

# CURRICULUM RESOURCE

Stage 4 & Stage 5: Design and Technology/ Science / English

The Purpose of this Zoo Project is to enhance student knowledge of wildlife adaptations, animal enclosure design and Taronga's welfare charter.

## WHO CARES ABOUT ANIMAL WELFARE?



Take a guided tour of Taronga Western Plains Zoo and examine the diversity of local and international species and the range of exhibits in which they reside. Conduct animal behavioural studies to inform your choices in designing a contemporary animal exhibit or visitor experience plan.

### PROJECT OUTLINE

#### AT SCHOOL

Become an investigative reporter! Choose a species from Taronga Western Plains Zoo and undertake research about the animal's biology and ecology.

#### AT THE ZOO

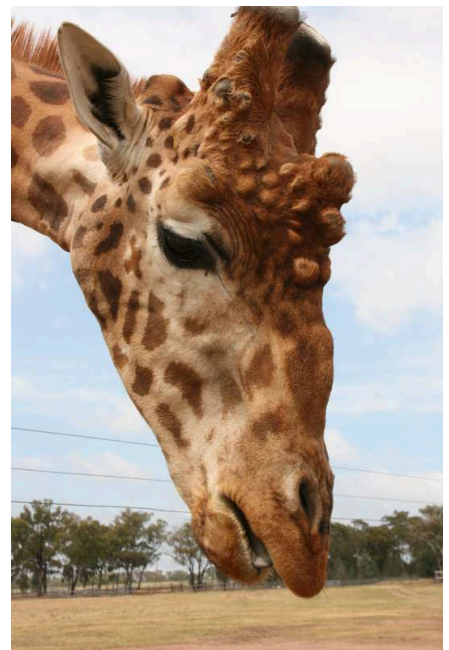
Take a tour of key Zoo exhibits to examine innovative and creative design solutions for animal exhibits. You will evaluate a range of design processes which integrate emerging technologies, ethical design principles and Workplace Health and Safety and exhibit standard requirements.

#### ZOO WORKSHOP

Examine innovations in exhibit design and visitor experience and learn about Taronga's Animal Welfare Charter and its implications for exhibit design.

#### BACK AT SCHOOL

Describe and follow a design process to develop a design brief for a new enclosure for your selected species at Taronga Western Plains Zoo. You will need to incorporate legislative obligations, an understanding of the specific animal requirements and visitor experience within your design.



# AT SCHOOL

Become an investigative Reporter! Choose a species from Taronga Western Plains Zoo and undertake research about the animal's biology and ecology.

## DISCOVER AND DESIGN!

### ANIMAL WELFARE CHARTER

When designing Zoo exhibits, Taronga aims to reproduce (as closely as possible) the animal's natural environment, taking into consideration their behavioural and physiological needs. This is why it is so important to undertake species specific research.

You can choose to undertake your design project from the following list of species

- ❖ Giraffe
- ❖ Ring Tailed Lemur
- ❖ Sumatran Tiger
- ❖ Asian Elephant



Before coming to the Zoo, you will need to choose the species that you would like to be the focus of your design project. It is important that you learn some key information about this species prior to coming to the Zoo including;

- ❖ Habitat requirements and distribution
- ❖ Diet
- ❖ Behaviour
- ❖ Adaptations
- ❖ Conservation Status
- ❖ Hypothesize what you think the species role in the Zoo would be, given the information you have collected on it.

NB: You can choose a species not on the list above, however please note there are only resources supplied for those above.

### ROLE OF THE MODERN ZOO

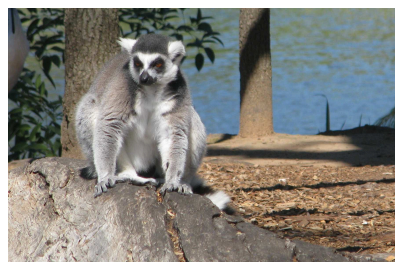
Zoos have been around since the mid-18<sup>th</sup> Century, but over time the design of Zoo exhibits has changed as a direct reflection of the values and understandings of society, in particular in the field of Science.

Modern Zoos are now considered Conservation, Education, Tourism and Research facilities and support both conservation within their doors and *For the Wild!*

At Taronga, we believe that wildlife and humans can share this planet. We're working tirelessly to achieve a shared future; helping threatened species to breed, protecting their genetic diversity and even re-introducing them to the wild. We're striving to be a centre for conservation excellence and through our work we aim to inspire individuals and communities.

### SPECIES IN OUR CARE

Taronga cares for 4,000 animals from over 350 species, many of which are threatened and some even critically endangered. Taronga participates in a number of conservation actions which benefits both animals within the Zoo, as well as their wild counterparts. Some of our animals are involved in breeding programs and others in research, such as the Animal Gene Storage Resource Centre of Australia, located at Taronga Western Plains Zoo, which includes a "Frozen Zoo" of genetic material. This program aims to develop new techniques to collect, preserve and store genetic material from endangered and other important species including the Black Rhinoceros, Tasmanian Devil and African Wild Dog.





