SHUANGHUGOES BEYOND THE REEF



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https://theeducationshop.com.au https://metromagazine.com.au © ATOM 2022 ISBN: 978-1-76061-523-9

STUDY GUIDE

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BEYOND THE REEF

Beyond the Reef (2022) is a feature documentary exploring the landscape of Far North Queensland, Australia. Directed by Luke Wheatley and presented by Shuang Hu, *Beyond the Reef* showcases some of Australia's most valuable ecosystems by land, air and sea.

Filmed in spectacular 8k with Dolby Atmos surround sound, Beyond the Reef has been created for a fully immersive giant screen experience.



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Running time: 70 minutes

CURRICULUM LINKS

Beyond the Reef is suitable for secondary students at all year levels. The documentary is also recommended for primary students in Years 5 and 6.

For students in Years 5–10, *Beyond the Reef* has relevance to units of work in the learning areas of English, Geography and HASS, and addresses the Australian Curriculum crosscurriculum priority of Sustainability.

Activities in this study design have been designed to educate students about two of Australia's World Heritage sites – the Great Barrier Reef and the Daintree Rainforest.

In English, students engage with a variety of texts for enjoyment in which the primary purpose is aesthetic, as well as texts designed to inform and persuade. English equips students with the skills necessary to investigate, analyse and communicate ideas and information. Beyond the Reef provides opportunities for students to study a text that explores a real-world setting and reflect on their understanding of places and issues of importance to society in relation to sustainability. Students can draw on Beyond the Reef to create a range of imaginative, informative and persuasive texts about the Great Barrier Reef and the Daintree Rainforest.

In Geography and HASS, students learn about the significance of the environment in human life, and the important interrelationships between humans and the environment. The environment supports and enriches human and other life. *Beyond the Reef* provides opportunities for students to investigate environmental geography through an in-depth study of a specific environment. Students can apply geographic knowledge and skills to investigate the characteristics of the environments of the Great Barrier Reef and Daintree Rainforest and how these places are used and managed by humans.

In Science, students develop scientific knowledge, understandings and skills to make informed decisions about local, national and global ecological issues. *Beyond the Reef* provides opportunities for students to nurture their curiosity about the world around them and to investigate the natural world and the changes made to it through human activity. The study of the ecosystems of the Great Barrier Reef and the Daintree Rainforest allows students to appreciate that components within living and nonliving systems are interdependent.

Beyond the Reef can be used to address the Australian Curriculum crosscurriculum priority: Sustainability. The concept of sustainability is about the capacity of the environment to continue to support our lives and the lives of other living creatures into the future. Education for sustainability develops the knowledge, skills, values and world views necessary for people to act in ways that contribute to more sustainable patterns of living. Sustainability education is futures-oriented, focusing on protecting environments and creating a more ecologically and socially just world through informed action.

See Appendix 1. Australian Curriculum links for more information.

For students in Years 11 – 12, *Beyond the Reef* has relevance to units of work in Biology, Environmental Science, Extended Investigations and Geography. Teachers are advised to access the senior curriculum syllabus documents for their state or territory.

SYNOPSIS

Join actor and part-time adventurer Shuang Hu on a journey through one of the most important ecological habitats in the world that can only be experienced on cinema's biggest screens!

The adventure starts at Vlasoff Cay with Shuang helicoptering onto the tiny island, and continues to Flynn Reef on the outer edge of the iconic Great Barrier Reef. Here, Shuang is beginning her scuba training – or mermaid training, as she likes to call it. Any nerves Shuang has when putting on her suit instantly fade away as she flips off the back of the boat and sees the reef sprawling before her. It's a magical experience and one that instantly redefines a person's relationship with the reef.

Shuang's training continues from Moore Reef, near the very edge of the continental shelf, to the Three Sisters, the massive coral columns where she comes face-to-face (literally) with a critically endangered hawksbill turtle.

Speaking of turtles, Shuang's next destination is Green Island and the Cairns Turtle Rehabilitation Centre. Here, she learns of the tragic impact plastic waste is having on the local turtles, with only one in 1000 reaching adulthood. It's not all sad though; Shuang is lucky enough to help return Billie the turtle to the wild after she was deemed healthy enough to leave her tank.

As Shuang continues to explore the reef, from the stunning Port Douglas to coral-spawning grounds at Mackay Reef, she discusses the importance of tourism as a gateway to science, and how seeing the reef instantly turns tourists into ambassadors for its protection.

