

Teacher Notes

Themes

- Animal biodiversity
- Habitats and ecosystems
- Threatened species
- Conservation and sustainability

Key learning outcomes

- Marvel at the diversity of animals that need tree hollows
- Learn how tree hollows form and how long it takes
- Discover how animals use and take care of tree hollows
- Understand the threats to these habitats and ecosystems and empathise with threatened species
- Learn how people can help to conserve habitat by making sustainable choices
- Appreciate how scientists study wildlife and ecosystems

Key curriculum areas

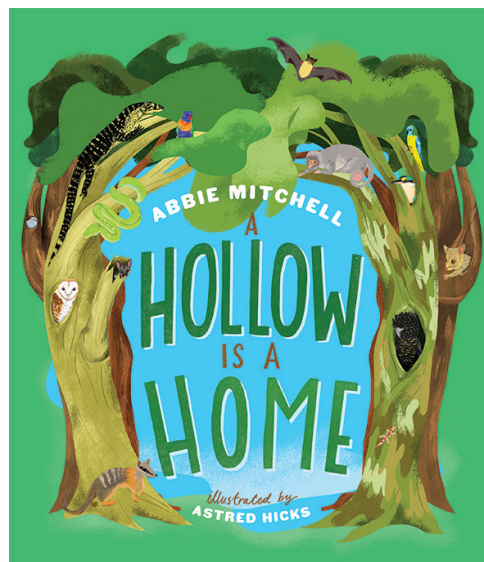
- Science: Science Understanding, Science as a Human Endeavour, Science Inquiry
- English: Language, Literacy
- HASS: Geography, Skills, Economics and business
- Mathematics: Number, Measurement
- Cross Curriculum Priority – Sustainability: Systems, world views, design, futures

Publication details

A Hollow Is a Home
ISBN: 9781486308057

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Teacher notes prepared by Mike McRae.



A Hollow Is a Home

Abbie Mitchell

Illustrated by Astred Hicks

Come and take a peek inside the amazing world of tree hollows and discover more than 340 species of incredible Australian animals that call hollows home. With colour photos of glorious gliders, darting dunnarts, minute microbats and many more, this book is full of fun facts about animals that use tree hollows as places for resting, nesting or hiding. Find out how hollows are created, why they are so vital to healthy ecosystems and the ways that they are threatened. You'll meet scientists who spend their time hollow-hunting and there are also plenty of tips on how you can spot hollows yourself, help to protect the environment and encourage habitat for hollow-dependent animals.

Readers in Years 3 to 6



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About the author and illustrator

Abbie Mitchell is an environmental educator who provides school and community programs to celebrate and promote Australian biodiversity. She lives in the bush with her husband, two kids, some stingless beehives and a couple of charismatic dogs – and lots of native creatures.

Astred Hicks is an award-winning book designer, illustrator and author. She has been designing books for over 10 years through her Sydney-based business Design Cherry.

Pre-reading activities

To prepare students for reading *A Hollow Is a Home*.

Find a tree on the school grounds that students can spend some time observing. Invite students to explain what makes it different to a shrub or even a grass. Ask them to describe the living things – both those they can see and those they might not be able to – that would use the tree, differentiating between those that might simply be stopping for a rest and those that use the tree for other resources.

Use this tree as a reference point for the book, returning to it for comparison or contrast. The students might be able to find out its species name and perhaps even other characteristics such as its age or major events in its life.

Discussion questions

Science

1. Ask students what they think different conservation statuses might mean and invite them to provide examples they've heard before. Discuss with them how an animal might be placed on an official conservation list. (Page 7)
2. Create a list of reasons an animal might require a tree hollow for survival. Discuss why animals are vulnerable to exposure to the elements and how a tree hollow might provide added benefits. (Pages 8–13)
3. Ask students to look up the life spans of some of the species listed in the illustration on page 18. Compare this with how long it takes a hollow to form in a tree. If habitat in a certain area is destroyed, why might planting new trees not be enough to save a threatened species?

