

Earth's Environment

CARING FOR COUNTRY

Teacher Toolkit

Stage 2



OUTCOMES CONTRIBUTED TO

GE2-1

GE2-2

GE2-3

HT2-2

HT2-5



Welcome to the Sydney Zoo Teacher Toolkit

At Sydney Zoo: students will explore how First Nations people have cared for Country for thousands of years and learn how natural resources were used sustainably to live off the land. Students will meet Kutukulung, the long-necked turtle and discover how their everyday actions can help protect this species in decline.

At school: students will apply their knowledge from Sydney Zoo and become environmental stewards to help protect the long-necked turtle in their local area.

What is in this toolkit:

- ✔ 8 Ways Aboriginal Pedagogy images and strategies for teaching and learning. These are explicit throughout this program with explanations of activity significance.
- ✔ Information regarding Syllabus content covered during your visit to Sydney Zoo
- ✔ Syllabus-linked post-visit project plan

Resources required to best use this toolkit:

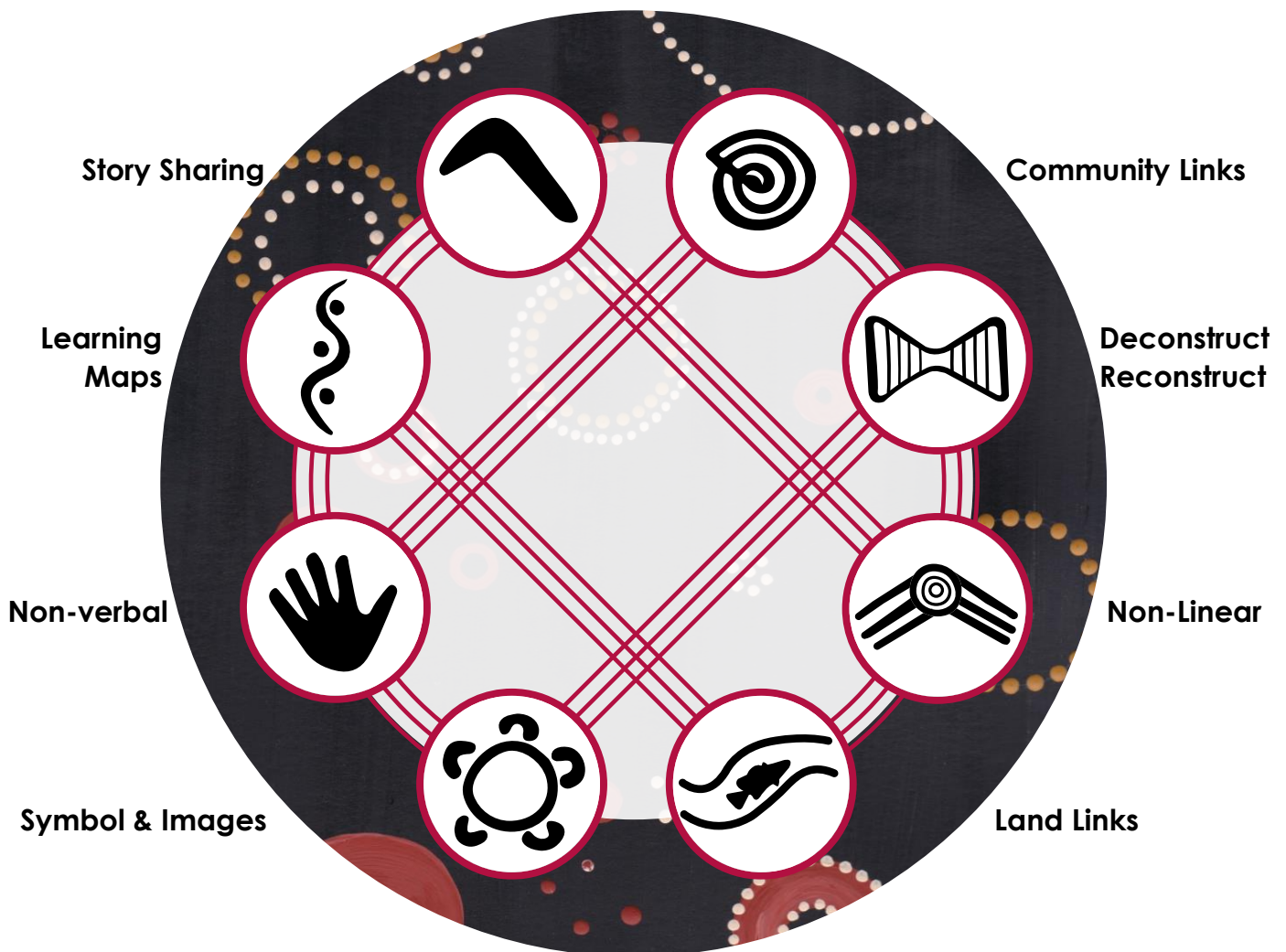
- ✔ Computer and screen or smartboard
- ✔ Internet access
- ✔ Access to playground/outdoors area where possible

