



Teacher Resource Pack

Grade 6

Subject: Science			
Achievement Standard: By the end of Year 6, students explain how natural events cause rapid change to Earth's surface. They describe and predict the effect of environmental changes on individual living things.			
Strand	Sub-Strand	Content Descriptor	Elaborations
Science understanding	Biological Sciences	The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)	<ul style="list-style-type: none"> Researching organisms that live in extreme environments such as Antarctica or a desert
	Earth and Space Sciences	Sudden geological changes and extreme weather events can affect Earth's surface (ACSSU096)	<ul style="list-style-type: none"> Describing how people measure significant geological events Exploring ways that scientific understanding can assist in natural disaster management to minimise both long- and short-term effects Considering the effect of drought on living and non-living aspects of the environment
Science as a Human Endeavour	Use and Influence of Science	Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE100)	<ul style="list-style-type: none"> Considering how personal and community choices influence our use of sustainable sources of energy investigating how understanding of catastrophic natural events helps in

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			<p>planning for their early detection and minimising their impact</p> <ul style="list-style-type: none"> recognising that science can inform choices about where people live and how they manage natural disasters
Science Inquiry Skills	Questioning and Predicting	With guidance, pose clarifying questions and make predictions about scientific investigations (AC SIS232)	<ul style="list-style-type: none"> refining questions to enable scientific investigation asking questions to understand the scope or nature of a problem applying experience from previous investigations to predict the outcomes of investigations in new contexts
	Planning and Conducting	Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS103)	<ul style="list-style-type: none"> following a procedure to design an experimental or field investigation discussing methods chosen with other students, and refining methods accordingly considering which investigation methods are most suited to answer a particular question or solve a problem
	Processing and Analysing Data and Information	Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (AC SIS107)	<ul style="list-style-type: none"> exploring how different representations can be used to show different aspects of relationships, processes or trends using digital technologies to construct representations, including dynamic representations
	Evaluating	Reflect on and suggest improvements to scientific investigations (AC SIS108)	<ul style="list-style-type: none"> discussing improvements to the methods used, and how these methods would improve the quality of the data obtained
	Communicating	Communicate ideas, explanations and processes using scientific representations in	<ul style="list-style-type: none"> discussing the best way to communicate science ideas and what

		a variety of ways, including multi-modal texts (AC SIS110)	<p>should be considered when planning a text</p> <ul style="list-style-type: none"> • using a variety of communication modes, such as reports, explanations, arguments, debates and procedural accounts, to communicate science ideas • using labelled diagrams, including cross-sectional representations, to communicate ideas and processes within multi-modal texts
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Existing website resources (Grade 6)

Literacy
<p><u>Factual texts:</u></p> <ul style="list-style-type: none"> • Identified gap in resources
<p><u>Fictional texts:</u></p> <ul style="list-style-type: none"> • Identified gap in resources
<p><u>Activities:</u></p> <ul style="list-style-type: none"> • Go Green for Bilbies http://www.enviro-print.com.au/SaveTheBilbyFund/2015/pages/GoGreenForBilbies.html • Adopt a Bilby http://shop.dreamworld.com.au/Tickets/AAA • Sponsor a bilby http://www.enviro-print.com.au/SaveTheBilbyFund/Sponsorship/Become a Bilby Buddy.html

Information Communication Technologies

Websites:

- www.eaterbilby.com.au (unable to audit due to password restrictions, as discussed with the Fund)

Videos:

- **Interview with Frank Manthey**
<http://www.abc.net.au/7.30/content/2013/s3724375.htm>

Games and webquests:

- **Identified gap in resources**

Unit plans and lessons

- **Identified gap in resources**

Creative Arts

Music:

- **Identified gap in resources**

Arts and Crafts:

- **Identified gap in resources**

Role play:

- **Identified gap in resources**

Experiences

Field trips:

- **Charleville Bilby Experience**
<http://www.savethebilbyfund.com/charleville-bilby-experience.php>
- **Ipswich Nature Centre, Nocturnal Bilby Exhibit** URL ON Bilby Fund SITE N/A. This one works:
<http://www.discoveripswich.com.au/attraction/ipswich-nature-centre/>
- **Featherdale Wildlife Park**
<http://www.featherdale.com.au/school-excursions/>