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4. Have students describe what they like about their home and what they use it for. Animals live in different ecosystems and require different resources from their habitats. What features of a tree and its hollow might different animals want? (Pages 24–29) Use the ‘Creature feature’ panels throughout the book as examples.
5. Being careful to instruct students not to give away too much about their address, discuss with them how far they might travel in a typical week. Who travels the furthest? Who barely leaves their suburb? Use this to discuss how different animals have their own ‘ranges’, drawing comparisons of their area with areas students might be familiar with. (Page 31)
6. Do any of the students have chores that they do around the house? Discuss how these are similar or different to the housekeeping that animals do to their hollows. (Pages 40–45)
7. Habitats are cleared for a variety of reasons. Ask students how this makes them feel and what impact this might have on wildlife. Give them a scenario, for example a woodland ecosystem being cleared for urban development, and invite them to predict the consequences for the animals that lived there. (Page 46)
8. Tree hollows are in high demand and at times there are not enough for all the animals that need them. Sometimes animals have to find a substitute, especially in an urban environment. Ask students if they have any amusing or shocking experiences of animals moving into their own homes. (Pages 54–59)
9. Many kinds of scientists pay close attention to what lives in tree hollows as part of their work. Ask students for examples of different kinds of scientists who might study animals. Perhaps they personally know somebody who works in such a profession? (Pages 72–75)
10. Making an urban environment friendly for animals that live in hollows could be one way to help species whose homes have been destroyed or are threatened. Ask students for their ideas on ways they can turn a garden or part of the schoolyard into an animal-friendly ecosystem. Remind them of the threats their own pets pose and what might be done to reduce the risks. (Page 87)

English

1. *A Hollow Is a Home* provides the scientific names of animal species. Why might these complicated sounding names be used instead of common names? Invite students to try to pronounce them. (Page 6)
2. *A Hollow Is a Home* is full of wonderful facts on animals and their habitats. The scientist profiles also discuss some facts, but include a few subjective opinions. Discuss with the students the difference between a fact and an opinion, and ask them to find examples of each in the profiles. (Pages 72–75)

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3. At the back of *A Hollow Is a Home* there's a glossary of terms which students might or might not understand already. Ask the students to select five new words from the glossary to use in a short composition about an animal or ecosystem from the book.

Mathematics

1. Roughly 115 species of Australian bird make use of tree hollows, which is about 15 per cent of the total number of species. Estimate with the students how many species of birds there are in the country. Use the chart on page 23 to make estimates for other groups of animals.
2. *A Hollow Is a Home* is full of measurements describing quantities of area, length and time. Ask students to come up with as many units for each as they can, and discuss which are most appropriate for describing specific things, from tree height to hollow size.

Activities

Science

Conservation conversation

The International Union for Conservation of Nature (IUCN) is the worldwide authority on the health of living populations around the globe. Its 'Red List' can be found online, and it provides readers with a snapshot of the status of a variety of animals. (Pages 6–7)

Ask students to see if they can find their favourite animal on the list. Come up with some examples of extinct, threatened and vulnerable animals, and discuss why they are under threat or extinct. Invite students to create posters that promote these facts. Ask them to think about who they want to read their poster. Would the choice of audience affect the design of the poster and the language they might use?

Extension: Have students provide their opinion on what might be done to conserve their choices of species. Once they've written this down, ask them to describe other consequences of this action.