**Sydney Zoo
acknowledges
the Darug nation,
their people,
past, present and
their future
generations.**

Thank you to Darug knowledge holders and artists who collaborated on the creation of these resources.

Aboriginal Pedagogy

8 Ways of Learning



TELL A STORY. MAKE A PLAN.
THINK AND DO. DRAW IT. TAKE IT OUTSIDE.
TRY A NEW WAY. WATCH FIRST, THEN DO.
SHARE IT WITH OTHERS

From the 8Ways website <https://www.8ways.online/>

Sydney Zoo has developed this lesson package with a focus on Aboriginal Pedagogy for delivery of all content. Context for each lesson is provided in the lesson plans.

Optional pre-visit 'languages' lesson outline

Location & Duration	Outcomes & 8Ways	Learning Activity	Resources
Classroom 45 minutes +	HT2-2 HT2-5	<p>Languages</p> <p>8Ways context in this lesson is about sharing community, finding out about community. It also relates history, family and language to each other and the impact of the past on the present.</p> <p><i>Optional: find parents or community members to come and discuss their languages.</i></p>	Smartboard or equivalent screen



8Ways
Community Links

Activity 1:

Discuss how many languages are spoken within the population of the classroom

- Are any of the languages similar?
- How many countries are represented?
- Students can speak some of the language(s) they know to the rest of the class e.g. hello, how are you.



Non-linear

Activity: 2

Aboriginal languages and nations

- Does anyone know an Aboriginal language?
- How many Australian Aboriginal languages are there?

Students to guess how many Aboriginal languages exist/existed before European settlement, discuss using the AIATSIS map to estimate.

- before British arrival there were over 250 languages and over 800 dialects spoken
- a dialect is a way of speaking a language that is only used in a certain location e.g. we speak English, so do people in England, Scotland and America, but we all use slightly different words some of the time. In Australia we might say 'G'day mate' but in some parts of America they might say 'Howdy'
- some languages are now 'extinct' – this means no one speaks the language anymore and no one knows how to speak it
- there are only 13 of the 250 languages still being learned by children today. 100 languages are still spoken by older generations but will soon be extinct in Australia.

Link

Aboriginal languages map
<https://aiatsis.gov.au/explore/map-indigenous-australia>

Activity: 3

Let's learn some language

- Explain that Darug is the Aboriginal language spoken in Western Sydney - there are multiple dialects
- Using the flash cards get students to sound out the words and draw pictures or find examples to use these words in the class
- Leave the flashcards around the classroom for students to try and use Darug language ongoing..

Activity sheet 'Darug Language Flash Cards'

Print as many copies of the flash cards as you need.

Language Flashcards

Cut out the words, practice saying the words and place them around the classroom to help use Darug language each day in class.

Warami

(wah-rah-my)

Hello

Yanu

(yah-noo)

Goodbye

Didgerigore

(didge-er-ree-gore)

Thank you

Naya

(neigh-ar)

I am

Yuin

(you-in)

Yes

Beal

(bay-yal)

No

Werowi

(we-roh_wee)

Girl

Wongra

(won-grah)

Boy

Language Flashcards

Cut out the words, practice saying the words and place them around the classroom to help use Darug language each day in class.