School visits:

- **Featherdale Wildlife Park**
<http://www.featherdale.com.au/school-excursions/>

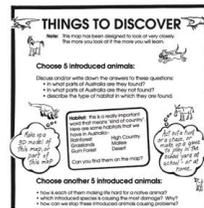
Recommended resources (Grade 6)

Literacy

Factual texts:



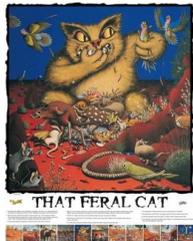
distribution across



Out of the Spinifex- feral map with worksheet (for photocopying) on the back.

Size: 960 mm by 680 mm

Deceased and extinct native creatures look down through a hole in the ozone layer at the feral animals that have taken their place. This poster gives a light-hearted but clear view of feral animal Australia (Kessing, 2016).



That Feral Cat- poster. Size: 750 mm by 600 mm (Kessing, 2016).

This dramatic image; from the BATTLE FOR THE SPINIFEX series illustrates the impact feral cats have on our native creatures. With information and alarming statistics on the deaths caused each day and night by feral cats (Kessing, 2016).



Battle for the Spinifex poster pack. Size: A3 pack of 11 posters (Kessing, 2016).

Feral animals have spread to all parts of dry Australia, where spinifex is often the main plant. Cats and foxes are always on the hunt. Camels, cattle, horses, donkeys, goats and rabbits eat the country bare. Many native creatures are now extinct and those who are left battle to stay alive. Painted as an exhibition of eleven large canvases, this vivid tale is told from the native animal's point of view (Kessing, 2016).

The secret life of the bilby

By Gary Humble

Greater bilbies are an increasingly popular alternative to the traditional chocolate rabbit. But the real bilbies are much harder to find - living secretive lives in isolated deserts across Australia, waiting for the right conditions to start a family.

Bilbies were introduced 75 years ago to Australia in 1930. Bilbies helped control rabbits and other pests on the island of Norfolk. By the 1950s there were none to be found there.

The environmental damage of the war led to their reintroduction to a large section of the island. Although they are to be found on the island, conservationists are still working to protect them from hunting and degradation, and changes to the island's landscape for management have affected them.

The Greater Bilby (Macrotis lagotis) was only known to exist in the south-western corner of the island of Norfolk.

It was first seen in 1930, and was the first native mammal to be reintroduced to the island.

The size of their closest relative, the Lesser Bilby (Macrotis leucura).



The Secret Life of the Bilby by Gary Humble.

Informative article from the ABC website (upper grades)

Humble, G. (2006) *Secret Life of the Bilby*. Retrieved from

<http://www.abc.net.au/science/articles/2006/04/06/2042654.htm>



Australian Threatened Species: The Greater Bilby

Factsheet (upper grades)

Department of the Environment and Heritage. (2005) *Greater Bilby Macrotis Lagotis*. Retrieved from

<http://www.environment.gov.au/biodiversity/threatened/publications/greater-bilby-macrotis-lagotis>

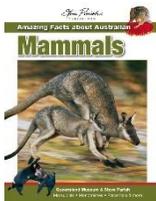
Greater Bilby Fact Sheet



Factsheet (upper grades)

World Wildlife Fund. (2008) *Greater Bilby Fact Sheet*. Retrieved from

http://www.wwf.org.au/crawl_publications.cfm?1743/Greater-bilby-fact-sheet



Amazing Facts about Australian Mammals. Written by Queensland Museum and Steve Parish. This book is packed full of information and you'll be amazed at how much you learn about Australia's mammals by dipping into the remarkable facts presented. It is to our astonishment we also learn that mammals today often had either giant or pygmy-sized ancestors millions of years ago! Full page spread on the Bilby (Parish, 2008).