Label a tree

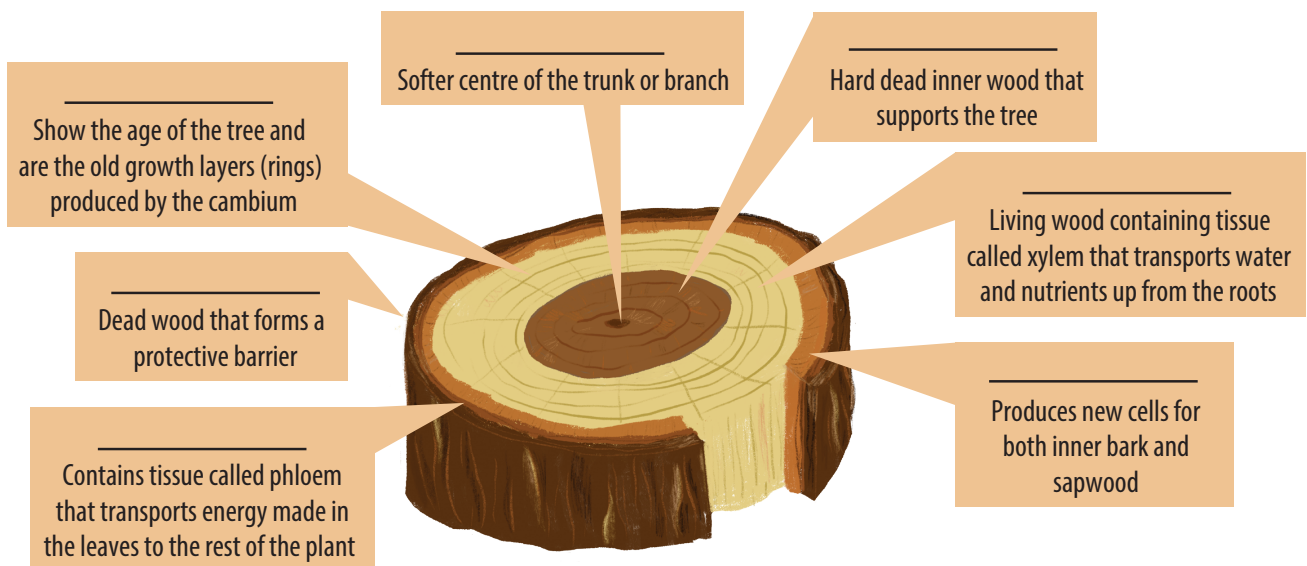
A hollow forms when the inside of a tree is damaged, for example by termites, fungi or fire. Read the section 'Heart attack: how hollows form' (Pages 15–16). Explain the names of the different tissues inside the tree and how they help the tree to grow. Students can complete the worksheet 'What is inside a tree?', which is found on the next page.

What is inside a tree?

The diagram below shows what is inside a tree.
Fill in the blanks with the name of each part.