From here, Shuang returns to the land, entering the 180-million-year-old Daintree Rainforest, the oldest rainforest in the world. Travelling on the iconic Kuranda Scenic Railway, Shuang visits the



multi-tiered Nandroya Falls, summons her courage to tackle the Barron River Rafting tour with some of the film's crew and takes a solar powered boat ride along the Daintree River to spot the legendary and often misunderstood local saltwater crocodiles. Shuang again takes to the skies to watch the sun rise over the world heritage listed area, from the magical experience of a hot air balloon.

After such incredible experiences, Shuang decides to slow down and enjoy two local culinary experiences. The first is at Oaks Kitchen & Garden, a Southeast Asian-inspired outdoor restaurant that sources its organic products locally; so locally, most of it comes from their four-acre garden.

The next experience is a traditional one, dating back to the time when Australia's First Nations people would hunt along the mangroves of Cooya Beach, known to the Eastern Kuku Yalanji traditional custodians as Kuyu Kuyu. Here, Shuang fishes with spears for crabs and then cooks them on a beachside stove.

As the film comes to an end, Shuang reflects on how her journey, and the people she has met along the way, have given her a newfound appreciation for the only place in the world where two heritage-listed locations sit side-by-side. In the final moment, she encourages viewers to take a moment to appreciate the incredible beauty of the world we live in.

Filmed in glorious large format 8k, *Beyond the Reef* is designed for a Premium Large Format (PLF)/Giant screen immersive experience.

DIRECTOR'S STATEMENT

Adventure has been part of my life since my family packed up our Sydney household and spent seven years exploring the world on a yacht. That incredible time on the ocean took us to all parts of the globe, experiencing diverse cultures, wildlife and environments.

Over my career, I have travelled to over 40 countries filming in remote and exotic locations, but as the saying goes, there is no place like home, and it's this philosophy that compels me to share the diversity and wilderness of the Australian environment.

There is something magical about the connection of the oldest living reef, rainforest and the culture all living together in one region. I want to show this connection and beauty from the point of view of our host who will be engrossed in life, energy and scope.

I have chosen to direct this story because at a time where the majority of the news and content we consume is colourless – *Beyond the Reef* will be hopeful, fun and bright. I want to bring the feeling of adventure and travel back to the screen, even if it's something many of us can only dream about.

It is also important to acknowledge the environmental impact climate change is having. However, instead of presenting yet another depressing message of loss and little hope, we want to show people that the little things we all do can make a difference – that there is hope for the reef and its beautiful surrounds, and that hope is dependent on the actions we all take as human beings. Incredibly important to me is that while filming, we also follow our own environmental sustainability procedures ensuring we leave the lowest footprint possible.

I am inspired by films that show our world beautifully combined with the human spirit such as *Encounters at the End of the World*, *Unbranded* and *Endless Summer* - and collaborating with cinematographers Jake Koning and Christian Miller to bring my vision to life was a highlight of the production. They both have a beauty to their shots and their combination of skills will take our audience on this giant screen adventure.

I really hope that after watching *Beyond The Reef* audiences will be entertained, inspired and left with the feeling of optimism.

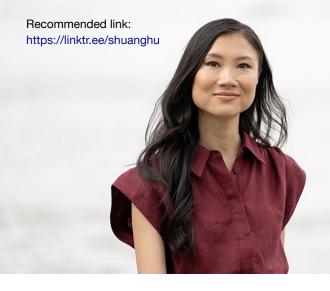
Luke Wheatley

SHUANG HU | PRESENTER

Shuang Hu is an award-winning actress, writer and producer who has been involved in the film and TV industry for over a decade.

She is best known for her role as Candy Law in SBS's critically acclaimed series *The Family Law*, the first Australian show to be led by a full Asian cast. She also starred in Comedy Central's *Ronny Chieng: International Student* and made her theatre debut appearing in The Outhouse Theatre's production of Annie Baker's *John*.

