

BACKYARD BUDDIES

Stage 1: Science & Technology
ST1-1WS-S, ST1-2DP-T, ST1-4LW-S



Become a Backyard Buddy! What native animals in your area could do with a helping hand? After running a fauna survey at your school, visit Taronga to learn how to create habitats for your local wildlife, including invertebrates. Be prepared to get your hands dirty! Back at school, get busy creating homes for your Backyard Buddy friends.

OUTLINE

AT SCHOOL

Before you can build a habitat, you'll need to know the types of animals that live in the school grounds. Conduct a fauna survey and invert checklist of your school grounds or local environment and examine their habitats.

AT THE ZOO

Explore and discover natural animal habitats. Learn how animals' needs are met in nature. Keep your eye out for all the free ranging invertebrates like spiders, butterflies and beetles that call Taronga home.

ZOO WORKSHOP

Encounter live Australian animals and participate in hands on habitat creation activities such as creating a lizard lounge and conducting an invert 'bug shake' investigation.

BACK AT SCHOOL

Create habitat for a 'backyard buddy' at home or school. Be prepared to get your hands dirty!



AT SCHOOL – BEFORE THE ZOO

During your investigations of the needs of living things, your students will:

- Appreciate the importance of ensuring native animals have their needs met in urban environments.
- Investigate whether the needs of local wildlife are being met in your school grounds or local nature reserve.
- Plan, design and deliver a way to protect a local native animal in your schoolyard.

BECOME A BACKYARD BUDDY

WHAT IS A BACKYARD BUDDY?

Being a buddy means helping a friend in need. Many of the Australian native animals that live in our local area are really in need of a helping hand. They are not getting all of the things they need to survive.

A Backyard Buddy helps the Australian native animals that are finding life pretty tough.

Are you a Backyard Buddy?

WHAT DO BACKYARD BUDDIES NEED?

You know that living things need air, water, food and shelter to survive. For some animals trying to survive in an urban environment, even these simple things can be hard to find.

ACTIVITY

Brainstorm problems you think wild animals may face in an urban environment?

Consider pollution, cars, development, introduced predators, competition etc.



THE BACKYARD BUDDY PLEDGE

Are you ready to become a Backyard Buddy and promise to help the native animals that we share our homes with?

Great! Time to take the 'Backyard Buddy' pledge.

"I promise. To do my best. To help the native animals that share my home. I will be the best Backyard Buddy that I can be."

AT SCHOOL – BEFORE THE ZOO

WILDLIFE SURVEY

A guided investigation into the presence and habitat needs of schoolyard wildlife.

SCIENTISTS INVESTIGATE

To find out what animals you can be helping in your local area – you'll need to complete an investigation!

Become a Scientist and conduct a fauna 'survey' of an area to identify what animals are there, what shouldn't be there and what is missing (see Activity 3).

Use this data to help you discover any problems with the wildlife in your area and then find ways to help (see Activity 4).



REFLECT

Imagine what your schoolyard would have looked like hundreds of years ago. Chances are there were a lot more trees and much fewer problems. Life is pretty tough for our native animals these days. Lucky you are now a Backyard Buddy!

1. CHOOSE A 'PATCH'

Use Google Earth or create a mud map of your school grounds or local reserve to determine a suitable area to survey. You may choose several locations.

2. USE YOUR SENSES

Find a 'patch' in the 'survey area' and lie down with your eyes closed. Use your senses to smell, and hear the signs of life around you. Also take a note of the unnatural sounds and smells not made by nature and discuss how they may affect the plants and animals in the area.

Use a sound recording device to record the sounds heard. This may come in handy for animal ID later.

3. SURVEY YOUR SCHOOLYARD

Use animal ID books, Wildlife ID apps, 'scats and tracks' guides plus the students' local knowledge to identify and record the animals in the schoolyard (or local nature reserve).