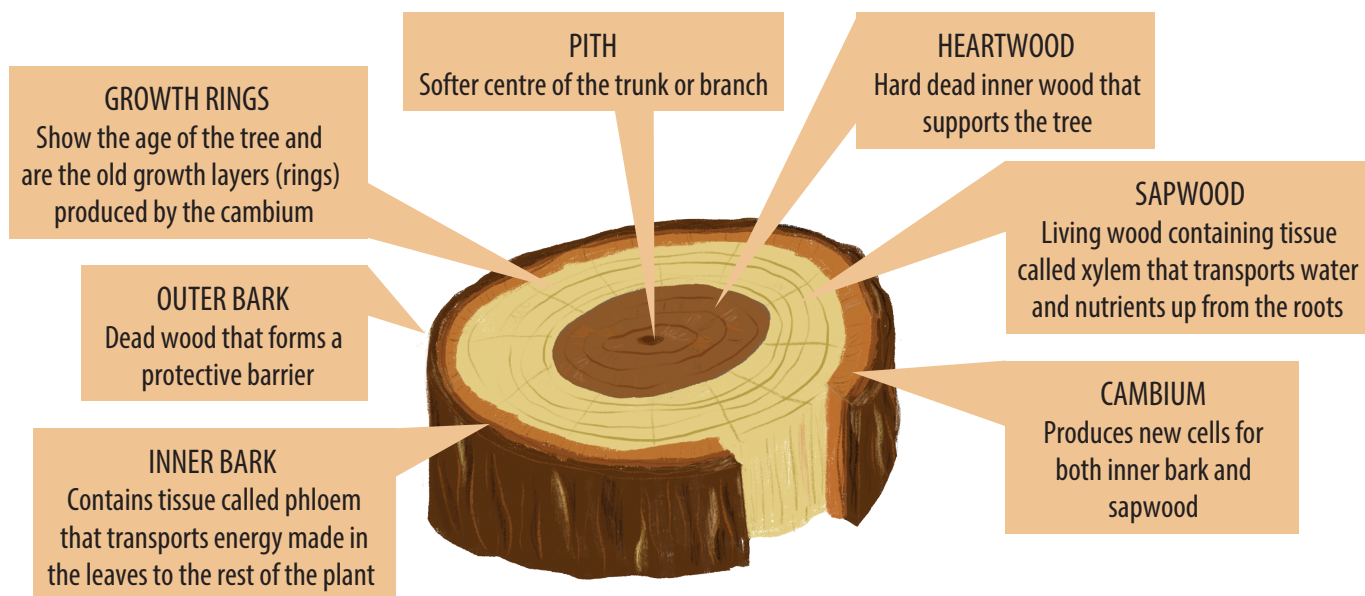
Part names

Sapwood	Growth Rings	Cambium	Inner Bark
Outer Bark	Heartwood	Pith	



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Worksheet answers



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Hollow hunting

Hollows come in all shapes and sizes, in all kinds of trees. Reading about them in a book is one thing. To see them first hand, take students on an outing to a nearby woodland environment and have them record their observations on the Hollow Hunt Survey sheet (see printable survey on the next page).

To complete the survey:

- Look for trees that are likely to have hollows, even if hollows are hard to see. (Page 67, 80)
- Look for clues left by animals that might be accessing a hollow. (Page 79)
- If a hollow is seen, draw a sketch of the tree. Label the drawing with the type of hollow. (Page 14)
- Measure the DBH and estimate the height of the tree. (Pages 82–83)
- Use a compass to work out the direction the hollow faces.
- Estimate the size of the hollow entrance. (Page 83)

The 4 Rs

Whether in the home or in the classroom, there are a variety of items that we might not really need, we can have fewer of, we can get a lot of use out of, or we break down and turn into something new.

Explain the 4 'Rs' – refuse, reduce, reuse, recycle (Page 64). Use four different coloured sticky notes – one for each of the 4 'Rs' – to catalogue items in a room. If it can be reused, ask students to describe its expected life span.

Extension: Invite students to use a fifth sticky note to label items that don't fit any of the above, and will end up in landfill.

English

Tree story

Write a story from the perspective of a tree, telling how a hollow formed in it and who came to visit over time. (Pages 14–20)

Scientist roleplay

A Hollow Is a Home contains four short interviews with researchers who investigate tree hollows as part of their work. (Pages 72–75)

Working in pairs, invite students to roleplay an interview with each scientist, where one student is asking questions and the other is responding as if they were that researcher. They can use the interviews as a script, or rework the information in them to come up with their own spin.

Hollow Hunt Survey

Survey information	Photo or drawing of location
<p>Location (Address or GPS coordinate)</p> <p>_____</p> <p>Date Time Temperature</p> <p>_____ _____ _____</p> <p>Season</p> <p>Spring Summer Autumn Winter</p> <p>Weather conditions</p> <p>Sunny Rainy Overcast Windy Night</p>	
<p>Tree information</p> <p>Tree species _____ (if known)</p> <p>Tree height _____ (approximately)</p> <p>Tree DBH _____ (circumference at 140 cm ÷ 3.14)</p> <p>Tree health</p> <p>Overall: Healthy Dead Fire scars Termites</p> <p>Branches: Many dead Few dead</p> <p>Broken Cut</p> <p>Tree connectivity _____ (How many branches touch other trees?)</p>	<p>Hollow information</p> <p>Distance from ground _____ (approximately)</p> <p>Size of hollow entrance _____ (approximately)</p> <p>Small < 5 cm Large 11-20 cm Medium 6-10 cm Extra large >20 cm</p> <p>Location of hollow _____</p> <p>Base of tree End of branch Trunk Middle of branch Top of trunk</p> <p>Direction that hollow faces _____</p> <p>Other observations (e.g. What does it look like? Can you tell the depth? Is it hidden by foliage? Does it look weather-proof/safe? Is there much food nearby?)</p>
<p>Animal clues or sightings</p> <p>_____</p>	

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A Hollow Is a Home review

Collect some book reviews from different sources. *Double Helix* magazine contains book reviews written by kids in every issue – order some back copies to share.

Discuss with students what details they might want to know in a review. Break them down into ‘things that are objective’, like page numbers or facts about the authors, and ‘things that are subjective’, like their personal opinion about how much (or how little) they enjoyed reading it.

Have students write a review for *A Hollow Is a Home*.

