



Year 3 - Wild Transformations

Teacher Guide and Unit Plan

A **life cycle** is the sequence of stages an organism goes through from birth (or germination) through growth, maturity, reproduction, and eventually death. The National Library of Australia explains that every *living thing is part of a cycle*: plants and animals are born, they grow, interact with their environment, and die, making way for new life. This repeating cycle is crucial for maintaining ecosystems and the broader biosphere.

Learning Intentions

We are learning ...

- ... define life cycles and their purpose.
- ...about life cycles of animals and the main stages they go through.
- ...how life cycles are used by scientists and identify animal species that are at risk of extinction.
- ...explain the life cycle of monotremes and identify unique features that help it survive.
- ...understand how the knowledge of life cycles is used to conserve wild animal species.

Success Criteria

We will be successful when...

- ... we can explain what a life cycle is and how people use this information.
- ... we describe how scientists use knowledge of life cycles to conserve animal species.
- ... define the purpose of the IUCN red list.
- ...identify Tasmanian animals that are at risk.
- ... we order key life stages of an animal and explain life cycle.
- ...identify and explain the key stages in a monotreme's life and how their unique features that help them survive.

Australian Curriculum

Learning Area Content Descriptions

Science
AC9S3U01 Students learn to examine the differences between the life cycles of plants and animals.

Science as a human endeavour

AC9S3H02 consider how people use scientific explanations to meet a need or solve a problem

Science Inquiry

Questioning and Predicting
AC9S3I01 pose questions to explore observed patterns and relationships and make predictions based on observations

Planning and Conducting
AC9S3I02 use provided scaffolds to plan and conduct investigations to answer questions...

Processing, modelling and Analysing
AC9S3I04 construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information...

Evaluating
AC9S3I05 compare findings with those of others ...draw conclusions

Communicating
AC9S3I06 write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate

Cross-Curriculum Priorities

Sustainability

General Capabilities

Literacy, Digital Literacy, Critical and Creative Thinking

Achievement standard

By the end of Year 3 students classify and compare living and non-living things and different life cycles...They identify solutions that use scientific explanations.



Teacher Background Information

How Life Cycles Help Scientists in Australia

1. Protecting animals at their most vulnerable times

Scientists study life cycles to figure out when animals need the most help—for example, during breeding or when young are learning to survive on their own. Tasmanian devils usually mate between February and May, and after a short 21-day pregnancy the tiny joeys move into the mother’s pouch, which has only four teats; more joeys are born than can attach, so early survival is a major pinch-point. Knowing this tells conservation teams when nesting mothers need quiet habitat and safe feeding areas, and when road-kill risks around den sites matter most

2. Reading ecosystem health from life-cycle signals

If plants fail to germinate after rain, or devils stop producing healthy young, those **life-cycle “signals”** can warn that an ecosystem is under stress. National reporting by the Australian Government highlights that **ecosystem processes** (growth, reproduction, migration) are key to ecosystem health; when these processes are disrupted, local systems can slide toward collapse. Scientists in Tasmania watch these signals—like devil recruitment (new young entering the population)—to judge whether conservation is working or more action is needed.

3. Supporting Conservation and Managing Threatened Species

Life cycles help scientists track and manage disease, because infection risks can change with age and behaviour. Devil Facial Tumour Disease (DFTD) spreads when devils bite each other, often during feeding and mating interactions—behaviours linked to specific life stages like adolescence and adulthood. CSIRO and partners have supported research to understand and manage DFTD, from early diagnostic studies to field tools that align with devil behaviour—such as testing oral bait strategies and biomarkers that show whether a devil took a vaccine bait, which is only useful if timed to the right ages and seasons when devils will accept baits.

4. Monitoring Environmental Health and Ecosystem Change

Life-cycle knowledge also helps people and wildlife live together. NRE Tasmania provides guidance for landholders on devils and quolls—recognising, for example, that lambing season can overlap with periods when devils are actively scavenging and juveniles are learning to forage. Practical steps (secure pens, good paddock hygiene, protecting weak stock) are timed to reduce conflicts during sensitive stages for both farm animals and native carnivores.

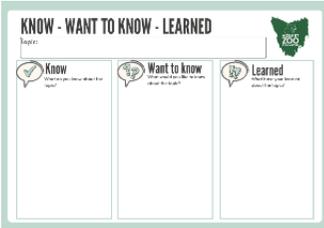
5. Planning Breeding Programs and Releasing

When a species is in trouble, scientists sometimes create “**insurance**” populations and plan carefully timed releases back to the wild. Research published with CSIRO Publishing shows how devil breeding programs use genetics and **knowledge of the reproductive cycle** to keep healthy diversity and natural behaviours—everything from pairing choices to the timing of mating so pouch young arrive in step with wild seasonal patterns. Matching releases to the animals’ life stages (for example, releasing robust sub-adults) improves survival once they face real Tasmanian conditions.