Don't forget to look for 'evidence' even if the animal is nowhere to be seen. For example, feathers, nests, dreys, web, scats (droppings), tracks, bird calls etc.

Use the ['Schoolyard Animal Survey' sheet](#) (on page 7-8) provided to conduct your investigation.

4. ANALYSE YOUR RESULTS

You may have recorded several different animals in your 'Schoolyard Animal Survey'. Choosing a native animal to help may be a little tricky. Before you choose, can you tell the difference between a native, pet, pest or introduced animal?

[Use the sheet provided on page 9 to test your knowledge.](#)

AT SCHOOL – BEFORE THE ZOO

Become an invert investigator. Conduct a simple fieldwork activity for a hands on investigation. Collect and organise your data and see what's missing in your school.

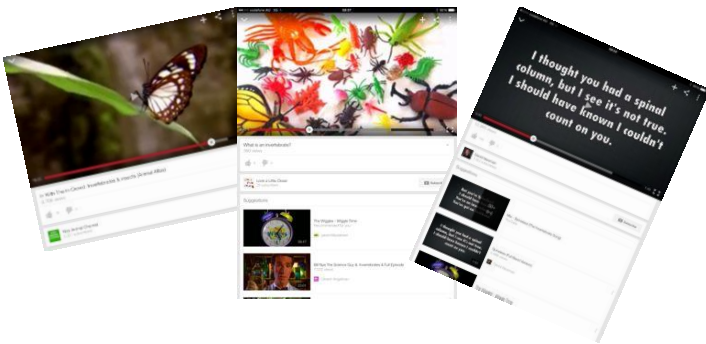
SEEKING THE SPINELESS !

Discuss with your class the purpose of an animal's spine. Identify animals with and without spines.

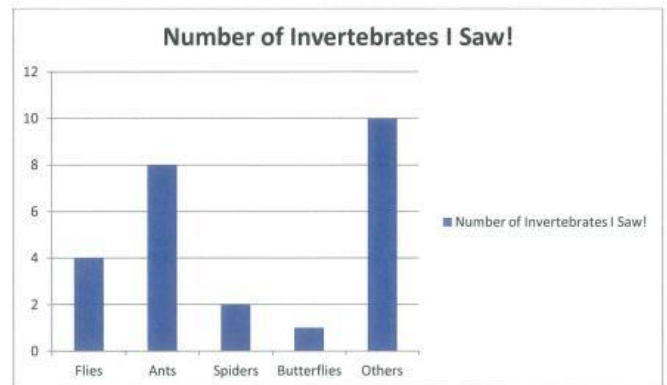
Head outdoors to find and record the invertebrates in the gardens at your school. Use the [Invert Checklist](#) on page 7 to assist students to gather data.

Discuss the importance of invertebrates in the food chain and webs, decomposition of wastes, seed dispersal and pollination.

Watch some YouTube clips to help. Search 'invertebrates' to find heaps of great clips.



Make a record of the data you collected in your investigation and find a way to represent this information. Share and discuss your findings.



WHAT ARE BASIC NEEDS?

Discuss with your class what they understand about the needs of living things: Do invertebrates have needs?

Students discuss the animals they found and if the invertebrates have everything they need to survive:

- Do they have water?
- Do they have food?
- Do they have shelter?

If these needs are not met in your school, can this situation be improved? What will you do to make your school invert-friendly? Why do we want invertebrates in our school gardens?

Your class 'pre-Zoo' objective is to explore the school surroundings and begin to inquire, "Does my school provide the basic needs of living things?"

WHERE DO I LOOK? WHAT DO I LOOK FOR?

Watch a video of Kerry – a Zoo Teacher – looking for evidence of invertebrates in the garden! Click here for the live link - <http://youtu.be/QZOoTVSevX0>



AT THE ZOO

Your Taronga Zoo excursion day and workshop experience

A SELF GUIDED EXCURSION DAY

EXPLORE THE ZOO

You'll see plenty of Zoo animals at Taronga Zoo, but you might be surprised how many wild, native animals also call Taronga Zoo home.

