



# Year 2 – Behind the Scenes at Hobart Zoo and Aquarium

## Teacher Guide and Unit Plan

### Learning Intentions

We are learning ...

... to identify how modern zoos and aquariums support animals, people and the planet.

... to identify the different jobs in a zoo and aquarium and how they help animals.

...to describe how Science is used every day at the Hobart Zoo and Aquarium to care for animals.

... to communicate how science helps animals at Hobart Zoo and Aquarium.

### Success Criteria

We will be successful when...

... we can name and explain at the five domains for animal care.

... we can explain why modern zoos and aquariums have a positive impact.

... we can match jobs at the zoo with how they help animals.

... we write an information report to describe how people use Science at Hobart Zoo and Aquarium to help animals.

... we have an artwork of a scene of Science at Hobart Zoo and Aquarium to support our writing.

### Australian Curriculum

#### Learning Area Content Descriptions

#### Science

#### Science as a human endeavour

##### AC9S2H01

describe how people use science in their daily lives, including using patterns to make scientific predictions

#### Science Inquiry

##### Questioning and Predicting AC9S2I01

pose questions to explore observed simple patterns and relationships and make predictions based on experiences

##### Planning and Conducting AC9S2I03

make and record observations...

##### Processing, modelling and Analysing AC9S2I04

sort and order data and information and represent patterns, including with provided tables and visual or physical models

##### Evaluating AC9S2I05

compare observations with predictions and others' observations, consider if investigations are fair and identify further questions with guidance

##### Communicating AC9S2I06

write and create texts to communicate observations, findings and ideas, using everyday and scientific vocabulary

#### Cross-Curriculum Priorities General Capabilities

Sustainability

Literacy, Digital Literacy, Critical and Creative Thinking

#### Achievement standard

By the end of Year 2 students pose questions to explore observed patterns or relationships and make predictions based on experience. They suggest steps to be followed in an investigation and follow safe procedures to make and record observations. They use provided tables and organisers to sort and order data and represent patterns in data. With guidance, they compare their observations with those of others, identify whether their investigation was fair and identify further questions. They use everyday and scientific vocabulary to communicate observations, findings and ideas.





## Teacher Background Information

Modern zoos and aquariums have evolved far beyond their historical role as places of entertainment. Today, **ZAA-accredited** zoos (Zoo and Aquarium Association Australasia) operate as conservation, education, welfare and research institutions that work to safeguard biodiversity locally and globally. ZAA represents nearly 100 zoos, aquariums, sanctuaries and wildlife parks across Australasia and ensures they meet the highest standards of **positive animal welfare** through the internationally recognised **Five Domains Model**. This accreditation process goes beyond minimum legal requirements and asks whether each animal experiences a life rich in positive experiences, not merely free from harm.

**What are the Five Domains?** The Five Domains is an evidence-based animal welfare framework used by **ZAA-accredited** zoos and aquariums to assess and improve animals' overall quality of life. It considers four physical domains—**Nutrition** (appropriate diet and water), **Environment** (comfort, climate, space, complexity), **Health** (fitness, injury, disease prevention), and **Behaviour** (opportunities for choice, control, and species-typical behaviours through enrichment)—which together influence the fifth domain, the animal's **Mental state** (the balance of positive experiences such as curiosity, comfort and engagement outweighing negative states). Rather than aiming for “not bad,” the model focuses on creating conditions for animals to have **positive welfare**, guiding habitat design, husbandry, enrichment, veterinary care and education programs across accredited institutions.

**How the Five Domains are measured:** Welfare assessments in ZAA-accredited zoos use structured evidence—such as behavioural observations, health checks, diet reviews, enclosure quality audits and enrichment evaluations—to determine whether each of the physical domains is being met. These findings are then used to infer the animal's **mental state**, ensuring decisions are based on measurable indicators and aligned with the **ZAA Five Domains-based accreditation standards**, which require institutions to demonstrate continuous improvement in positive welfare outcomes. Zoo staff use science every day through evidence-based monitoring to support animal health and wellbeing, including **regular feeding trials, weight checks, behavioural observations, and targeted enrichment sessions** that encourage natural behaviours.

