# Year 4 – Who Eats Who?

## Teacher Guide and Unit Plan

### Learning Intentions

We are learning …

… to understand what a food chain is and the roles of producers, consumers and decomposers.

…to build and label food chains using Tasmanian organisms.

… to explain the role of Tasmanian devils in Tasmanian food chains.

… to explain how the Tasmanian Devil food chain helps the Tasmanian eco-system.

… to understand the role of decomposers.

### Success Criteria

We will be successful when…

… we can identify producers, consumers and decomposers; explain how energy moves through a simple food chain

… we can accurately sequence organisms, label each role, and use arrows to show energy flow.

… we make a labelled scientific chart to show the flow of energy in a food chain that includes decomposers.

… we identify devils as carnivorous

consumers/scavengers and describe a devil food chain and how they help the Tasmanian bush habitat.

… we explain what has contributed to their declining numbers in the wild.

| **Australian Curriculum** | |
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| ***Learning Area*** | ***Content Descriptions*** |
| ***Science*** | |
| AC9S4U01 | explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships |
| **Science as a human endeavour** | |
| AC9S4H02 | consider how people use scientific explanations to meet a need or solve a problem |
| **Science Inquiry** | |
| Questioning and Predicting AC9S4I01 | pose questions to explore observed patterns and relationships and make predictions based on observations |
| Planning and Conducting AC9S4I02 | use provided scaffolds to plan and conduct investigations to answer questions… |
| Processing, modelling and Analysing AC9S4I04 | construct and use representations, including tables, … visual or physical models, to organise data and information, show simple relationships… |
| Evaluating AC9S4I05 | compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions |
| Communicating AC9S4I06 | 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 4 students identify the roles of organisms in a habitat and construct food chains.

Students pose questions to identify patterns and relationships and make predictions based on observations. They construct representations to organise data and information and identify patterns and relationships. They communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate.

# Teacher Background Information – Food Chains in Tasmanian Habitats

All living things in a habitat are linked by feeding relationships. A food chain shows who eats whom, and the arrows point in the direction energy flows—from the food to the feeder. Plants and algae are producers because they make their own food using sunlight. In Tasmanian environments, native vegetation provides the foundation for biodiversity by supplying food, shelter and nutrients, forming the base of many food chains.

Animals are consumers because they must eat plants or other animals to gain energy. Herbivores, such as insects or wallabies, feed on plants, while carnivores eat other animals. A simple Tasmanian forest food chain, such as *Eucalyptus leaves → Insects → Wattlebird*, demonstrates energy moving from the plant to the insect and then to the bird. Freshwater systems show similar relationships: tadpoles often graze on algae and aquatic plants, while bottom-dwelling insect larvae feed on plant matter. Platypuses forage along streambeds using their bill to detect prey such as insect larvae, worms and yabbies. This produces chains like *Aquatic plants → Aquatic insect larvae → Platypus*.

Decomposers, such as fungi and soil invertebrates, break down dead matter and return nutrients to the soil, supporting new plant growth and completing the energy cycle. Tasmanian soil ecosystems contain diverse organisms that play essential roles in nutrient recycling and long-term habitat health.

Predators and scavengers also shape Tasmanian food webs. The Tasmanian devil, Australia's largest surviving carnivorous marsupial, scavenges carcasses and helps keep the environment clean. Devils are linked to herbivores such as wallabies and possums through chains like *Wallaby carcass → Tasmanian Devil → Wedge-tailed Eagle*. Their populations have been affected by Devil Facial Tumour Disease (DFTD), a transmissible cancer. Conservation programs monitor devil numbers, manage disease impacts and support recovery efforts.

Human actions influence food chains too. Roadkill reduction projects help protect devils and other wildlife by identifying hotspots and encouraging safer driving behaviour. Conservation work in zoos and aquariums also relies on understanding food chains. Staff use feeding relationships to design suitable diets, model natural behaviours and teach visitors how each species fits within its ecosystem.

Understanding producers, consumers, decomposers and energy flow helps explain how Tasmanian species depend on one another. When students explore these ideas, they develop a clearer sense of how changes to one part of a habitat can affect the whole system.