See if you can spot;

- a kookaburra
- a bird nest
- a water dragon
- a tree hollow
- a rainbow lorikeet
- a noisy minor
- a golden orb spider
- a possum drey.
- a brush turkey



TAKE PHOTOS

Wherever you see a native animal, evidence of the animal or it's habitat – photograph it. This evidence may come in handy when deciding which animal to help and learning how to help meet it's needs.

ZOO WORKSHOP

Your Zoo Workshop is located at Backyard to Bush:

- During the workshop you will meet a variety of native Australian animals. Many of them can be found in people's backyards, local parks and reserves and even in your schoolyard.
- Meet a range of invertebrates under Taronga Teacher supervision. Work Scientifically by conducting a tree shake in the B2B garden. Use magnifying glasses to look at them closely.
- Learn how invertebrates benefit humans and other animals. Discuss ways to help invertebrates in your area
- You will also discuss ways people can help native animals and invertebrates to meet their needs for survival.
- If you aren't already – this is the time to become a 'Backyard Buddy'

BEFORE YOU COME TO THE ZOO

Have you ...

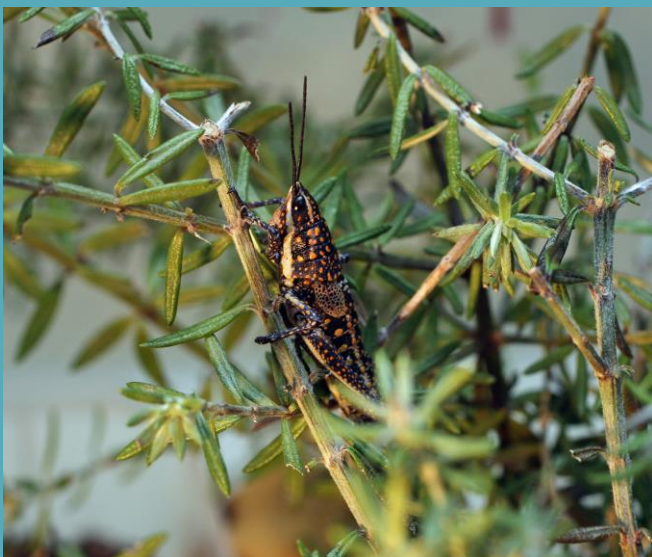
- Completed your schoolyard animal survey?
- Become a Backyard Buddy?



AT THE ZOO – BEFORE OR AFTER YOUR WORKSHOP

A self guided investigation where your students count invertebrate animals around the Zoo grounds and document and collect data about these invertebrates using simple tools.

Taronga cares for over 100 invertebrates in many different ways - visit Backyard to Bush to discover them.



DURING YOUR ZOO EXPLORATION, YOUR STUDENTS CAN:

DISCOVER

- Visit Backyard to Bush and find as many of our invertebrates as possible. Use our [Invert Checklist](#) on page 7 to help you.
- Examine how Taronga provides water and food for our invertebrates.
- Keep an eye out for invertebrates all over the Zoo, especially in our many gardens.

COLLECT EVIDENCE

- Students can record and make small documentary videos about their invertebrate investigations.

MOBILE DEVICE SUGGESTIONS



- Use existing apps such as the NSW Field Guide App developed by The Australian Museum and Museum Victoria.
- Use iMovie to create simple videos with your students.

BACK AT SCHOOL – AFTER THE ZOO

Ok Buddies – you are well on your way to helping local wildlife now. Time to choose a species, get everyone on board, make a plan and – take action!

BUDDIES TAKE ACTION

DECISION TIME

Has your class decided on a native animal that needs your help? There may be many and it may be hard to choose. Remember – creating habitat and removing problems for one type of animal, usually helps many more.