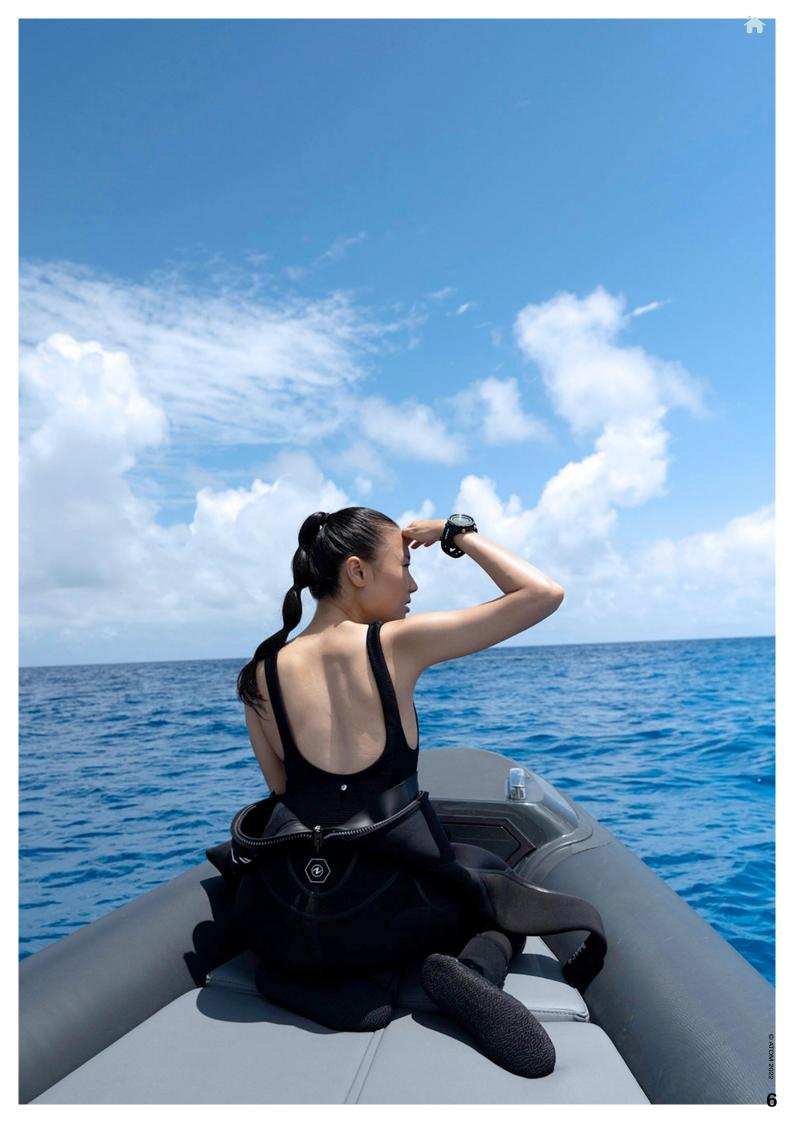
Online, Shuang creates comedy skits for her 4.3 million plus followers on TikTok and 4.29 million plus subscribers on YouTube. Shuang has recently been cast for the VIACOM-CBS Diversity Showcase 2022 and has recently finished filming Prime Video Australia's first original feature film *Five Blind Dates*.



GETTING STARTED

Beyond the Reef is a documentary about the ecosystems of Far North Queensland, particularly, the Great Barrier Reef and the Daintree Rainforest.

- Have you ever visited Far North Queensland? Where did you go? What did you see? Share your travel experiences with the class.
- Using Google Earth, locate the Great Barrier Reef and the Daintree Rainforest. Click on 'More info' and then spend time visiting the points of interest.
 Write a description of the location of the Great Barrier Reef and the Daintree Rainforest.



Learning intention: Students will learn about the components of coral reef ecosystems and the geographic characteristics of the Great Barrier Reef.

Shuang Hu visits the Great Barrier Reef. The Great Barrier Reef is located on the northeast coast of Australia. It is the largest living structure on Earth and the world's largest coral reef system. It covers approximately 348,000 square kilometres and extends for 2,000 kilometres along Queensland's coast. The Great Barrier Reef is the only living thing on Earth that is visible from space.

- Draw a map of the Great Barrier Reef. On the map show the cities and towns and the larger islands.
- 2. The Great Barrier Reef was declared a World Heritage site in 1981. What is a World Heritage site? Why was the Great Barrier Reef declared a World Heritage site?
- Have you ever heard someone refer to the natural wonders of the world? Various lists of the wonders of the world have been compiled from ancient to modern times to catalogue the world's most spectacular natural features and







man-made structures.