HASS: Geography

Use a satellite image from Google Maps to look at your school and local area. See if you can identify areas of good habitat and large trees that may have hollows. Is there habitat connectivity for arboreal animals to move across the area? Are there areas that could be improved to link connectivity? What type of improvements could be made? (Pages 34, 68)

Mathematics

Tree pi

One way to estimate the likelihood of a tree having a hollow is to measure the thickness (diameter) of its trunk. (Page 82)

What you need

- String
- Pencil
- Scissors
- Thumbtack
- Measuring tape
- Calculator

What to do

1. Find a tree that seems to have a single trunk, growing on relatively flat ground.
2. Use the measuring tape to work out a height of 140 centimetres from the ground. Mark this height with a pencil.
3. Place a thumbtack into the pencil mark on the tree (don't worry, one thumbtack won't harm it!).

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4. Secure the string to the thumbtack and unwind a length around the tree parallel to the ground.
5. Pull the string tight and mark the spot where it meets the thumbtack again. Cut the string at this point. Measure the length of the string. This is the circumference of the tree.
6. To find the diameter of the tree, divide the circumference by 3.14 (a number called 'pi').

According to *A Hollow Is a Home*, about half of all trees with a diameter of 50 centimetres should have a hollow. This is an average figure based on a lot of measurements over a large area.

Based on the trees in the area where you took your measurement, would you agree? What's unique about your area that might affect this probability of finding a hollow? (Page 17)

Treigonometry

A clinometer is a handy way to measure the height of an object, using little more than some maths and a few simple tools. You can also do an estimate before finding a more precise measurement. (Page 83)

What you need

- Recycled paper
- Sticky tape
- Recycled cardboard
- Scissors
- String
- Metal washer
- Measuring tape

Making the clinometer

1. Cut the cardboard into a perfect square with a side of 20 centimetres.
2. Cut the cardboard square diagonally across to provide two right angled triangles. Each student needs one of these triangles.
3. Roll a strip of paper to make a narrow cylinder, about as wide as a pencil, and secure it with tape. Tape the cylinder along the triangle's long side (the hypotenuse) to use as a scope.
4. Cut 30 centimetres of string and tie one end to the washer.
5. Tape the free end of the string to one of the 'sharp' corners of the triangle, just below the scope (not the right angle).

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Using the clinometer

1. Find a tall tree to measure, preferably at least twice as tall as a person.
2. Hold the clinometer so the scope side is higher than the right angle. The right angle can be pointing at the ground, and the string is on the opposite side to the person using it.
3. To measure the tree, hold the clinometer up to your eye and look at the top of the tree through the scope.
4. Angle the clinometer so the string lines up with one flat side of the triangle, and the other flat side runs parallel to the ground. If you can't see the top of the tree through the scope any more, move closer or further away from the tree until you can.
5. Once the string lines up with one side of the triangle and the ground with the other, the line of sight down the scope will make an angle of 45 degrees with the ground.
6. Just as the length of two sides of the triangle is the same, the distance from the viewer to the tree will be roughly the height of the tree. Use a tape measure to work this out.
7. To work it out more precisely, you need to take into account your eyes are actually higher than the ground. Measure the distance from your eyes to the ground and add this to the distance.

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Australian Curriculum Links (Version 9.0)