IUCN Red List

The **IUCN Red List** provides a global, science-based assessment of extinction risk, showing population trends, threats, habitat needs, and conservation actions. This helps scientists and governments identify *when* in a species’ life cycle protection is most urgent—such as during breeding, denning, or juvenile dispersal. Red List data also feeds into tools like the **Red List Index**, which governments use to guide seasonal closures, den-site protections, and road-safety measures during high-risk periods.

Year 3 – Wild Transformations – Unit Plan

	Tuning In	Modelling – I do	Guided Practice- We do	Independent Practice- You do	Plenary	Resources
Lesson 1 – What is a life cycle – Reading						
Learning Intention	We are learning to define life cycles and their purpose.		Success Criteria		We will be successful when we can explain what a life cycle is and how people use this information.	
Sequence	<p>Introduce the purpose of Hobart Zoo and Aquarium, the excursion and the unit topic, Life Cycles.</p>	<p>Discuss, what is a life cycle and what do we know about life cycles and record on a KWL chart.</p>  <p>Have students think/pair/share a wondering they have about life cycles and record in the chart.</p>	<p>Choose a whole class fluency strategy choral/cloze/echo to read the text, What is a life cycle – FK 3.5</p> <p>Begin Word Wall with vocab listed in the glossary and suggestions from students. Clarify and include unfamiliar vocab with a short definition.</p>	<p>Check understanding using the quiz included in the PPT.</p>	<p>Have students think/pair/share a new understanding/something learnt and record to complete the KWL chart.</p>	<p>What is a life cycle? Text printed for each student.</p> <p>A3/Digital KWL Chart</p>
Teacher Notes	Record your personal notes and adjustments here.					

	Tuning In	Modelling – I do	Guided Practice- We do	Independent Practice- You do	Plenary	Resources
<h2>Lesson 2 – What are the stages of a life cycle? – Science</h2>						
Learning Intention	We are learning about the life cycles of animals and the main stages they go through.		Success Criteria		We will be successful when we can order key life stages of an animal and explain a life cycle.	
Sequence	<p>Discuss – How do animals change to become adults?</p> <p>Record ideas on an ideas map.</p> 	<p>Show the video on the PPT about the life cycle of a wombat.</p>	<p>Guide students to put the photos of each stage of the wombat's life cycle in order.</p> <p>Show students the completed side and highlight the sentence descriptor to explain what is happening at each stage.</p>	<p>Students choose from a koala, blue tang fish, albino Bennett's wallaby or a budgerigar to order and describe a life cycle.</p>	<p>Walk around and admire everyone's lifecycles.</p> <p>Tell a partner one key stage of the life cycle for the animal you chose.</p>	<p>Blank life cycle</p> <p>Photo pages for koala, blue tang, albino Bennett's wallaby and budgerigar.</p>
Teacher Notes	Record your personal notes and adjustments here.					

	Tuning In	Modelling – I do	Guided Practice- We do	Independent Practice- You do	Plenary	Resources
Lesson 3 - How do life cycles help humans know if animals are at risk of extinction? – Reading						
Learning Intention	We are learning how life cycles are used by scientists and identify animal species that are at risk of extinction.		Success Criteria		We will be successful when we... ... describe how scientists use knowledge of life cycles to conserve animal species. ... the purpose of the IUCN red list. ...identify Tasmanian animals that are at risk.	
Sequence	Discuss: how do we know if a species is at risk of extinction? who decides if a species is at risk? what animals do we know are extinct?	Explain key vocabulary for this reading and record on Word Wall: <i>extinct</i> – gone forever <i>critically endangered</i> – nearly extinct <i>IUCN Red List</i> - International Union for Conservation of Nature Practice Go over key words and definitions on Word Wall for life cycle.	Choose a whole class fluency strategy choral/cloze/echo to read the text, The IUCN Red List Clarify unfamiliar vocab and add to Word Wall Model IUCN Red List research task	Students complete the IUCN Red List Research Task.	Whole class quiz.	Access to computer/tablet to research Printed Task Sheet, <i>Wild Transformations: The Red List</i>

Teacher Notes	Record your personal notes and adjustments here.
----------------------	--

EXCURSION TIME

Share the social story with your class and preparing them for their excursion to Hobart Zoo and Aquarium where they will learn about the life cycle of monotremes

	Tuning In	Modelling – I do	Guided Practice- We do	Independent Practice- You do	Plenary	Resources
--	-----------	------------------	------------------------	------------------------------	---------	-----------

Lesson 4 – Communicating the life cycle of a monotreme

Learning Intention	We are learning to identify and explain the key stages in a monotremes life and how their unique features that help them survive.		Success Criteria	We will be successful when we identify and explain the key stages in a monotremes life and how their unique features that help them survive.		
Sequence	Discuss: What animals are monotremes? How are monotremes different to other mammals? What features make them unique?	Explicitly teach the features of a life cycle by reviewing the slide of the wombat life cycle. Record each feature as a new addition to the Word Wall.	Think/pair/share with a partner about which monotreme you will choose and the key stages of the life cycle. Brainstorm the words you would expect students to use on the board.	Students will create a life cycle with a short description of each stage that uses key scientific vocabulary.	Write one sentence to describe what you have done that you are proud of about your life cycle. I am proud of myself for... Students can aurally present their life cycle to the class or a small group.	Art and craft materials for students to use to create models or draw pictures for each life cycle stage.