The Great Barrier Reef is regarded as one of the seven natural wonders of the world. What are the other six natural wonders of the world? Using your knowledge of these places, write a definition of a natural wonder of the world. Explain why the Great Barrier Reef is a natural wonder of the world.

- Draw a diagram that provides answers to the following questions.
 - What is an ecosystem?
 - What are the components of an ecosystem?
 - How do the components of an ecosystem link together to make the ecosystem work?
- 5. What is a coral reef ecosystem? How are coral reefs formed? Make a list of the biotic (living) and abiotic (non-living components) of a coral reef ecosystem. Describe the relationship between the biotic and abiotic components of a coral reef ecosystem. Why are coral reefs important?
- 6. Working as a class, create a Great Barrier Reef learning walk in your classroom. Begin this process, by printing an infographic about the Great Barrier Reef to display at the beginning of the learning walk. Then compile a gallery of the class's favourite images of the Great Barrier Reef. Make small fact cards about the Great Barrier Reef ecosystem to add to the display.

Learning intention: Students will follow Shuang Hu's exploration of the Great Barrier Reef.

There are many ways to explore the Great Barrier Reef. In Beyond the Reef, Shuang Hu views the reef from the sky and by boat. She explores the underwater world of the Great Barrier Reef by going snorkelling and scuba diving.

- Spend time exploring the Great Barrier Reef using the Street View feature of Google Maps. Link: https://www.google.com.au/maps/about/ behind-the-scenes/streetview/treks/oceans/
- 2. Shuang's exploration of the reef begins at Vlasoff Cay. What is a cay? How are cays formed? How many cays are there in the Great Barrier Reef? Use Google Earth to locate Vlasoff Cay. Write a description of the location and the geographic characteristics of Vlasoff Cay. Find an image of Vlasoff Cay. Use the image that you have found and the description that you have written to make a postcard* of Vlasoff Cay.

*A postcard is a card for sending a message by post without an envelope, typically having a photograph or other illustration on one side and space for a written message on the other side. A postcard is A6 (105 x 148mm) in size.







- 3. Shuang Hu needs to obtain open dive certification. What is open dive certification? Why does Shuang have to complete four dives before she is certified? Why is scuba diving a good way to explore the Great Barrier Reef?
- 4. Shuang's first dive is at Flynn's Reef. What is a coral reef? How are coral reefs formed? How many individual reefs are in the Great Barrier Reef? Use Google Earth to locate Flynn's Reef. Write a description of the location and the geographic characteristics of Flynn's Reef. Find an image of Flynn's Reef. Use the image and the description that you have written to make a postcard of Flynn's Reef to add to your postcard collection.
- 5. Shuang's second dive is at Moore Reef. Use Google Earth to locate Moore Reef. Write a description of the location and the geographic characteristics of Moore Reef. Find an image of Moore Reef. Use the image and the description that you have written to make a postcard of Moore Reef to add to your postcard collection.
- 6. Shuang's final dive is at the Three Sisters. The Three Sisters is part of Milln Reef. What is a coral bommie? Use Google Earth to locate Flynn's Reef. Write a description of the location and the geographic characteristics of the Three Sisters. How did the Three Sisters get its name? Find an image of the Three Sisters. Use the image and the description that you have written to make a postcard of The Three Sisters to add to your postcard collection.
- 7. Sailing is another way to explore the Great Barrier Reef. Have you ever been sailing or would like to go sailing? Shuang goes sailing with Steve. They head to Mackay Reef. Complete your postcard set by making a postcard about Mackay Reef.



Learning intention: Students will learn about the biodiversity of the Great Barrier Reef.

The diversity of species and habitats, and their interconnectivity, make the Great Barrier Reef one of the most complex natural ecosystems on earth.

- 1. What is biodiversity?
- The Great Barrier Reef contains an abundance of marine life. There are approximately 1625 different species of fish found in the Great Barrier Reef Marine Park. During her dives, Shuang encounters some of these species.

Choose one of the fish species from the following list:

- DAMSELFISH
 - WHITE TIP MAORI WRASSE

CLOWNFISH

REEF SHARK - PARROT FISH

Complete a detailed investigation using Chart 1.