Wargul

(wah-gool)

One

Bulla

(bull-lah)

Two

Bulla Wargul

(bull-lah wah-gool)

Three

Bulla Bulla

(bull-lah bull-lah)

Four

**Bulla Bulla
Wargul**

(bull-lah bull-lah wargul)

Five

Djaralang

(jar-rah-langl)

Many (numbers)

Wianna

(why-arh-nah)

Mother

Bianna

(bi-arh-nah)

Father

Language Flashcards

Cut out the words, practice saying the words and place them around the classroom to help use Darug language each day in class.

Djuramin

(jew-rah-min)

Sister

Bobbina

(bob-bee-nah)

Brother

Gagunda

(ga-gun-dah)

Kookaburra

Gula

(gu-lah)

Koala

Wirriga

(wee-ree-gah)

Goanna

Kutukulung

(ku-tuk-u-lung)

Turtle

Mogra

(mo-grah)

Fish

Wombady

(wom-bad-ee)

Wombat

Visiting Sydney Zoo

During your workshop at Sydney Zoo students will journey through the Australia precinct and learn about First Nations cultures, how to care for Country and what they can do to protect our waterways and Kutukulung, the long-necked turtle.

Pre-visit checklist:

- ✔ Print off the student booklets to take on your excursion to Sydney Zoo
- ✔ Behaviour expectations of students while visiting Sydney Zoo
 - Students must always be accompanied by a teacher
 - Follow instructions of your teacher and zoo staff
 - Take only photographs and memories, leave only footprints and smiles
 - If you get lost, find a staff member in uniform and tell them you need help
 - Have a lot of fun and ask lots of questions!
- ✔ Ask students to prepare low waste/waste free lunches if possible. We love seeing the students' being low waste/waste free – please brag about this to us
- ✔ Wet-weather preparation if the forecast is not favourable (some of our animals love wet days so don't worry about them hiding away)

Upon arrival:

- ✔ Send one staff member to check-in at Group Bookings – assemble classes to enter the zoo with other staff members
- ✔ Enjoy your visit with us and please ask any staff for assistance if required
- ✔ Students must always be accompanied by a teacher

What is a low or no waste lunch?

- Sourcing foods that have minimal or no packaging and using reusable containers to carry food.
- Bringing your own reusable drink bottle and refill it.
- Carrying your own reusable cutlery set.



Examples

- ✔ Sandwiches - without clingwrap, they can stay fresh in a suitable reusable container or beeswax reusable wrap.



- ✔ **Fruit** - apples, bananas and mandarins are easy to eat and/or peel at school or the Zoo, the core and skin can go in the organic bins.
- ✔ **Nuts, dried fruit, biscuits, popcorn etc.** in a small reusable container, buy them in bulk to reduce packaging and put servings into small containers for snacks.



Optional post-visit 'Protecting Kutukulung' lesson outline

Location & Duration	Outcomes & 8Ways	Learning Activity	Resources
Multiple lessons	GE2-1 GE2-2 GE2-3	Protecting Kutukulung This project is designed to be undertaken after participating in the Stage 2 Earth's Environment: Caring for Country workshop at Sydney Zoo.	



8Ways
Landlinks

Activity 1:
Discuss with students what they learned about Totems during their workshop at Sydney Zoo.



8Ways
Non-verbal

Totems:



8Ways
Deconstruct/Reconstruct

- They can be any plant or animal
- Totems are an important part of First Nations culture and ensure the protection of plants or animals by different clans. This practice ensured that plants and animals were sustainably



8Ways
Symbols

- What does it mean if you have a totem? (you must care for it's existence)



8Ways
Storytelling

Kutukulung, the long-necked turtle, is an important family totem of the Boorooberongal clan of the Darug nation. Like the Boorooberongal clan have done for thousands of years, ***we want you to help protect the long-necked turtle.***



8Ways
Community Links

Activity 1.1

Create an 'earth toy' model of the long-necked turtle made of clay and items from nature (that will breakdown naturally back into the earth). This will represent your promise to help protect Kutukulung.



8Ways
Deconstruct/Reconstruct

Activity 2:
Using jigsaw groups, research and report on the role of freshwater turtles in the natural environment and the significance of these animals in First Nations cultures.



