LIFE CYCLES

Science & Technology

Stage: 2
Outcomes: ST2-1WS-S, ST2-2DP-T, ST2-4LW-S

All animals have a lifecycle. Students will learn how the features and needs of animals change and develop as they move from stage to stage. They will meet animals with unique lifecycles and investigate how they can help overcome the challenges these species face as they develop and grow, including designing animal habitats in their schools and backyards.

TARONGA ZOO SYDNEY

TARONGA WESTERN PLAINS ZOO DUBBO

For the Wild

Learning Intention:
- I can understand the difference between living and non-living things.
- I am curious about my environment and the various habitats around me.
- I can collect and represent the data I have collected.

Success Criteria:
- I recognised the difference between living and non-living things.
- I used my powers of observation to identify habitats in my environment.
- I represented data I collected about my environment.

WHAT DO YOU KNOW ABOUT LIVING THINGS?

Living Things
As a class, outline some of the living and non-living things in your playground.
Record your answers under these headings.

| Living Things | Non-Living Things |

K.W.L CHART

Choose TWO living things in your school grounds, making sure at least one is an animal.
Thinking about what each of these living things need to survive, complete a K.W.L chart like the one below. Be sure to include any information about the organisms life cycle that you already know.

| K – What I already KNOW | W - What I WANT to know | L – What I have LEARNED |

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DEFINITION

As a class, brainstorm living vs non-living, and have students create their own definition of what is means to be living. .

ANIMAL NEEDS

Select a living thing from the KWL chart you completed as a class. Have students brainstorm everything that the living thing might need to survive.

Include information about their specific life cycles (see black & white resources).

SCHOOLYARD SURVEY

Conduct a schoolyard animal survey.
Students can then use this data to inform their native animal habitat design. *See attached worksheet*

PHOTO: LORINDA TAYLOR

LIFECYCLES IN THE CLASSROOM

Your class might even like to get some invertebrates for your classroom! There are many great activities relating to lifecycles and these creepy, crawly critters! The references below include suppliers of invertebrates and useful activities, conduct an internet search!

- Insect Farm
- Mealworm Care

Undertake experiments to examine

- Growth rates
- Pupation rates
- Reactions of mealworms to light and dark spaces

NSW GOVERNMENT | Education

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ASSESS YOUR SCHOOL ENVIRONMENT!

Being a Scientist – completing an animal survey.

For your students to determine what species they should support in your local area – they'll need to complete a scientific field investigation!

Students become scientists as they conduct a fauna 'survey' of a local area to identify the animals present.

Students can then analyze this data to evaluate any concerns for the wildlife in your area and then identify ways to help.

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. This could also include the habitat you have already created and different groups could potentially investigate different areas.

2. USE YOUR SENSES

Find a 'patch' in the school to comprise the survey area. Have students lie down with their eyes closed and use their senses to smell and hear the signs of life around them. Also have them take note of any unnatural sounds and smells. As a class, discuss how these may affect the plants and animals in the area.

3. SURVEY

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 and even bird calls can be used to determine the presence of animals.

4. ANALYSE YOUR RESULTS

STUDENT WORKSHEET

SCHOOLYARD ANIMAL SURVEY

Date: _____

Group Name: _____

Survey Location (e.g. lunch area): _____

Weather Conditions (e.g. rainy, cold, overcast): _____

Drawing of survey location below (e.g. map):

STUDENT WORKSHEET

SCHOOLYARD ANIMAL SURVEY

Animal	Tally of Observations	Total

SCHOOLYARD ANIMAL SURVEY

Other evidence of birds:

Try to identify the birds that left other evidence including:

- ❑ Feathers
- ❑ Nests
- ❑ Bird call
- ❑ Bird eggs
- ❑ Bird droppings

Other Evidence of mammals:

Try to identify the mammals that left other evidence including:

- ❑ Fur
- ❑ Drey / hollow
- ❑ Burrow / tunnel
- ❑ Droppings
- ❑ Footprints

Other evidence of frogs:

Try to identify the frogs that left other evidence including:

- ❑ Eggs/ Frog Spawn
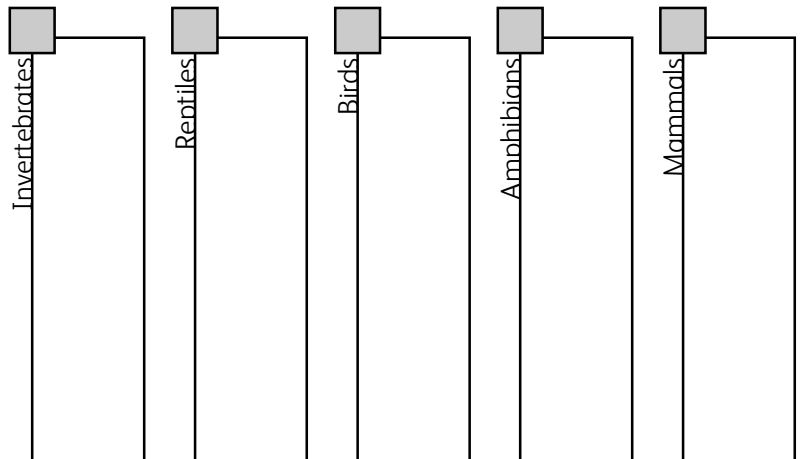- ❑ Croaking
- ❑ Frog droppings

Analyse your results

1. How many of each class of animal did you find?

Invertebrates | Reptiles | Birds | Amphibians | Mammals

2. Which animal was the most common?

3. Put a line through the animals that are introduced or pest species e.g. ~~cat~~ (as we don't want to create habitat to encourage these).

Other evidence of reptiles:

Try to identify the reptiles that left other evidence including:

- ❑ Skins
- ❑ Tracks
- ❑ Eggs
- ❑ Reptile droppings

TARONGA
CONSERVATION SOCIETY AUSTRALIA

For the Wild

STUDENT WORKSHEET

HABITAT THREATS

Assess the CURRENT THREATS to the habitat you have built.

There are a number of threats that contribute to the continued decline of our native animals, including:

- Disease
- Habitat Degradation
- Stream Drying/ Wetland drainage
- Predation by introduced Exotic Predatory Fish
- Herbicide and Insecticide use
- Climate Change

Did you identify any **threats** to wildlife within your playground? List any possible solutions.

Threats
- ?
- ?
- ?
- ?

Solutions
- ?
- ?
- ?
- ?