"Jump to Chart 1" on page 10

Use your research to make a poster about the fish species that you have selected and that visitors to the Great Barrier Reef could view. Think about the most creative way to tell your audience the information about the fish species. Use headings and subheadings. Include images of the fish species. List your sources on the other side of the poster. Add the posters to the Great Barrier Reef

learning walk in your classroom.

 Fish are an essential part of the Great Barrier Reef ecosystem. While fishing is allowed, it is the responsibility of the Great Barrier Reef Marine Park Authority to ensure all fishing activities are ecologically sustainable. What is sustainable fishing? Working in a group, design signage that informs visitors to the Great Barrier Reef about:

- how to keep fish habitats healthy;
- how to practise sustainable fishing;
- the rights of Traditional Owners to fish and gather from their Sea Country.
- Approximately six hundred different types of coral can be found in the Great Barrier Reef. What is coral?

Describe the relationship between coral and other marine species.

BRIEF: A Great Barrier Reef resort has commissioned your class to make A3 art posters to display around the resort. Spend time as a class discussing the composition of the posters. What will the posters have in common? How will the posters differ?

Working as an individual, choose the species of coral that you will use as the subject of your poster. Use the internet to research this species. Your poster should convey information through written and visual language.

Add your art posters to the Great Barrier Reef learning walk.

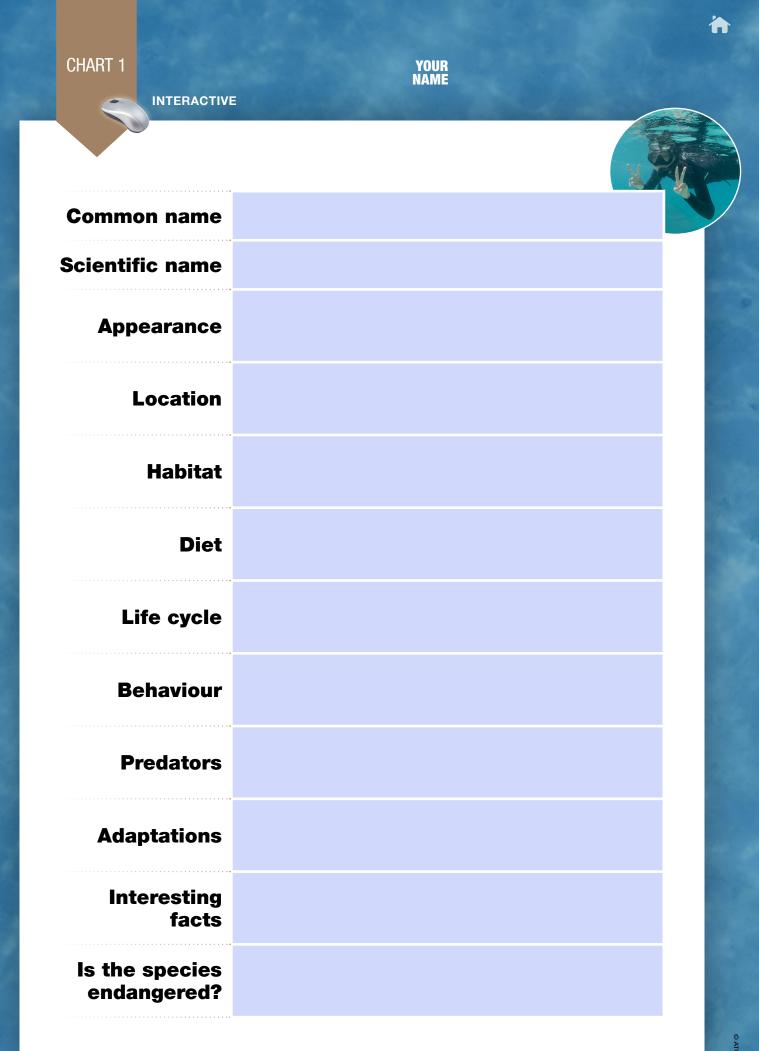
 On her trip to Mackay Reef, Shuang sees coral spawn.

What is coral spawning? Imagine you are a Great Barrier Reef tour guide. Your task is to explain coral spawning and why it is important to the future of the Great Parrier Page

- is important to the future of the Great Barrier Reef. What would you say?6. The Great Barrier Reef provides a habitat for two
- hundred and fifteen species of birds including twenty-two species of seabirds and thirty-two species of shorebirds.