Year level	Learning area: science	Other learning areas
Year 3	<p>Science understanding: Biological sciences</p> <ul style="list-style-type: none"> Compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals (AC9S3U01) <p>Science as a human endeavour: Nature and development of science</p> <ul style="list-style-type: none"> Examine how people use data to develop scientific explanations (AC9S3H01) <p>Science as a human endeavour: Use and influence of science</p> <ul style="list-style-type: none"> Consider how people use scientific explanations to meet a need or solve a problem (AC9S3H02) <p>Science inquiry: Questioning and predicting</p> <ul style="list-style-type: none"> Pose questions to explore observed patterns and relationships and make predictions based on observations (AC9S3I01) <p>Science inquiry: Planning and conducting</p> <ul style="list-style-type: none"> Use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment (AC9S3I02) <p>Science inquiry: Evaluating</p> <ul style="list-style-type: none"> Compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions (AC9S3I05) 	<p>HASS</p> <p>Skills: Questioning and researching</p> <ul style="list-style-type: none"> Develop questions to guide investigations about people, events, places and issues (AC9HS3S01) Locate, collect and record information and data from a range of sources, including annotated timelines and maps (AC9HS3S02) <p>Skills: Concluding and decision-making</p> <ul style="list-style-type: none"> Draw conclusions based on analysis of information (AC9HS3S05) <p>English</p> <p>Literacy: Creating texts</p> <ul style="list-style-type: none"> Plan, create, edit and publish imaginative, informative and persuasive written and multimodal texts, using visual features, appropriate form and layout, with ideas grouped in similar paragraphs, mostly correct tense, topic-specific vocabulary and correct spelling of most high-frequency and phonetically regular words (AC9E3LY06) <p>Literacy: Interacting with others</p> <ul style="list-style-type: none"> Use interaction skills to contribute to conversations and discussions to share information and ideas (AC9E3LY02) <p>Literacy: Analysing, interpreting and evaluating</p> <ul style="list-style-type: none"> Identify the audience and purpose of imaginative, informative and persuasive texts through their use of language features and/or images (AC9E3LY03) <p>Mathematics</p> <p>Measurement</p> <ul style="list-style-type: none"> Identify which metric units are used to measure everyday items; use measurements of familiar items and known units to make estimates (AC9M3M01)

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Year level	Learning area: science	Other learning areas
Year 4	<p>Science understanding: biological sciences</p> <ul style="list-style-type: none"> Explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships (AC9S4U01) <p>Science as a human endeavour: Nature and the development of science</p> <ul style="list-style-type: none"> Examine how people use data to develop scientific explanations (AC9S4H01) <p>Science as a human endeavour: Use and influence of science</p> <ul style="list-style-type: none"> Consider how people use scientific explanations to meet a need or solve a problem (AC9S4H02) <p>Science inquiry: Questioning and predicting</p> <ul style="list-style-type: none"> Pose questions to explore observed patterns and relationships and make predictions based on observations (AC9S4I01) <p>Science inquiry: Planning and conducting</p> <ul style="list-style-type: none"> Use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment (AC9S4I02) Follow procedures to make and record observations, including making formal measurements using familiar scaled instruments and using digital tools as appropriate (AC9S4I03) <p>Science inquiry: Processing, modelling and analysing</p> <ul style="list-style-type: none"> Construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns (AC9S4I04) <p>Science inquiry: Evaluating</p> <ul style="list-style-type: none"> Compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions (AC9S4I05) <p>Science inquiry: Communicating</p> <ul style="list-style-type: none"> Write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate (AC9S4I06) 	<p>HASS</p> <p>Geography</p> <ul style="list-style-type: none"> The importance of environments, including natural vegetation and water sources, to people and animals in Australia and on another continent (AC9HS4K05) <p>Skills: Questioning and researching</p> <ul style="list-style-type: none"> Develop questions to guide investigations about people, events, places and issues (AC9HS4S01) <p>Skills: Interpreting, analysing and evaluating</p> <ul style="list-style-type: none"> Interpret information and data displayed in different formats (AC9HS3S03) <p>Skills: Concluding and decision-making</p> <ul style="list-style-type: none"> Draw conclusions based on analysis of information (AC9HS4S05) Propose actions or responses to an issue or challenge that consider possible effects of actions (AC9HS4S06) <p>Skills: Communicating</p> <ul style="list-style-type: none"> Present descriptions and explanations, drawing ideas from sources and using relevant subject-specific terms (AC9HS4S07) <p>English</p> <p>Literacy: Creating texts</p> <ul style="list-style-type: none"> Plan, create, edit and publish written and multimodal imaginative, informative and persuasive texts, using visual features, relevant linked ideas, complex sentences, appropriate tense, synonyms and antonyms, correct spelling of multisyllabic words and simple punctuation (AC9E4LY06) <p>Literacy: Interacting with others</p> <ul style="list-style-type: none"> Listen for key points and information to carry out tasks and contribute to discussions, acknowledging another opinion, linking a response to the topic, and sharing and extending ideas and information (AC9E4LY02) <p>Literacy: Analysing, interpreting and evaluating</p> <ul style="list-style-type: none"> Identify the characteristic features used in imaginative, informative and persuasive texts to meet the purpose of the text (AC9E4LY03) <p>Mathematics</p> <p>Number</p> <ul style="list-style-type: none"> Recognise and extend the application of place value to tenths and hundredths and use the conventions of decimal notation to name and represent decimals (AC9M4N01) <p>Measurement</p> <ul style="list-style-type: none"> Interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units (AC9M4M01) Recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units (AC9M4M02)