8Ways
Community Links

Create a class visual mind map answering the following questions:



8Ways
Landlinks

- What species of freshwater turtles live in New South Wales?
- What role do freshwater turtles play in the ecosystem?
- How were turtles used in First Nations cultures across Australia?
- How are the waterways traditionally cared for by First Nations peoples?
- Are there traditional stories of freshwater turtles you can find?
- What threats do freshwater turtles face today?
- What actions can people take to help protect freshwater turtles?

Butchers paper
Markers







Useful links:

[Freshwater turtles | NSW Environment and Heritage](#)











[Eastern Snake-necked Turtle - The Australian Museum](#)

[Wayamba the Turtle \(kullillaart.com.au\)](#)

Optional post-visit 'Protecting Kutukulung' lesson outline

Location & Duration	Outcomes & 8Ways	Learning Activity	Resources
     	<p>GE2-1 GE2-3 GE2-3 8Ways Landlinks 8Ways Non-verbal 8Ways Deconstruct/Reconstruct 8Ways Symbols 8Ways Storytelling 8Ways Community Links</p>	<p>Activity 3: This activity is designed for students to take responsibility for caring for the local environment where Kutukulung lives.</p> <p>Mapping your environment Students create a map of their school environment and surrounds.</p> <ul style="list-style-type: none"> • Map can be made digitally, drawn or use an existing copy of the school map that students draw on • Plot on the map environmental features including <ul style="list-style-type: none"> - out of bounds area (and discuss why it is out of bounds) - garden areas - play areas and their favourite places - places to eat - bushland, creeks or other natural areas <p>Discuss the maps the students have created</p> <ul style="list-style-type: none"> • Where do animals live in the school? • Do you have turtle-friendly spaces nearby? Eg a creek, bushland, protection from foxes • Where does rubbish commonly end up? • Where are the drains located in and around the school? • Where are the bins located? <p>Using the maps discuss</p> <ul style="list-style-type: none"> • How can we better care for this area to ensure we are looking after wildlife and the environment we share with it? <p>For example:</p> <ul style="list-style-type: none"> - place bins in rubbish hot spots - draw turtles around the school drains in chalk to remind students to pick up their rubbish before its washed down the drain into turtle habitat - hold no waste lunch box days to reduce amount of rubbish at school - once a day we do a 5 minute rubbish run, picking up as much litter as we can from the school playground - plant a bush garden in an appropriate space - create signs to educate other people about the long-necked turtle and what they can do to help look after the waterways 	

Optional post-visit 'Protecting Kutukulung' lesson outline

Location & Duration	Outcomes & 8Ways	Learning Activity	Resources
     	GE2-1 GE2-3 GE2-3 8Ways Landlinks 8Ways Non-verbal 8Ways Deconstruct/Reconstruct 8Ways Symbols 8Ways Storytelling 8Ways Community Links	<p>Activity 4:</p> <p>Create a project plan on how your class will protect the long-necked turtle. Option to use the scaffold 'project planning scaffold' as a basis for planning your class project.</p> <p>Share your work with us at Sydney Zoo! education@sydneyzoo.com</p>	Project planning scaffold p13 and p14
 	8Ways Storytelling 8Ways Community Links	<p>Activity 5:</p> <p>Perform the Kutukulung dance for your school</p> <p>Practice the Sydney Zoo Kutukulung dance.</p> <p>Create a presentation on long-necked turtles for a school assembly and perform the Kutukulung dance to teach others how to help care for this declining species.</p>	
	8Ways Community Links	<p>Activity 6:</p> <p>Become a citizen scientist!</p> <p>Use the TurtleSAT webpage or download the TurtleSAT app onto your smart device and start helping scientists track freshwater turtles.</p>	TurtleSAT > Home
	8Ways Landlinks	<p>TurtleSAT is a Citizen Science mapping tool produced by the 1 Million Turtles Community Conservation program. TurtleSAT allows communities to map the location of freshwater turtles in waterways and wetlands across the country.</p> <p>You can assist by recording where you see turtles, where you see their nests, where turtles are seen or killed on the road, or evidence of turtles (such as skeletal remains).</p>	

Project planning scaffold

What is the problem/opportunity?



Identify and define issues you may face and create criteria



Research first then create a plan



Create your project with appropriate tools, materials and safe practices



Evaluate your project – did you do what you set out to do?