Working with a partner, use the Internet to research either the seabirds or the shorebirds of the Great Barrier Reef. Based on your choice, make an A4 folded brochure that will help novice twitchers identify the birds of the Great Barrier Reef. *Twitcher is an informal word for a birdwatcher.





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Learning intention: Students will learn more about the importance of protecting the ecological integrity of the Great Barrier Reef.

Shuang meets marine biologist Eric. Eric's passion is promoting science in tourism. Eric believes that the best way to protect the Great Barrier Reef is by encouraging people to feel connected to the reef.

- 1. What is marine biology? What does a marine biologist do?
- How can a film like Beyond the Reef encourage people to feel connected to the Great Barrier Reef?
- 3. The Great Barrier Reef is a popular tourist destination. Use the Internet to research visitor experiences. What if you were able to spend a day on the Great Barrier Reef? What would you do? Plan your itinerary.

What is science tourism? How can science tourism build the resilience of the Great Barrier Reef? Take a look at your itinerary. Are any of the experiences examples of science tourism? Now that you know about science tourism, plan an itinerary that is exclusively composed of science tourism experiences.

 Use a table to make a list of the likely impacts of tourism on the Great Barrier Reef. Your list should include both positive and negative impacts. Use a third column to provide suggestions about ways to minimise the negative impacts of tourism.
 See table below. **5.** The greatest threat to the Great Barrier Reef is climate change.

Working with a partner, compile a slide presentation about the impact of climate change on the Great Barrier Reef. Your slide presentation should use words, images and sound to describe the impact of climate change on the Great Barrier Reef.

6. In *Beyond the Reef*, Shuang introduces the audience to people who and organisations that are working to protect the ecological integrity of the Great Barrier Reef.

The Great Barrier Reef Marine Park Authority is responsible for the protection and management of the Great Barrier Reef Marine Park. Visit the Great Barrier Reef Marine Park Authority website. Spend time exploring the website to learn about the work of the GBRMPA.

Use the Internet to research other people who and organisations that are working to protect the ecological integrity of the Great Barrier Reef. Share your findings with the class.

The everyday actions of individuals can have a significant impact on marine environments. Use the thinking strategy Think – Pair – Share to make a list of how everyone can help protect the ecological integrity of the Great Barrier Reef.

7. Approximately 40 Aboriginal and Torres Strait Islander groups have territories beside the Great Barrier Reef. These groups have been living in this area for thousands of years. What is the Indigenous name for the Great Barrier Reef? Why is the marine environment important to Australia's First Nations people? What role should Traditional Owners play in the management and protection of the Great Barrier Reef?





Learning intention: Students will learn about the turtles of the Great Barrier Reef.

Jenny Gilbert is a marine biologist. She is co-founder of the <u>Cairns Turtle Rehabilitation</u> <u>Centre</u>. Shuang travels to Green Island (Dabuukji) to meet Jenny and learn about the threats to the turtles of the reef. Jenny explains to Shuang some of the ways that we can protect the turtle species of the Great Barrier Reef.

Before you begin the tasks, visit the Cairns Turtle Rehabilitation to learn more about the work of the organisation.

- 1. How do turtles help to monitor the health of the reef?
- Only one in 1000 turtles make it to adulthood. Investigate why turtles have such a short life span. Share your findings with the class.
- 3. What are the main causes of illness and injuries to the turtle species that inhabit the Great Barrier Reef?
- Shuang encounters a hawksbill turtle on her fourth dive. Hawksbill turtles are critically endangered. Use the Internet to research hawksbill turtles. Use Chart 2 to make a record of your research.

"Jump to Chart 2" on page 13

Working in a small group, design a social media campaign to save the hawksbill turtle. A social media campaign* is a way to raise awareness about a subject using at least one social media platform. Hold a team meeting to clarify your aim and your audience and to discuss content creation and curation. Each member of the team is responsible for creating posts that will feature in the campaign. Present your campaign to the class.

*You are not required to upload your content.