**Teacher
Notes**

Record your personal notes and adjustments here.



Adjustments

The following adjustments are differentiated to support and engage all students.

	Enabling	Extending
Content	<p>Provide multiple exposures to content to make connections with prior knowledge.</p> <p>Print out readings, task overviews and pictures for students.</p> <p>Create a Word Wall and adding key vocabulary and definitions.</p>	<p>Encourage students to independently research to deepen understanding using referenced sources.</p>
Process	<p>Encourage students to work with a partner or in a small group.</p> <p>Break tasks into smaller steps with clear checkpoints.</p> <p>Structure activities so that ‘think’ time is included through strategies such as ‘think, pair, share’ or ‘think, walk and talk’</p>	<p>All self-directed pathways such as posing an email to a conservationist (zoo keeper) to include first hand accounts.</p> <p>Have students form an individual plan and frame investigate questions related to the life-cycle of a threatened species and key actions to conserve it in the wild.</p>
Product	<p>Scaffold output tasks so students can cut and paste instead of draw/build, scribe key ideas or have them record them onto an iPad.</p>	<p>Students can investigate the Tasmanian Government Save the Tasmanian Devil Program, Swift Parrots or the CSIRO Spotted Handfish captive breeding program.</p>

Resources

The following evidence-based websites (hyperlinks) contain facts, images and videos for further information.

[Save the Tasmanian Devil Program | Department of Natural Resources and Environment Tasmania](https://nre.tas.gov.au/conservation/threatened-species-and-communities/lists-of-threatened-species/threatened-species-vertebrates/save-the-tasmanian-devil-program) - <https://nre.tas.gov.au/conservation/threatened-species-and-communities/lists-of-threatened-species/threatened-species-vertebrates/save-the-tasmanian-devil-program>

[What is a monotreme? - The Australian Museum](https://australian.museum/learn/species-identification/ask-an-expert/what-is-a-monotreme/) - <https://australian.museum/learn/species-identification/ask-an-expert/what-is-a-monotreme/>

[Department of Natural Resources and Environment | Department of Natural Resources and Environment Tasmania](https://nre.tas.gov.au/) - <https://nre.tas.gov.au/>



References

The following evidence-based sources have been used throughout this unit:

CSIRO n.d., *Ecosystems*, CSIRO, viewed 27 January 2026, <<https://www.csiro.au/en/research/natural-environment/ecosystems>>.

Hogg, CJ, Fox, S, Pemberton, D & Belov, K (eds) 2019, *Saving the Tasmanian Devil: Recovery through Science-based Management*, CSIRO Publishing, Melbourne, viewed 27 January 2026, <<https://www.publishing.csiro.au/book/9781486307180>>.

Gruerber, CE et al. 2018, 'A Tasmanian devil breeding program to support wild recovery', *Reproduction, Fertility and Development*, vol. 31, no. 7, pp. 1296–1304, CSIRO Publishing, viewed 27 January 2026, <<https://www.publish.csiro.au/rd/fulltext/RD18152>>.

IUCN 2024, *IUCN Red List of Threatened Species—About & Red List Index*, International Union for Conservation of Nature, viewed 27 January 2026, <<https://iucn.org/resources/conservation-tool/iucn-red-list-threatened-species>>.

IUCN 2026, *Sarcophilus harrisii (Tasmanian Devil) Assessment Page*, International Union for Conservation of Nature, viewed 27 January 2026, <<https://www.iucnredlist.org/species/40540/10331066>>.

National Library of Australia (NLA) n.d., *Circle of Life*, National Library of Australia Digital Classroom, viewed 27 January 2026, <<https://www.library.gov.au/learn/digital-classroom/understanding-living-world/circle-life>>.

NRE Tasmania n.d., *About the Tasmanian Devil*, Department of Natural Resources and Environment Tasmania, viewed 27 January 2026, <<https://nre.tas.gov.au/conservation/threatened-species-and-communities/lists-of-threatened-species/threatened-species-vertebrates/save-the-tasmanian-devil-program/about-the-tasmanian-devil>>.

NRE Tasmania n.d., *Tasmanian Devil – Species Page*, Department of Natural Resources and Environment Tasmania, viewed 27 January 2026, <<https://nre.tas.gov.au/wildlife-management/fauna-of-tasmania/mammals/carnivorous-marsupials-and-bandicoots/tasmanian-devil>>.

NRE Tasmania n.d., *Living with Tasmanian Devils and Quolls*, Department of Natural Resources and Environment Tasmania, viewed 27 January 2026, <<https://nre.tas.gov.au/wildlife-management/living-with-wildlife/living-with-tasmanian-devils-and-quolls>>.

Parks and Wildlife Service Tasmania n.d., *Tasmanian Devil*, Tasmania Parks & Wildlife Service, viewed 27 January 2026, <<https://parks.tas.gov.au/discovery-and-learning/wildlife/tasmanian-devil>>.