ to help identify your birds. ([Click here](#))
- Observe the birds as they find their everyday basic needs.
- Listen to bird calls to locate help them.



Photographer: ChloePrecey

AT THE ZOO – YOUR SELF GUIDED FLIGHT PLAN!

Fly through Taronga Western Plains Zoo, exploring the variety of birds and other animals within the grounds.

EXPLORE

Taronga Western Plains Zoo only has a small number of birds on exhibit. These include the emu and ostrich which can be located using the Zoo Map ([click here to download](#)).

Your students will also see guinea fowl and peacock, which are part of our 'free ranging' animal collection and numerous species of wild birds throughout the Zoo grounds and wetlands.

CHALLENGE

Challenge your students to determine the food, water and shelter available for each of the birds they see at Taronga Western Plains Zoo. You may like them to compare and contrast with other animals in the Zoo.



COLLECTING STUDENT EVIDENCE

- Go twitching around the Zoo, remembering to listen as well as observe. The signage will help to identify the range of birds on display.
- Examine how our zookeepers provide food, water, and shelter to the birds in our exhibits.
- Examine some of our wetlands and identify the species of birds found there
- Survey the café and picnic grounds to identify bird species
- Examine sources of food, water and shelter for wild birds
- Teachers/Parents record short videos of students describing the animals they meet at different places in the zoo.
- Describe how Taronga cares for the animals.
- Photograph your students at various animal enclosures.
- Use these images and videos to construct class 'discovery' presentations.



MOBILE DEVICE SUGGESTIONS

- Have your supervising adults take photos and videos of birds that their students find in the Zoo.
- Use your images and recordings back at school to create resources including; student presentations and digital storybooks.

AT THE ZOO - WORKSHOP

Experience a workshop where students meet animals up close and discover how these animals depend on their local environments for survival.

PURPOSE

This workshop directly links to the curriculum outcomes listed on page 6 of this resource.

Specifically, we focus on the 'basic needs of living things' with an over-arching intention to build in students a curiosity for their surroundings as well as interest and enthusiasm towards science through birds.

DURING THE WORKSHOP, YOUR STUDENTS WILL

- Meet a range of animals
- Learn about the food, water and shelter requirements for each animal
- Explore bird habitats in the grounds surrounding the Education Centre
- Discuss your school playground and how it provides an animals' basic needs.

Tawny Frogmouths are quite common but very secretive.



SEND TO US BEFORE YOUR WORKSHOP!

Send us a list of birds that you have spotted in your school playground.

We will include in the workshop some information about what your birds eat, where they live and some actions students can take to care for them.

TECHNOLOGY

During the workshop, nominate 1 student to collect images and video of animals. These are excellent for reference back at school, as you create presentations and other digital records of their learning.



CONNECT

Students meet our animals up close, as they learn about the basic needs of animals for survival.

BIRD PATROL – IMPROVING OUR LOCAL ENVIRONMENT

MAKE A DIFFERENCE - TIME FOR A CLASS DECISION

CHALLENGE

Support your students as they identify an environmental issue in their own school and develop a solution.

Allow students to discuss and debate what your school needs to support local bird species. You may like to refine your surveying techniques to look at the abundance of different species. Students may also like to debate which bird species the school should prioritise (not necessarily the most numerous or obvious species in the yard!).

ANIMAL FOOD

- Plants, shrubs and trees will provide flowers, seeds and bugs.
- Leaf litter is perfect for small invertebrates.
- Use rubbish bin lids to stop birds eating unnatural food such as your lunch scraps and other rubbish.



WATER

- Provide drinking and bath water by building a bird bath (There are fun easy ways to make bird baths, try using recycled materials. Or there are many options to buy one.)
- Locate your bird bath in the open so predators cannot sneak up on the birds, but close enough to trees for an easy escape.
- Regular fresh water and thorough cleaning will keep birds healthy and coming back.

KEEP IN CONTACT – WE’D LOVE TO HEAR FROM YOU!

Taronga wants to hear about your school’s conservation actions and successes! Send us your stories and amazing pictures* about the changes you have made, after your visit to the Zoo. You can also send us any links to your class Blogs about your visit or even student created conservation websites.