ZAA members collectively lead coordinated breeding and recovery programs for threatened species, often forming “insurance populations” for animals at risk of extinction. This work aligns directly with the Australian Government's **Threatened Species Strategy**, which identifies captive breeding, science partnerships and habitat restoration as critical tools in reversing decline.

Scientific roles within zoos—such as **marine biologists, zoologists, ecologists** and **veterinarians**—provide essential expertise. Marine biologists study aquatic species, monitor water quality and investigate environmental impacts on marine life, contributing data to both zoo operations and national conservation planning.

In addition to science and animal care, zoos serve as major **education providers**, engaging the public to build awareness and conservation of the natural environment. At Hobart Zoo and Aquarium, we have daily keeper talks where zookeepers teach the public about our animals and conservation efforts such as the Save the Devil Program. These experiences help people understand conservation, environmental challenges and the actions they can take in their own lives.

Overall, accredited zoos and aquariums play a vital role in Australia's conservation landscape. They connect science, animal care, community education and sustainability, ensuring students experience authentic examples of Science as a Human Endeavour in action.





## References:

**ZAA (Main site)**, <https://www.zooaquarium.org.au/>

**ZAA Accreditation & Animal Welfare (Five Domains Model),**

<https://www.zooaquarium.org.au/public/Public/Animal-Welfare/ZAA-Accreditation.aspx>

**Australian Government – Threatened Species Strategy / Conservation Policy**

**Threatened Species Strategy 2021–2031:**

<https://www.dceew.gov.au/sites/default/files/documents/threatened-species-strategy-2021-2031.pdf>

**Threatened Species Strategy Action Plan 2021–2026 (DAFF):**

<https://www.agriculture.gov.au/sites/default/files/documents/threatened-species-strategy-action-plan-2021-2026.pdf>

**Australian Government Veterinarian / Wildlife health & biosecurity:**

[https://www.agriculture.gov.au/agriculture-land/animal/health/acvo/vet\\_careers](https://www.agriculture.gov.au/agriculture-land/animal/health/acvo/vet_careers)

**Wildlife Care in Australia report:**

<https://www.dceew.gov.au/sites/default/files/documents/wildlife-care-in-australia-report.pdf>





## Year 2 – Behind the Scenes at Hobart Zoo and Aquarium – Unit Plan

	Tuning In	Modelling – I do	Guided Practice- We do	Independent Practice- You do	Plenary	Resources
<b>Lesson 1 – Why do we need zoos?</b>						
<b>Learning Intention</b>	We are learning to identify how modern zoos and aquariums support animals, people and the planet.		<b>Success Criteria</b>		We will be successful when we can name and explain at the five domains for animal care. We will be successful when we can explain why modern zoos and aquariums have a positive impact.	
<b>Sequence</b>	<p><b>Think/Pair/Share</b> Show students the map of Hobart Zoo and Aquarium.</p> <p>Ask students to discuss the following: What is a zoo?</p> <p>Why do we need zoos?</p> <p>Record ideas in Science Journal.</p>	<p><b>Vocab</b> Wild Nutrition – food Environment – home Mental – Feelings</p> <p><b>Echo Read – Why do we need zoos?</b> Pause to ask clarifying questions.</p>	As a group, highlight the evidence from the text of the positive impact of zoos. Focus on the five domains.	<p>Students to then record the five domains in the Science books, draw what this is and write a sentence to explain it.</p> <p>Students then write why zoos have a positive impact.</p>	Quiz to check for understanding.	
<b>Teacher Notes</b>	Record your personal notes and adjustments here.					