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Year level	Learning area: science	Other learning areas
Year 5	<p>Science understanding: Biological sciences</p> <ul style="list-style-type: none"> Examine how particular structural features and behaviours of living things enable their survival in specific habitats (AC9S5U01) <p>Science as a human endeavour: Nature and development of science</p> <ul style="list-style-type: none"> Examine why advances in science are often the result of collaboration or build on the work of others (AC9S5H01) <p>Science as a human endeavour: Use and influence of science</p> <ul style="list-style-type: none"> Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions (AC9S5H02) <p>Science inquiry: Questioning and predicting</p> <ul style="list-style-type: none"> Pose investigable questions to identify patterns and test relationships and make reasoned predictions (AC9S5I01) <p>Science inquiry: Planning and conducting</p> <ul style="list-style-type: none"> Plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place (AC9S5I02) Use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate (AC9S5I03) <p>Science inquiry: Processing, modelling and analysing</p> <ul style="list-style-type: none"> Construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships (AC9S5I04) <p>Science inquiry: Evaluating</p> <ul style="list-style-type: none"> Compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions (AC9S5I05) <p>Science inquiry: Communicating</p> <ul style="list-style-type: none"> Write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate (AC9S5I06) 	<p>HASS</p> <p>Geography</p> <ul style="list-style-type: none"> The influence of people, including First Nations Australians and people in other countries, on the characteristics of a place (AC9HS5K04) The management of Australian environments, including managing severe weather events such as bushfires, floods, droughts or cyclones, and their consequences (AC9HS5K05) <p>Skills: Concluding and decision-making</p> <ul style="list-style-type: none"> Develop evidence-based conclusions (AC9HS5S05) Propose actions or responses to issues or challenges and use criteria to assess the possible effects (AC9HS5S06) <p>Skills: Communicating</p> <ul style="list-style-type: none"> Present descriptions and explanations, drawing ideas, findings and viewpoints from sources, and using relevant terms and conventions (AC9HS5S07) <p>English</p> <p>Language: Language for interacting with others</p> <ul style="list-style-type: none"> Understand that language is selected for social contexts and that it helps to signal social roles and relationships (AC9E5LA01) <p>Literacy: Creating texts</p> <ul style="list-style-type: none"> Plan, create, edit and publish written and multimodal texts whose purposes may be imaginative, informative and persuasive, developing ideas using visual features, text structure appropriate to the topic and purpose, text connectives, expanded noun groups, specialist and technical vocabulary, and punctuation including dialogue punctuation (AC9E5LY06) Plan, create, rehearse and deliver spoken and multimodal presentations that include relevant, elaborated ideas, sequencing ideas and using complex sentences, specialist and technical vocabulary, pitch, tone, pace, volume, and visual and digital features (AC9E5LY07) <p>Literacy: Interacting with others</p> <ul style="list-style-type: none"> Use appropriate interaction skills including paraphrasing and questioning to clarify meaning, make connections to own experience, and present and justify an opinion or idea (AC9E5LY02) <p>Mathematics</p> <p>Number</p> <ul style="list-style-type: none"> Interpret, compare and order numbers with more than 2 decimal places, including numbers greater than one, using place value understanding; represent these on a number line (AC9M5N01) <p>Measurement</p> <ul style="list-style-type: none"> Choose appropriate metric units when measuring the length, mass and capacity of objects; use smaller units or a combination of units to obtain a more accurate measure (AC9M5M01) Solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units (AC9M5M02) Estimate, construct and measure angles in degrees, using appropriate tools including a protractor, and relate these measures to angle names (AC9M5M04)