# AT THE ZOO

A guided (or self-guided) investigation

## DESIGN PROJECT JOURNAL!

Your Design Project Journal is a great way for students to track research and develop a design brief for a creative and innovative solution to exhibit design or visitor experience plan. It provides opportunities for you to:

- ❖ collect, organise and analyze information
- ❖ communicate your ideas and information
- ❖ plan and organise your design activity
- ❖ solve problems
- ❖ consider costings, measurements, materials etc
- ❖ Teachers can also use this for both formative and summative assessment

## EXPLORE

- Complete an ethogram case study (with your guide)
- Complete an ethogram for your selected species
- Complete a visitor foot fall case study (with your guide)
- Complete a visitor foot fall study at your selected species exhibit
- Photograph exhibit elements from your selected species and at least 2 other species within the Zoo
- Complete your Design Project Journal

## CONNECT

- Meet native Australian animals to connect to some of our animal ambassadors
- Connect with the animals you are investigating at their exhibits and add any information to your pre-visit research
- Associate visitor behaviour with the design of the exhibit

## DISCOVER

- Discover the diversity of approaches to be considered when designing a Zoo exhibit
- Learn about how the Taronga Animal Welfare Charter influences ethical exhibit design
- Wonder at the amazing features of animals and how these might impact on the design of your exhibits

## COMPLETE YOUR INVESTIGATION

- Return to school and complete your design project. Remember, you will need to incorporate legislative obligations, an understanding of the specific animal requirements and visitor experience within your design.
- It is suggested that Stage 4 students create a visitor experience plan and Stage 5 students create an exhibit design as their major project.

## LINKS TO RESOURCES.

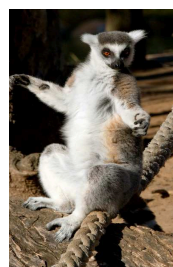
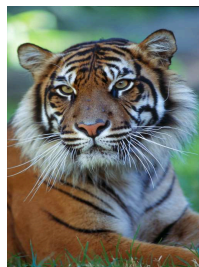
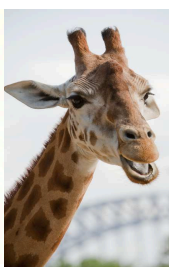
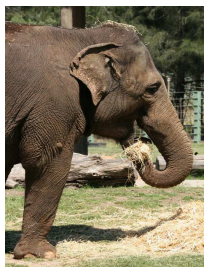
### PB Works

Upon booking this program you will receive an invitation to join a collaborative workspace. This will allow students to gain access to additional resources and to even collaborate on line.

### Exclusive Video Footage

Upon booking this program you will receive access to exclusive footage that can be used for additional studies of animal and visitor behaviour from your classroom!

Image Credit: Lorinda Taylor



# SYLLABUS LINKS

## INTEGRATED CURRICULUM

This program can be delivered to meet outcomes explicit to subject areas or as part of an Integrated Unit of work across Design and Technology, Science and English. The central theme to the project is “How do we design exhibits at Taronga which support the Animal Welfare Charter and the Zoo’s vision to *Secure a Shared Future for Wildlife and People*”. Through delivering integrated curriculum we strive to enrich student learning through providing rich, authentic and contextual learning experiences.

## DESIGN AND TECHNOLOGY OUTCOMES

- **Objective 1:** Knowledge and understanding of design concepts and processes (4.1.1, 4.1.2, 5.1.1, 5.1.2)
- **Objective 2:** Understanding and the appreciation of the impact of past, current and emerging technologies on the individual, society and environments (4.2.1, 5.2.1)
- **Objective 3:** Knowledge and understanding of the work of designers and the issues and trends that influence their work (4.3.1, 4.3.2, 5.3.1, 5.3.2)
- **Objective 4:** Knowledge and understanding of skills in innovation, creativity and enterprise (4.4.1, 5.4.1)
- **Objective 5:** Skills in communicating design ideas and solutions (4.5.1, 5.5.1)
- **Objective 6:** Knowledge and understanding of and skills in managing resources and producing quality design solutions (4.6.1, 4.6.2, 4.6.3, 5.6.1, 5.6.2, 5.6.3)

## QUALITY TEACHING

This program supports the 3 dimensions of pedagogy:

- Promotes intellectual quality
- Provides a quality learning environment
- Supports significance of student work

### • Content:

SC4 – 8WS, SC4 – 9WS  
SC5 – 6WS, SC5 – 7WS,  
SC5 – 8WS, SC5 – 9WS  
SC4 – 14LW, SC4 – 5LW,  
SC5 – 14LW, SC5 – 5LW

## ENGLISH OUTCOMES

Can accommodate for life skills and ESL scales.