Project planning scaffold for use as a class

Roles	Assigned students

Word bank

Word	Definition
Aboriginal and/or Torres Strait Islander Peoples	<p>The First Peoples of Australia, represented by over 250 language groups, each associated with a particular Country or territory. Torres Strait Islander Peoples are represented by five major island groups, and are associated with island territories to the north of Australia's Cape York which were annexed by Queensland in 1879.</p> <p>An Aboriginal and/or Torres Strait Islander person is someone who:</p> <ul style="list-style-type: none"> • is of Aboriginal and/or Torres Strait Islander descent • identifies as an Aboriginal person and/or Torres Strait Islander person, and • is accepted as such by the Aboriginal and/or Torres Strait Islander community(ies) in which they live.
adaptation	The process of change by which a species becomes better suited to its environment.
built environment	The manufactured artefacts and surroundings that provide the setting for human activity.
characteristics	<p>A set of distinguishing aspects (including attributes and behaviours) of a living thing, object or material. The characteristics of living things are often used to classify them and might include how they move or reproduce.</p> <p>When discussing materials the characteristics are the qualities used by humans to determine their use and the way people work with them. They might include colour, hardness and opacity.</p>
classification	A category into which something is organised.
climate change	A long-term change in regional or global climate patterns eg annual precipitation, frequency of weather events.
climate graph	A graph showing average monthly temperature (by a line) and precipitation (by columns) for a location.
climatic zones	Refers to areas of the Earth that have similar temperatures. The major zones are hot, temperate and polar and are generally demarcated by lines of latitude. Within each zone there are different climates because of the effects of the distribution of continents and oceans and the circulation patterns of the atmosphere and oceans.
conclusions	An opinion or judgement based on evidence.
Country/Place	<p>Country is a space mapped out by physical or intangible boundaries that individuals or groups of Aboriginal Peoples occupy and regard as their own. It is a space with varying degrees of spirituality.</p> <p>Place is a space mapped out by physical or intangible boundaries that individuals or groups of Torres Strait Islander Peoples occupy and regard as their own. It is a space with varying degrees of spirituality.</p>
cultural groups	People belonging to or identifying with a nationality, ethnic group, religion or social group with a distinct culture.
culture	The customs, habits, beliefs, social organisation and ways of life that characterise different groups and communities.
designed solution	A product, service or environment that has been created for a specific purpose or intention as a result of design thinking, and design and production processes.
diversity	Differences that exist within a group, for example, age, sex, gender, gender expression, sexuality, ethnicity, ability/disability, body shape and composition, culture, religion, learning differences, socioeconomic background, values and experiences.

Word bank

Word	Definition
environment	The living and non-living elements of the Earth's surface and atmosphere. Where unqualified, it includes human changes to the Earth's surface eg croplands, planted forests, buildings and roads.
features	The tangible elements of a place or environment.
field sketches	Annotated line drawings created to record features of an environment during fieldwork activities.
investigate	Carry out a systematic or formal inquiry to discover and examine information.
investigation	A scientific investigation is a systematic inquiry applying the processes of planning a course of action, safely manipulating tools and equipment in collecting and interpreting data, drawing evidence-based conclusions and communicating findings.
landscape	A landscape is an area, created by a combination of geological, geomorphological, biological and cultural layers that have evolved over time eg riverine, coastal or urban landscapes.
natural environment	An environment in which humans do not make significant interventions, for example ocean environments or national parks.
natural resources	Resources provided by nature. Resources can be classified as renewable, non-renewable and continuous. Also known as environmental resources.
natural vegetation	The vegetation that has evolved in an area over time.
perception	People's assessment of places and environments.
seasonal calendar	The classification of the weeks or months of the year into seasons eg spring, summer, autumn and winter, or wet and dry, or the classifications of Aboriginal cultures.
sketch map	A labelled drawing outlining the main geographical features of a place.
small-scale map	A map showing a large area of the Earth's surface with little detail eg world map where one centimetre on the map scale represents a large distance on the land.
sustainable	Supporting the needs of the present without compromising the ability of future generations to support their needs.
weather	The condition of the atmosphere at a point in time eg temperature, humidity.



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