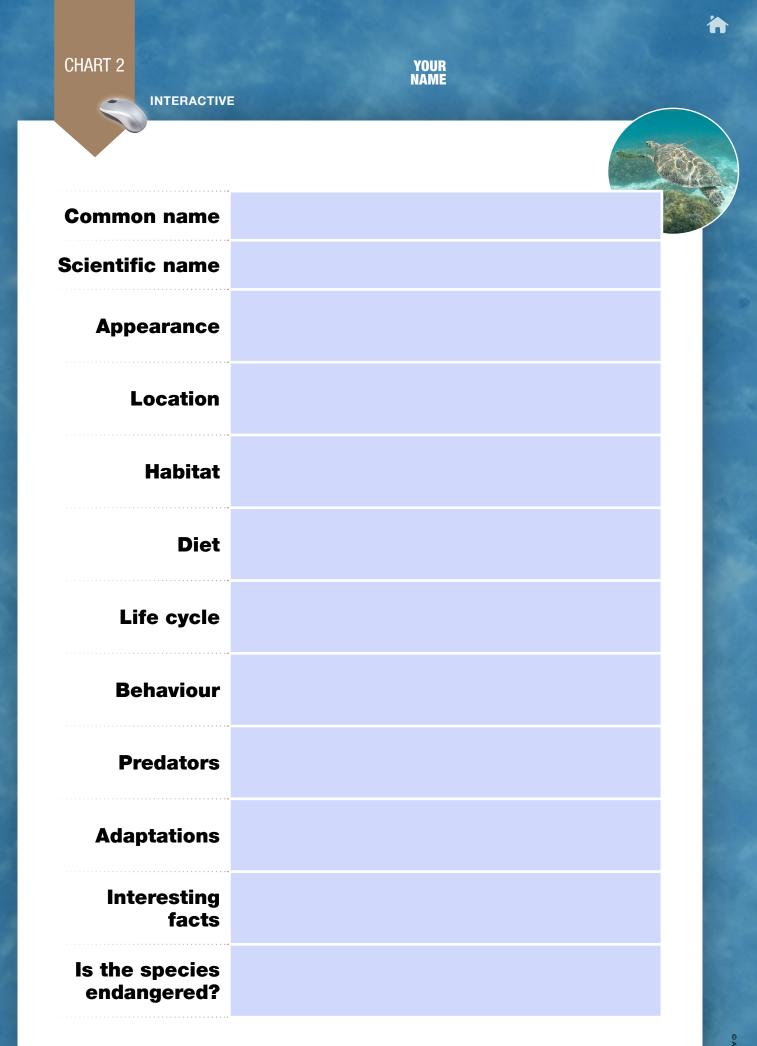


- 5. Shuang helps Jenny release a rehabilitated turtle named Billie. Billie has been fitted with a satellite tracker which will enable the staff at Cairns Turtle Rehabilitation Centre to maintain her health profile. Since her release, Billie has travelled 2264 kilometres from Port Douglas to Townsville. She was last spotted near the Whitsunday Islands. Drawing on Billie as an example, explain the importance of tracking the turtles that are returned to the ocean after their stay at the Cairns Turtle Rehabilitation Centre.
- 6. The waters of the Great Barrier Reef are a feeding ground for one of the world's largest populations of dugongs. The dugong is an endangered species. Why has the dugong become an endangered species?

What is a conservation status? What is the conservation status of the dugong? How can we protect the dugongs of the Great Barrier Reef?

- Plastic is a material designed to last forever. It is often used to make products that we use once and throw away. Plastic that makes its way to our oceans harms the health of marine animals. Make an infographic about the impact of plastics on marine ecosystems using the Great Barrier Reef as the example of the marine ecosystem. Your infographic should inform your audience about:
 - the ways that plastic litter can damage a marine ecosystem like the Great Barrier Reef;
 - how a piece of plastic litter could end up in the Great Barrier Reef;
 - the actions that could be taken to prevent plastic litter from becoming part of the Great Barrier Reef.





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13





Learning intention: Students will learn about rainforest ecosystems and the geographic characteristics of the Daintree Rainforest (Kada Kada).

Shuang Hu visits the Daintree Rainforest. The Daintree Rainforest is in Tropical North Queensland. It is the oldest and the largest rainforest in the world. The area protected under World Heritage listing covers an area of approximately 12,000 square kilometres and stretches from Townsville to Cooktown.