### References


Hobart Zoo & Aquarium n.d., *Education & Aquarium Pages*, viewed 10 February 2026. [inquisitive.com]

Australian Museum 2025, *Platypus — Animal Factsheet*, Australian Museum, viewed 10 February 2026. [australian...hic.com.au]

Department of Natural Resources and Environment Tasmania (NRE Tas) 2026, *Save the Tasmanian Devil Program*, Government of Tasmania, viewed 10 February 2026. [outlifeexpert.com]

Department of Natural Resources and Environment Tasmania (NRE Tas) n.d., *Platypus in Tasmania*, Government of Tasmania, viewed 10 February 2026. [australias...hub.gov.au]

Education Services Australia 2026, *AC9S4U01 – Year 4 Biological Sciences*, Scootle, viewed 10 February 2026. [wildlife.vic.gov.au]

Primary Connections 2025, *Sustain the chain – Year 4 teaching sequence*, Australian Academy of Science, viewed 10 February 2026. [platypus.asn.au]

Private Forests Tasmania 2024, *Biodiversity and Habitat Fact Sheet*, Government of Tasmania, viewed 10 February 2026. [primarycon...ons.org.au]

# Year 4 – Who Eats Who? – Unit Plan

| | Tuning In | Modelling – I do | Guided Practice- We do | Independent Practice– You do | Plenary | Resources |
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| **Lesson 1 – What is a food chain?** | | | | | | |
| **Learning Intention** | We are learning to understand what a food chain is and the roles of producers and consumers. | | **Success Criteria** | | We will be successful when we can identify producers, consumers and decomposers; explain how energy moves through a simple food chain. | |
| **Sequence** | Show three the images of eucalyptus leaves, insects and Bolivian Squirrel Monkey.<br><br>**Discuss and Record in Science Journal**<br><br>What do you see?<br><br>How are they connected? | **Vocabulary**<br>**Food Chain** – The flow of energy between plants and animals.<br>**Energy Flow** – Energy that is transferred from one living thing to another through eating.<br>**Producer** – Gets its energy to grow from the Sun.<br>**Consumer** – Eats to get energy.<br>**Herbivore** – Eats plants.<br>**Carnivore** – Eats animals.<br><br>Show the food chain in the PowerPoint.<br><br>**Define:** | In a circle, show students the animal and plant cards with the titles of producer, consumer – herbivore and consumer – carnivore and have students sort the cards.<br><br>Students then sort them further by creating the food chains drawing arrows on Post It Notes to show the direction of the energy flow. | Students to choose 3 different food chains to record by drawing and writing on their food chains sheet and explain why each organism is in that position. | Quiz to check for understanding. | Photo cards of animals and plants.<br><br>Students food chains recording sheet. |

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| | | The purpose of food chains is to show what a species eat.<br>It helps scientists understand how animals depend on each other for survival. | | | | |
| **Teacher Notes** | Record your personal notes and adjustments here. | | | | | |

| | Tuning In | Modelling – I do | Guided Practice- We do | Independent Practice– You do | Plenary | Resources |
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| **Lesson 2 – Aquatic Food Chains** | | | | | | |
| **Learning Intention** | We are learning to build and label aquatic food chains. | | **Success Criteria** | | We will be successful when we can accurately sequence organisms, label each role, and use arrows to show energy flow. | |
| **Sequence** | Show students a photo of a eucalyptus tree and then one of algae.<br><br>Glue them in the class Science Journal on the same page.<br><br>**Discuss and record** the following:<br>How do they get their energy?<br><br>What would their role be in a food chain? | **Vocabulary**<br>**Aquatic** – Lives or found in water.<br>**Suitable** – Just right or good.<br><br>Read the text, Freshwater Food Chains to students.<br><br>Have them read it as a choral read aloud. | Brainstorm other aquatic food chains that students might know.<br><br>Record these in Science Journal.<br><br>Model how to research food chains on Google and how to determine if the information is accurate. | Students choose 2 aquatic food chains to record either in their Science books or on a sheet of cardboard.<br><br>*Challenge:* Can you find a food chain with more than 4 organisms. | **Pair/Share**<br>Share your 2 aquatic food chains and explain them to a friend. | Computers with internet access. |
| **Teacher Notes** | Record your personal notes and adjustments here. | | | | | |