Email wpzedcentre@zoo.nsw.gov.au

**Please ensure all students in photos have a signed permission letter for publication of student’s work or photographs on websites.*

MORE BIRD DISCOVERIES

Use our simple “TWPZ Busy Birds” page to help you discover what your school birds are doing and what they need. ([Click here](#))

ANIMAL SHELTER

- Plants of all shapes and sizes are important for shelter.
- Some of your birds might even need special hollows to nest in
- Plant shrubs and trees to make the playground bird friendly.
- Create a class roster for watering, weeding and mulching

WAS YOUR SOLUTION USEFUL?

Throughout the year, students should monitor their playground ‘improvement’ and observe changes in bird visitors, both to numbers and types (species). Take note of all changes, including other new species, weeds etc



RESOURCES & SYLLABUS LINKS

MOBILE DEVICE SUGGESTIONS

Using devices to collect images and video will support students as they are introduced to current and new technologies.

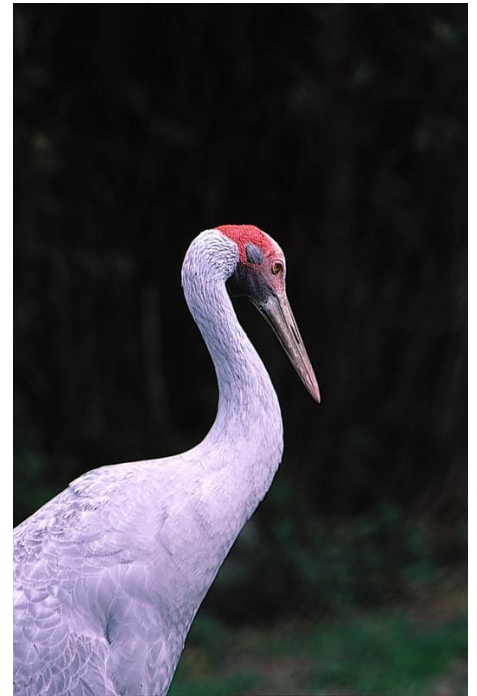
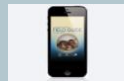
The Taronga/DEC “Wild Australia” app for iPad contains information and activities that will complement the Bird Patrol project.

(Click on the image)



The Australian Museum fauna app for Android or iOS will help your students explore a wider range of birds and other animals than what you would encounter at school.

(Click on the image)



INTERESTING READING

Common Myna vs native Noisy Miner

<http://australianmuseum.net.au/blogpost/Science/myna-or-miner>

List of the Top 30 urban Birds

<http://australianmuseum.net.au/Birds-in-Backyards-top-30-urban-birds>

Birdlife Australia – bird finder

<http://www.birdsinbackyards.net/finder>

NSW Government information

<http://www.environment.nsw.gov.au/animals/NativeAnimalFactSheetsbyTitle.htm>

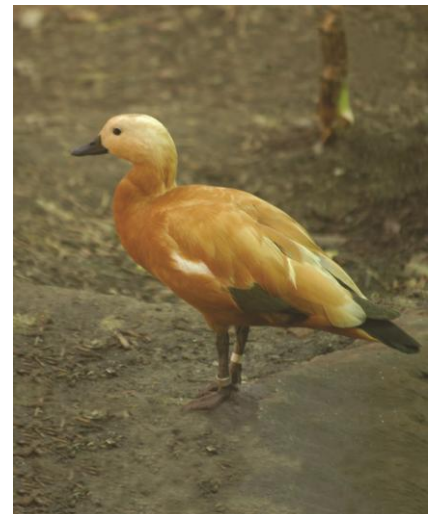


Image Credit: Leonie Saville

RESOURCES & SYLLABUS LINKS

NSW SCIENCE K-10 SYLLABUS OUTCOMES

- **Values and Attitudes**

STe- 1VA: Shows interest and enthusiasm for science and technology, responding to their curiosity, questions and perceived needs and wants

STe – 2VA: Demonstrates a willingness to engage responsibly with local, national and global issues relevant to their lives and to shaping sustainable futures

- **Skills**

STe – 4WS: investigates questions and predictions by collecting and recording data, sharing and reflecting on their experiences and comparing what they and others know.