	Tuning In	Modelling – I do	Guided Practice- We do	Independent Practice- You do	Plenary	Resources
<b>Lesson 2 – Who works at the zoo?</b>						
<b>Learning Intention</b>	We are learning to identify the different jobs in a zoo and aquarium and how they help animals.		<b>Success Criteria</b>		We will be successful when we can match jobs at the zoo with how they help animals.	
<b>Sequence</b>	<p><b>Discuss and Record</b></p> <p>Who looks after the animals at the zoo?</p> <p>What jobs do you think are at a zoo?</p> <p>Watch the videos of people at HZAA explaining what they do.</p>	<p>Teacher shows students the poster of people who work at the zoo and their jobs.</p> <p>Owner – Stuart Zoo Keeper – Karinda Zoologist – Mandy Marine Biologist – Talei Grounds Keeper – Adam Educator – Laura Hospitality – Jodie Finance – Judy</p> <p>Teacher to model how to brainstorm how an owner of a zoo helps animals by watching the video and recording 1 to 2 short answers.</p>	<p>Break students into 7 groups and give them a device with the video on it to complete their own brainstorm of how that role helps animals.</p> <p>Alternatively, give students a printout of the transcript.</p>	<p><b>Reflective Writing</b></p> <p>If you worked at Hobart Zoo and Aquarium, which job would you like and why?</p>	<p>Display student brainstorms on the wall.</p> <p>Have students share their reflective writing.</p>	<p>Blank life cycle</p> <p>Photo pages for koala, blue tang, albino Bennett’s wallaby and budgerigar.</p>



<b>Teacher Notes</b>	Record your personal notes and adjustments here.					
<b>EXCURSION TIME</b> 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						
	<b>Tuning In</b>	<b>Modelling – I do</b>	<b>Guided Practice- We do</b>	<b>Independent Practice- You do</b>	<b>Plenary</b>	<b>Resources</b>
<b>Lesson 3 – Communicating how Science helps animals at Hobart Zoo and Aquarium</b> <b>Part I – Writing</b>						
<b>Learning Intention</b>	We are learning to describe how Science is used every day at the Hobart Zoo and Aquarium to care for animals.		<b>Success Criteria</b>		We will be successful when we write an information report to describe how people use Science at Hobart Zoo and Aquarium to help animals.	
<b>Sequence</b>	<b>Discuss</b> Show students photos of science at Hobart Zoo and Aquarium and ask students what is happening.  Record entries in Science Journal.  Photos in PowerPoint.	Choose one of the photos and use it to write a short information text to describe the science being used on the board.  Focus on the text features of facts, verbs, nouns and explaining why by linking to the Five Domains.	In pairs, students discuss which they'd like to choose and brainstorm words they might use to explain it.	Students glue their chosen photo of Science at the zoo into their book and record their information text below.	As a class, edit using a punctuation and grammar checklist:  Students can read aloud with a partner.	



		<p>E.G., At Hobart Zoo and Aquarium, zoo keepers observe and record animal behaviour. This science task helps them to know that animals are feeling joy and healthy.</p>				
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**Teacher Notes**

Record your personal notes and adjustments here.



	Tuning In	Modelling – I do	Guided Practice- We do	Independent Practice– You do	Plenary	
<b>Lesson 4 – Communicating how Science helps animals at Hobart Zoo and Aquarium</b> <b>Part 2 – Visual Art</b>						
<b>Learning Intention</b>	We are learning to communicate how science helps animals at Hobart Zoo and Aquarium.		<b>Success Criteria</b>		We will be successful when we have an artwork of a scene of Science at Hobart Zoo and Aquarium to support our writing.	
<b>Sequence</b>	<p><b>Review Science Journal</b> Read record of how Science is used at Hobart Zoo and Aquarium.</p> <p><b>Discuss and record</b> What can we draw to show this? Answers may include:</p> <ul style="list-style-type: none"> <li>• weight check of a wombat</li> <li>• counting budgies in the aviary</li> <li>• check the water health with a ph strip in the aquarium</li> <li>• feeding animals</li> <li>• counting koala poo</li> <li>• observing and recording animal behaviour</li> </ul>	<p>Show students how to draw using the oil pastel.</p> <p>Break it down so you focus on the basic shapes first then add detail.</p> <p>Gently wash over the scene with a water dye that suits the theme, e.g. blue for the aquarium, light orange/brown for the meerkats, blue for budgies.</p>	Students to plan their drawing by practising it on a whiteboard and describing it to their friend.	<p>Students to draw their own scene of science at Hobart Zoo and Aquarium using oil pastels. Students then choose a water dye to brush over the highlight the oil pastels. They may wish to be creative and use multiple dye colours.</p> <p>They then write a few sentences to explain the science being used, encourage use of the five domains.</p>	<p><b>Artist Share</b> Students pair up and take turns to show their art and read their explanation.</p> <p>This is an opportunity for peer-to-peer feedback under teacher guidance.</p>	<p>A4 or A3 Cardboard Oil Pastels Water based dyes</p>

**Teacher  
Notes**

Record your personal notes and adjustments here.