ACTIVITY

Use the ‘needs analysis’ process to help your class decide on a native animal to receive your Backyard Buddy help. See the [‘Choosing your Buddy’](#) activity on page 10.



PESTER POWER!

Great work Buddies - you’ve chosen an animal to help. But that’s not enough – next you’ll need to convince the rest of the class and maybe even your school Principal for permission!

BACKYARD BUDDY ACTION PLAN

1. What animal needs your help and why?
2. What needs to be done? Who can help and who needs persuading?
3. Research, design your habitat and write a procedure on what to do with detailed instructions.
4. Collect materials and allocate roles.
5. Complete your habitat restoration project
6. Evaluate and reflect on the success of the project with advice for future years.

SOME USEFUL LINKS

Australian Museum (animals)
<http://australianmuseum.net.au/animals>

Birds in Backyards (bird habitat guidelines)
<http://www.birdsinbackyards.net/Guidelines-Creating-Bird-Habitats>

Introduced species in Australia
http://en.wikipedia.org/wiki/List_of_introduced_species

NPWS Backyard Buddies (how to make habitats for natives)
<http://www.backyardbuddies.net.au/>

Wires (Voluntary wildlife rescue)
www.wires.org.au/

BACK AT SCHOOL – AFTER THE ZOO

An action plan to improve the environment around you!

TAKE ACTION!

RECOUNT, RECALL, REACT

You have learnt about invertebrates, why they matter and what they need to survive.

Now you can use the design and production process to decide on a plan:

- Plant flowering plants in the garden, which will attract butterflies, ladybirds, bees and all your favourite invertebrates.
- Create a leaf litter lounge for all the crawling ‘not-so-creepey critters’, like slugs and slaters.
- Design and build an ‘Bug Hotel’, perfect for bees, beetles and spiders.
- Start a worm farm (links to instructions are provided in the Resource Page).



JUST FOR FUN, TRY:

- Dress up as your bug BFF! Will you need antennae? Or wings? Or one foot? Tell a story as a bug.
- Choreograph a dance to some music – maybe ‘The Ugly Bug Ball’ by the Sherman Brothers. The link is in the Resource List.
- Create a video of your class in costume doing a dance, present a news piece or anything you can think of.

SCHOOLYARD ANIMAL SURVEY

Investigate your school grounds or a nearby park/reserve. Use the worksheet to record sightings. Remember to use all your senses and also look for other evidence.

[return to linked page](#)

BIRDS

Tally

OTHER EVIDENCE OF BIRDS

Try to identify the birds that left the evidence you discover.

- Feathers ☐
- Nests ☐
- Bird call ☐
- Bird eggs ☐
- Bird droppings ☐

ANALYSE YOUR RESULTS

1. How many birds did you discover? _____

2. Which bird was the most common?

3. Which birds were 'missing'?* _____

4. Put a line through the birds that are introduced or pest species. Use your 'Native animal Identifier sheet' to help you'.

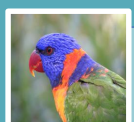
* not found but *should* be living in the area.



Common Ibis



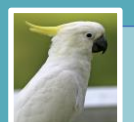
Noisy Miner



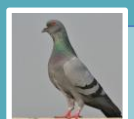
Rainbow Lorikeet



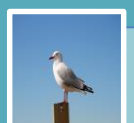
Indian Myna



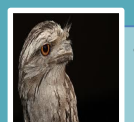
Cockatoo



Pigeon



Seagull



Tawny Frogmouth



Plover

SCHOOLYARD ANIMAL SURVEY (CONTINUED)

Investigate your school grounds or a nearby park/reserve. Use the worksheet to record sightings. Remember to use all your senses and also look for other evidence.