STe – 5WT: uses a structured design process, everyday tools, materials, equipment and techniques to produce solutions that respond to identified needs and wants

- **Knowledge and Understanding**

ST1 – 9ES: identifies ways that people use science in their daily lives to care for the environment and the Earth's resources

ST1 – 11LW: describes ways that different places in the environment provide for the needs of living things

STe – 8NE: identifies the basic needs of living things

LEARNING ACROSS THE CURRICULUM



LITERACY LINKS

This program includes links to the K-6 Literacy Continuum from Cluster 2 – Cluster 4 in the areas of Aspects of Writing and Aspects of Speaking, Reading Texts and Vocabulary Knowledge.

...MORE EDUCATION OPPORTUNITIES WITH TARONGA WESTERN PLAINS ZOO

BRING YOUR CREATURES TO SPEND A NIGHT WITH OURS!

Organise a Billabong Camp ZoosnooZ at Taronga Western Plains Zoo

ZoosnooZ is a unique sleepover experience and a great way for your students to learn about animals and the environment.

Your students will:

- Enjoy a great BBQ dinner under the stars
- Discover wild creatures on your night zoo walk with a special Australasian themed tour!
- Get close to amazing animals with a special encounter and lesson in the Education Centre
- Enjoy a continental breakfast then go on a behind-the-scenes early morning walk
- Spend the following day in the stimulating learning environment of the Zoo

ZoosnooZ is great fun and can be incorporated into any curriculum-related excursion for your students. It's also good for team building!



ZOOMOBILES - LET US BRING OUR ZOO TO YOU!

Taronga's [Zoomobile outreach programs](#) visit a diverse range of venues to provide hands-on learning and entertainment for all ages and most occasions. It is offered from both Taronga and Taronga Western Plains Zoo.

During a visit, your audience will meet, learn about and interact with native animals, with the aim of encouraging them to support native wildlife conservation.

Our Zoomobiles will present:

- Lessons for Primary and Secondary
- Animals of the Dreaming workshop
- At Community Events



TWILIGHT SAFARI.

Our Twilight Safari is an amazing opportunity for students to explore the Zoo at dusk! Listen out for roars, screeches and growls. See animals stalking in the dark; and meet other Zoo residents that come out to play after the sun goes down! The Twilight Safari is African themed and includes:

- Feasting on a BBQ dinner under the stars
- Get up close to amazing zoo residents with a session in the Education Centre
- Discovering wild animals on your Zoo night walk



...MORE EDUCATION OPPORTUNITIES WITH TARONGA WESTERN PLAINS ZOO

PROJECT IN-SITU

Project In Situ is an award winning Community Based Conservation program. Students become involved in genuine outcomes, protecting a locally threatened species.

Your students will investigate the plight of a locally threatened species, including visit the habitat of the animal and hearing first hand from the industry experts currently working on its recovery. The students become involved in real life, contextual issues that involve problem solving, decision-making, investigative skills and reflection as they design and deliver a community awareness and behaviour change strategy to contribute to its recovery.



SOMETHING FOR TEACHERS- JOIN TTA TODAY!

The Taronga Teachers Association (TTA) is a professional membership group that is committed to supporting and assisting teachers to become more effective environmental educators. Members will receive a variety of unique experiences and activities that focus on animals and the environment. These include free entry to both Taronga Zoo and Taronga Western Plains Zoo for 12 months as well as access to specific TTA events such as:

- Key note lectures
- Behind the scenes tours
- Conferences

These exciting activities are designed and delivered to inspire teachers to become active advocates for wildlife and the environment.

Taronga recognises the need to support teachers in their vital role as educators of future Earth Citizens.

THEME WEEKS

Taronga Western Plains Zoo offers a variety of theme weeks throughout the year including;

- National Science Week
- Book Week
- Threatened Species Day
- World Water Day
- NAIDOC
- World Environment Day

For more information, follow the link:

<https://taronga.org.au/education/education-dubbo>



EARLY MORNING WALKS

Our leisurely guided walks are a fantastic behind the scenes experience for students and teachers. Starting at dawn when the animals awaken, the walk takes approx 2 hours. Breakfast packs are also available for purchase after your walk.