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Year level	Learning area: science	Other learning areas
Year 6	<p>Science understanding: Biological sciences</p> <ul style="list-style-type: none"> Investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions (AC9S6U01) <p>Science as a human endeavour: Nature and development of science</p> <ul style="list-style-type: none"> Examine why advances in science are often the result of collaboration or build on the work of others (AC9S6H01) <p>Science as a human endeavour: Use and influences of science</p> <ul style="list-style-type: none"> Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions (AC9S6H02) <p>Science inquiry: Questioning and predicting</p> <ul style="list-style-type: none"> Patterns and test relationships and make reasoned predictions (AC9S6I01) <p>Science inquiry: Planning and conducting</p> <ul style="list-style-type: none"> Use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate (AC9S6I03) <p>Science inquiry: Processing, modelling and analysing</p> <ul style="list-style-type: none"> Construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns, trends and relationships (AC9S6I04) <p>Science inquiry: Evaluating</p> <ul style="list-style-type: none"> Compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions (AC9S6I05) <p>Science inquiry: Communicating</p> <ul style="list-style-type: none"> Write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate (AC9S6I06) 	<p>HASS</p> <p>Economics and business</p> <ul style="list-style-type: none"> Influences on consumer choices and strategies that can be used to help make informed personal consumer and financial choices (AC9HS6K08) <p>English</p> <p>Literacy: Interacting with others</p> <ul style="list-style-type: none"> Use interaction skills and awareness of formality when paraphrasing, questioning, clarifying and interrogating ideas, developing and supporting arguments, and sharing and evaluating information, experiences and opinions (AC9E6LY02) <p>Literacy: Analysing, interpreting and evaluating</p> <ul style="list-style-type: none"> Analyse how text structures and language features work together to meet the purpose of a text, and engage and influence audiences (AC9E6LY03) <p>Literacy: Creating texts</p> <ul style="list-style-type: none"> Plan, create, edit and publish written and multimodal texts whose purposes may be imaginative, informative and persuasive, using paragraphs, a variety of complex sentences, expanded verb groups, tense, topic-specific and vivid vocabulary, punctuation, spelling and visual features (AC9E6LY06) <p>Language: language for interacting with others</p> <ul style="list-style-type: none"> Understand that language is selected for social contexts and that it helps to signal social roles and relationships (AC9E5LA01) <p>Mathematics</p> <p>Measurement</p> <ul style="list-style-type: none"> Convert between common metric units of length, mass and capacity; choose and use decimal representations of metric measurements relevant to the context of a problem (AC9M6M01)

Teacher Notes

Year level	Learning area: science	Other learning areas
All	<p>Cross Curriculum Priority: Sustainability Systems</p> <ul style="list-style-type: none">All life forms, including human life, are connected through Earth's systems (geosphere, biosphere, hydrosphere and atmosphere) on which they depend for their wellbeing and survival. (SS1)Sustainable patterns of living require the responsible use of resources, maintenance of clean air, water and soils, and preservation or restoration of healthy environments. (SS2)Social, economic and political systems influence the sustainability of Earth's systems. (SS3) <p>World views</p> <ul style="list-style-type: none">World views that recognise the interdependence of Earth's systems, and value diversity, equity and social justice, are essential for achieving sustainability. (SW1)World views are formed by experiences at personal, local, national and global levels, and are linked to individual, community, business and political actions for sustainability. (SW2) <p>Design</p> <ul style="list-style-type: none">Sustainably designed products, environments and services aim to minimise the impact on or restore the quality and diversity of environmental, social and economic systems. (SD1)Creative and innovative design is integral to the identification of new ways of sustainable living. (SD2)Sustainable design requires an awareness of place, past practices, research and technological developments, and balanced judgements based on projected environmental, social and economic impacts. (SD3) <p>Futures</p> <ul style="list-style-type: none">Sustainable futures are achieved through informed individual, community, business and political action that values local, national and global equity and fairness across generations into the future. (SF1)Sustainable futures require individuals to seek information, identify solutions, reflect on and evaluate past actions, and collaborate with and influence others as they work towards a desired change. (SF2)	

Related books from CSIRO Publishing

Animal Eco-Warriors (2017)

Bouncing Back (2018)

Phasmid (2015)