[return to linked page](#)

MAMMALS

Tally



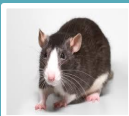
Fox



Sugar Glider



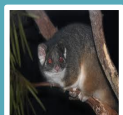
Native Rat



Black Rat



Flying Fox



Ringtail Possum



Brushtail Possum



Bandicoot



Cat

OTHER EVIDENCE OF MAMMALS

Try to identify the birds that left the evidence you discover.

- Fur ☐
- Drey (possum home) ☐
- Burrow/tunnel ☐
- Droppings ☐
- Footprints ☐

ANALYSE YOUR RESULTS

1. How many mammals did you discover?

2. Which mammal was the most common?

3. Which mammals were 'missing'?*

4. Put a line through the mammals that are introduced or pest species..

* not found but *should* be living in the area.

NATIVE, INTRODUCED, PEST OR PET?

Familiar faces in your local area may not be Australian natives after all.

Can you tell the difference?

Even some native animals or our pets can be pests for other native animals.

[return to linked page](#)

Stick Insect



Galah



Water Dragon



Willy Wagtail



Diamond Python



Green Tree Frog



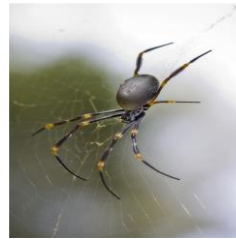
Tawny Frogmouth



Ringtail Possum



Orb Spider



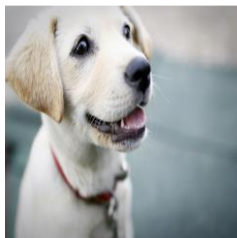
Indian Myna



Grey Headed Flying Fox



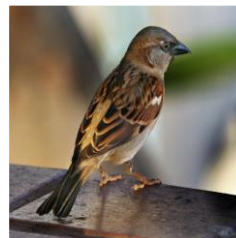
Dog



Cat



Sparrow



Blue Tongue Lizard



Ibis



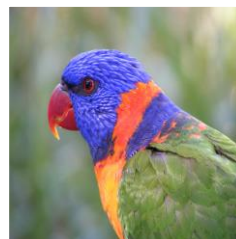
Noisy Miner



Brush-tail Possum



Rainbow Lorikeet



Black Rat



QUESTIONS

1. Five of these animals are not native animals. That means they do not come from Australia. One of them came to Australia by accident in the ships of the First Fleet! The others were introduced on purpose. Can you find them?
2. Which one catches wildlife if you let it outside the house at night?
3. Which one is a bully to native birds and takes their homes?

CHOOSING YOUR BUDDY

It's often hard to choose just one Backyard Buddy.
They all could do with a helping hand!

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INSTRUCTIONS

1. Choose 4 animals and create a poster on each with the animal in the centre and bubbles surrounding it (examples are provided below).
NB – your class might choose an animal that was not found in the school ground but is known to live nearby.
2. For each animal, guide a brainstorm on their particular needs given their (most likely) urban setting.
3. Tick the needs that are already being met for the animals and circle the ones that you think they are in need of help.
Cross the ones that you can't do much about.
4. Once completed, use the data to help your class agree on a Backyard Buddy to help.

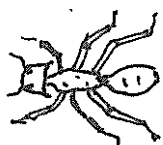


THE BUG GARDEN : INVERT CHECKLIST

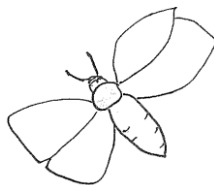
Stage 1: Science & Technology

AT SCHOOL

Record the invertebrates you see by ticking the boxes.



Ants

☐

Moths

☐

Snails

☐

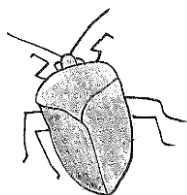
Cockroaches

☐

Spiders

☐

Butterflies

☐

Beetles

☐

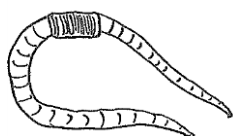
Grasshoppers

☐

Flies

☐

Caterpillars

☐

Worms

☐