## Adjustments

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

	Enabling	Extending
Content	Pre-teach key vocabulary (zoo, conservation, habitat, threatened, scientist). Use images and word banks.	Add or have students research statistics or case examples (e.g., species recovery programs). Save the Tasmanian Devil, Swift Parrots or Spotted Handfish.
Process	Model with sentence frames; use think–pair–share; provide guided graphic organisers with icons.	Student-led inquiry: choose a staff role to research in more depth; compare two sources.
Product	Allow oral recording or labelled drawings instead of extended writing; scribe or provide cloze passages.	Create an information poster or persuasion piece with QR code to a class-made pledge.

## Resources

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

[STEM Resources for Children 0-8 Years - Little Scientists Australia](#)

[The Zoo Scientist](#)

[Drawing like a scientist | Primary Connections](#)





## References

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

Zoo and Aquarium Association Australasia (ZAA) 2025, Accreditation Standards and Conservation Programs.

Taronga Conservation Society Australia 2024, Conservation, Wildlife Hospitals and Sustainability Initiatives.

Zoos Victoria 2024, Fighting Extinction Program and Research Outputs.

Australian Government 2021–2031, Threatened Species Strategy and Action Plans.

Jobs and Skills Australia 2025, Marine Biologist Occupational Profile.

Department of Agriculture, Fisheries and Forestry (DAFF) 2025, Veterinary Roles in Wildlife Health.

DCCEEW 2024, Wildlife Care and Emergency Response Guidance.

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>>.



## Year 2 - Why do we need zoos and aquariums?

Zoos and aquariums look after animals. They keep animals safe.

They help people learn about animals. Scientists there teach us why animals need help.

Some animals are not found in the wild as much now. Zoos help keep them safe and help them have babies.

At **Hobart Zoo and Aquarium**, people learn about **Tasmanian Devils**. There are not many left in the wild.

All animals should feel:

- safe
- healthy
- joyful

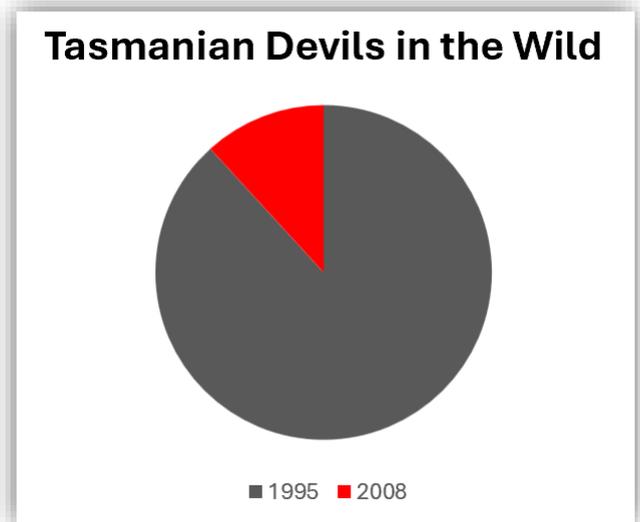


Figure 1 - Tasmanian Devils in the Wild - IUCN Red List -

Zoos use a science tool called the **Five Domains**. These are:



Figure 2 - RSPCA Five Domains Chart

- **Nutrition/Food** – Do animals have good food?
- **Environment/Home** – Is their home safe and comfy?
  - **Health** – Are they well?
- **Behaviour** – Can they move and play?
- **Mental/Feelings** – Do they feel calm and joyful?

Animals cannot tell us how they feel. Zoos use this to give animals great lives and live like they would in the wild.



Help Hobart Zoo and Aquarium to be sustainable by only printing what you need.