- **Objective B, Outcome 3:** uses and describes language forms, features and structures of texts appropriate to a range of purposes, audiences and contexts (EN4 – 3B, EN5 – 3B)
- **Objective B, Outcome 4:** makes effective language choices to creatively shape meaning with accuracy, clarity and coherence (EN4 – 4B, EN5 – 4B)
- **Objective C, Outcome 5:** thinks imaginatively, creatively, interpretively and critically about information, ideas and arguments to respond to and compose texts (EN4 – 5C, EN5 – 5C)
- **Objective C, Outcome 6:** identifies and explains connections between and among texts (EN4 – 6C, EN5 – 6C)
- **Objective D, Outcome 8:** identifies, considers and appreciates cultural expression in texts (EN4 – 8D)
- **Objective E, Outcome 9:** uses, reflects on and assesses their individual and collaborative skills for learning (EN4 – 9E, EN5 – 9E)

## LEARNING ACROSS THE CURRICULUM



## LITERACY LINKS

This program includes links to the 7-10 Literacy Continuum from Cluster 13 – Cluster 15 in the areas of Reading Texts, Comprehension, Vocabulary Knowledge and Aspects of Writing. Assessment Tasks could also be tailored to include Aspects of Speaking.

# RESOURCES

Resources, links etc

## Designing Zoos

<http://designingzoos.com/2008/07/15/the-next-zoo-design-revolution/>

## Zoolex

<http://www.zoolex.org/zoolexcgi/gallery.py>

## Trends in Exhibition

[http://www.joncoedesign.com/trends/exhibit\\_trends.htm](http://www.joncoedesign.com/trends/exhibit_trends.htm)

## Planning Zoos for Generations

<http://www.clrdesign.com/our-work>

## Animal Behaviour and Exhibit Design

<http://zoodesign.files.wordpress.com/2011/03/chapter-18-integrating-animal-behavior.pdf>

## Zoo Exhibit Design Trends

<http://www.zoonews.co.uk/IZN/380/IZN-380-exhibits.html>

## The Portico Group

[http://porticogroup.com/portfolio/exhibit\\_design](http://porticogroup.com/portfolio/exhibit_design)

## Zoo Habitats - Manufacturers

<http://www.pangea.dk/zoo-habitats>

## Visitor Learning

<http://australianmuseum.net.au/Making-a-difference-what-have-we-learned-about-visitor-learning/>

## Following Visitors and What it Tells Us

<http://www.izea.net/education/journal%202007%20following%20visitors%20and%20what%20it%20tells%20us.pdf>

## Conservation Status of Species – IUCN Red List

<http://www.iucnredlist.org/>

## General Standards for Exhibiting Animals in NSW

<http://www.dpi.nsw.gov.au/agriculture/livestock/animal-welfare/exhibit/general>

## Policy for Managing Solitary Elephants in NSW

[http://www.dpi.nsw.gov.au/\\_data/assets/pdf\\_file/0010/264484/Policy-on-the-management-of-solitary-elephants-in-NSW.pdf](http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0010/264484/Policy-on-the-management-of-solitary-elephants-in-NSW.pdf)

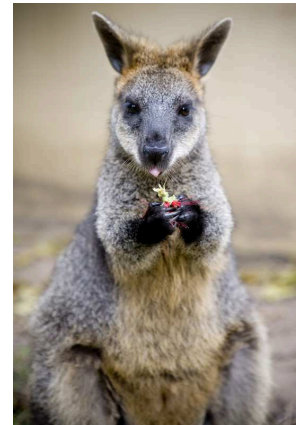


Image Credit: Mandy Everett



Catholic Education  
Diocese of Parramatta



Education &  
Communities



For the Wild





# ...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.

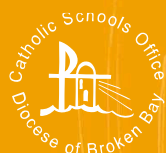
Our Zoomobiles will present:

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



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



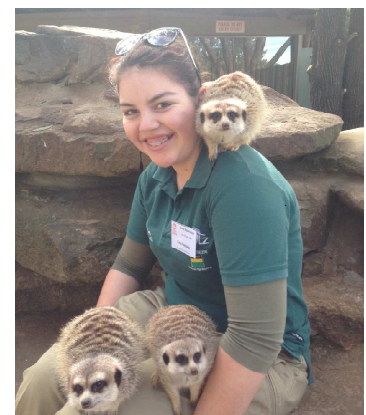
# ...MORE EDUCATION OPPORTUNITIES WITH TARONGA WESTERN PLAINS ZOO

## YOUTH AT THE ZOO - YATZ!

YATZ is a fun, educational program for 13 - 19 year olds, held at Taronga Zoo and Taronga Western Plains Zoo. Teens participate in a variety of activities both inside and outside of the Zoos, throughout all school holidays and occasionally during the school term. Participants get the opportunity to learn about many aspects of our Zoos, while the Zoos benefit from having access to a group of young people with energy, motivation and a genuine interest in animals.

Membership Includes:

- Involvement in a range of activities both during school holidays and during term time
- The opportunity to work with zoo staff, including keepers
- 12 months free entry to Taronga Zoo and Taronga Western Plains Zoos
- YATZ uniform and ID badge
- Magazines and newsletters
- Invitations to VIP events and presentations



## THEME WEEKS

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

- National Science Week
- Evolution of Australian Biota
- Book Week
- Threatened Species Day
- Tourism Day
- Career Days
- Meet a Keeper

For more information, follow the link:

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



## 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.



Catholic Education  
Diocese of Parramatta



Education &  
Communities



For the Wild



For the Wild