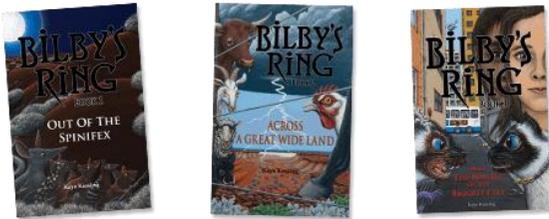


Australia's Mammals: Have they a Future? Written by Woinarski, J., Burbidge, A. & Harrison, P. Journal article detailing the threats to Australia's native mammals.

- **Image of a Greater Bilby**, 'Macrotis lagotis'. Retrieved from (Scoutle) <http://www.scoutle.edu.au/ec/viewing/R9612/index.html> (ESA, 2015)
- **Greater Bilby Endangered Animal Poster:** Factsheet poster. Teachstarter. (2016). Greater Bilby Endangered Animal Poster. Retrieved from <https://www.teachstarter.com/teaching-resource/greater-bilby-endangered-animal-poster/>

Fictional texts:

Bilby's Ring Trilogy. Written and Illustrated by Kaye Kessing. Science-based, with ten years of research and writing, these first Ten Tales for 8 to 12 years will entertain and inform (Kessing, 2016).



Out of the Spinifex: Tales 1 to 3

Bilby the Pink-eared Bandicoot heads off with Chuditch the Spotted Quoll, hoping to find a safe place to live. Fire keepers no longer walk the great western deserts, burning the country in patches to bring new growth. Feral animals are everywhere, hunting creatures like Bilby and Chuditch or eating too many native plants. Our Australian deserts are no longer safe enough for many of our native species (Kessing, 2016).

Across a great wide land: Tales 4 to 6

Joined by Mala the Rufous Hare Wallaby, Numbat and Sticky the Stick-nest Rat, the five are urged on by others in trouble.

As a simple search becomes a mighty quest, they must travel far across a great wide land to seek help from that scariest of species, the humans! (Kessing, 2016).

Into the Bowels of the Biggest City: Tales 7 to 10

Far on the sunup side of Australia, in the Biggest City by the Endless Sea, Felis Grandiosa the megalomaniac gutter cat has heard of the coming of The Five and swears to stop them.

Can Tinny and Nessa, the young humans who befriend The Five, manage to save them from a shocking death? (Kessing, 2016).

Activities:

- **See existing resources**

Information Communication Technologies

Websites:

- **Kaye Kessing:** <http://www.kayekessing.com/> (teacher resource to purchase Bilby related books, novels, posters)
- **Bilby Blog:** <http://www.kayekessing.com/bilbys-blog> (information on the Bilby with the ability to ask questions)
- **Act Wild Zoos Victoria** Retrieved from (Scootle) <http://www.actwild.org.au/animals/> (ESA, 2015)



Greater Bilby Taronga Zoo

Taronga Zoo (2008) *Greater Bilby*. Retrieved from <https://taronga.org.au/animal/greater-bilby>

Video:



Vulnerable Bilbies can be seen at Taronga Zoo.

Informative video presentation from a senior keeper about the conservation and care of bilbies.

Taronga Sydney. (2010, August, 31). *Vulnerable Bilbies can be seen at Taronga Zoo*. Retrieved from

<https://youtu.be/vIzEHTEPy7Q>

Games and webquests:

- **Act Wild** Zoos Victoria Retrieved from (Scootle) <http://www.actwild.org.au/animals/> (ESA, 2015)

Unit plans and lessons

- **CSIRO Education Programs-** Sustainable Futures (curriculum aligned): <http://www.csiro.au/en/Education/Programs/Sustainable-Futures>
- **Bilby Skull** image: Retrieved from (Scootle) <http://www.scootle.edu.au/ec/viewing/R7910/index.html>

Creative Arts

Music:

- **Identified gap in available resources**

Art and Craft:

- **Identified gap in available resources**

Role play:

- **Identified gap in available resources**

Experiences

Field Trips:



Adelaide Zoo learning experiences

Learning experiences for all age groups, linked to the curriculum.

<http://www.zoossa.com.au/zoo-learning-programs/>



Bunyaville Environmental Education Centre, programs for all year levels & curriculum links & risk assessment info.

<http://www.bunyavileec.eq.edu.au/programs/easter-bilby-adventure/easter-bilby-adventure.html>

School visits:

- **See existing resources**