| Prepare for the class excursion<br>Share the social story with your class and preparing them for their excursion to Hobart Zoo and Aquarium. | | | | | | |
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| | **Tuning In** | **Modelling – I do** | **Guided Practice- We do** | **Independent Practice– You do** | **Plenary** | **Resources** |
| **Lesson 3 – How do Tasmanian Devils Contribute to the Tasmanian Ecosystem?** | | | | | | |
| **Learning Intention** | We are learning to explain how the Tasmanian Devil food chain helps the Tasmanian eco-system. | | **Success Criteria** | | We will be successful when we explain a food chain for the Tasmanian Devil and how they help the Tasmanian bush habitat. | |
| **Sequence** | **Think/Pair/Share**<br>Have students discuss the following with their partner.<br>- What do Tasmanian Devils Eat?<br><br>Watch the video, David Attenborough presents: Tasmanian – Weird and Wonderful, this is shortened and runs for 6 minutes. x | **Vocab:**<br>Scavenger<br>Carcass<br><br>Share and read the extract from the NRE website, Tasmanian Devil Facts for Kids.<br><br>Model how to highlight key facts to explain how Tasmanian Devils help the Tasmanian bush habitat. | Students are to work as a team to highlight key information and examples to share with the class. Record on paper or whiteboards before sharing. Alternatively, print the webpage and highlight use highlighters. | Students will complete the task where they construct a labelled Tasmanian Devil Food Chain and write a paragraph to explain how they help the Tasmanian bush habitat. | Gallery Walk to share learning. | David Attenborough presents: Tasmanian – Weird and Wonderful<br><br>Information Reports |
| **Teacher Notes** | Record your personal notes and adjustments here. | | | | | |

| | Tuning In | Modelling – I do | Guided Practice- We do | Independent Practice– You do | Plenary | Resources |
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| **Lesson 4– What are decomposers and how do they fit in food chains?** | | | | | | |
| **Learning Intention** | We are learning to understand the role of decomposers. | | **Success Criteria** | | We will be successful when we make a labelled scientific chart to show the flow of energy in a food chain that includes decomposers. | |
| **Sequence** | We know that Tasmanian Devils clean up dead animals. What cleans them up if they aren't there?<br><br>What cleans up dead plants?<br><br>Discuss as a class and record ideas in Science Journal. | **Vocab:**<br>Decomposers – an organism that gets energy by eating dead plants and animals. They return great nutrients to the soil to keep it healthy.<br><br>**Know/Want/Learned**<br>**Write the topic –** *How decomposers fit in food chains.*<br>Write two examples for know and want in the thinking organiser. | Students to work together to discuss, write and draw their ideas for Know and Want to Know in their thinking organiser.<br><br>Watch the video, What are decomposers in the food chain? Have students take notes as they watch. | Students are to chose one of the previous food chains from their book to illustrate on cardboard to include decomposers. | Students to share their food chain drawing and explain the connections. | A4 cardboard |
| **Teacher Notes** | | | | | | |

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| **Teacher Notes** | Record your personal notes and adjustments here. | | | | | |

## Adjustments

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

| | Enabling | Extending |
|---|---|---|
| **Content** | Provide fewer organisms and pre-labelled role cards. | Add decomposers and human-impact factors. Students can independently research these. |
| **Process** | Model each step.<br>Paired support.<br>Complete task in small group with guided teacher or adult support. | Independent research using government fact pages to compare food chains in two different habitats. |
| **Product** | Partially complete food chain with one relationship. Show one of the organisms and have students cut and paste to complete the food chain. | Multi-relationships shown in the food chain with explanations.<br>Poster or campaign created and share with local school community with specific actions to support Tasmanian Devil conservation. |

## 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

Lesson 1 • Sustain the Chain – Year 4 | Primary Connections - https://primaryconnections.org.au/teaching-sequences/year-4/sustain-the-chain/lesson-1-our-local-environment

## References

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


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>.

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NRE Tas 2011, Draft Recovery Plan for the Tasmanian Devil, Government of Tasmania.

Primary Connections 2025, Sustain the chain – Year 4 teaching sequence (AC v9), Australian Academy of Science.

Private Forests Tasmania 2024, Biodiversity and habitat fact sheet, Government of Tasmania.

Scootle 2026, AC9S4U01 – Year 4 Biological sciences descriptor, Education Services Australia.

# Year 4 - Freshwater Food Chains

Aquatic plants use sunlight to make their own food, so they are producers.

Worms often graze on algae and soft plant matter from rocks and leaves. This makes them plant-eating consumers.

Energy moves from plants to aquatic worms when they feed on the algae. Then to the platypus who searches bottom of Tasmanian rivers and waterways for insects or worms to eat using its bill. This makes platypus carnivore consumers.

We show the flow of energy with arrows. Energy passes from the plants to the insects, and then to the platypus.

algae
producer

worms
consumer(herbivore)

platypus
Consumer
(carnivore)

At **Hobart Zoo & Aquarium**, keepers use food chain information to plan suitable diets. It also helps them to know which animal species than can put in the same habitat without one being eaten, this is especially important in aquariums.

Scientists use food chain information to make decisions to support animals in the wild as their habitats change and when new species are introduced to areas.