- David Attenborough once called the Daintree Rainforest the most extraordinary place on earth. Based on your viewing of *Beyond the Reef*, why do you think the Daintree Rainforest is an extraordinary place?
- 2. Draw a map of the Daintree Rainforest. Your map should show significant natural and man-made features.
- 3. The Daintree Rainforest was declared a World Heritage site in 1988. What is a World Heritage site? Why was the Daintree Rainforest declared a World Heritage site?
- 4. The Daintree Rainforest is more than 180 million years old. It is a living relic of Gondwana, an ancient supercontinent. Use the Internet to learn about Gondwana. Working in a small group, write a conversation between the landmasses that were once part of Gondwana that explains their break-up.
- Draw a diagram that provides answers to the following questions.
 - What is an ecosystem?
 - What are the components of an ecosystem?
 - How do the components of an ecosystem link together to make the ecosystem work?



6. What is a forest ecosystem? What are the three main types of forest ecosystems? What are the characteristics of each type of forest ecosystem? Why are forest ecosystems important?

 A typical forest is composed of an overstory and an understory. In complex forests such as tropical rainforests, the stratification of the forest forms five distinct layers: emergent, canopy, understory, shrub layer and ground layer.

Draw a diagram that shows the five layers of the Daintree Rainforest. Add a column with five rows to your diagram. Use this column to identify animal, plant, fungi and other species that are likely to be found living and growing in each layer.

- 8. Where does the Daintree Rainforest meet the Great Barrier Reef? Describe the unique nature of this geographic location.
- 9. Working as a class, create a Daintree Rainforest learning walk in your classroom*. Begin this process, by compiling a gallery of the class's favourite images of the Daintree Rainforest. Make small fact cards about the Daintree Rainforest ecosystem to add to the display.
 *Use the opposite side of the room, so that at the end of the unit, the two learning walks will meet much like how the rainforest meets the reef in reality.





Learning intention: Students will follow Shuang Hu's exploration of the Daintree Rainforest.

The Daintree Rainforest is a popular tourist destination. There are many ways to explore the Daintree Rainforest. In Beyond the Reef, Shuang Hu hikes along some of the area's many boardwalks, takes a ride on the Kuranda Scenic Railway, goes white water rafting and riverdrift snorkelling, and even drifts along the Mossman River on a lilo!

- Spend time exploring the Daintree Rainforest online at https://parks.des.qld.gov.au/parks/ daintree/maps-resources.
- Shuang's walk through the forest leads her to Nandroya Falls. Use Google Earth to locate Nandroya Falls. Write a description of the location and the geographic characteristics of Nandroya Falls. Find an image of Nandroya Falls. Use the image that you have found and the description that you have written to make a page in Shuang's travel journal. *A travel journal is a place to plan and organise your trips, write about your experiences, and add mementos from the trip.



- 3. Since 1891, the Kuranda Scenic Railway has been transporting people through the Daintree Rainforest from Cairns in the south to Kuranda in the north. Use Google Earth to locate Kuranda Scenic Railway and visit the scenic railway online to learn about its history, as well as its route through the rainforest. Drawing on Shuang's experience and your research add another page to Shuang's travel journal.
- 4. Shuang visits Baron Falls (Din Din), one of Australia's most recognisable waterfalls. Use Google Earth to locate Baron Falls. Write a description of the location and the geographic characteristics of Baron Falls. Find an image of Baron Falls. Use the image that you have found and the description that you have written to add another page to Shuang's travel journal.



- 5. Shuang goes white water rafting along the Baron River. Use Google Earth to locate the Baron River. Write a description of the location and the geographic characteristics of Baron River. Find an image of Baron River. Use the image that you have found and the description that you have written to add another page to Shuang's travel journal.
- 6. Shuang cruises along the Daintree River. The Daintree River is the great dividing river that separates the







Daintree rainforest from the rest of the world. Use Google Earth to locate the Baron River. Write a description of the location and the geographic characteristics of Baron River. Find an image of Baron River. Use the image that you have found and the description that you have written to add another page to Shuang's travel journal.

- 7. Shuang snorkels and floats along the Mossman River (Jinkalmu). Use Google Earth to locate the Mossman River. Write a description of the location and the geographic characteristics of Mossman River. Find an image of Mossman River. Use the image that you have found and the description that you have written to add to Shuang's travel journal.
- Visitors to the Daintree Rainforest can explore the rainforest via elevated boardwalks. Use the Internet to research the four Daintree National Park boardwalks: Dubuki, Kulki, Jindalba and Madja boardwalks. Which boardwalk would you choose to experience

the Daintree Rainforest?

Shuang goes walking with Matt. What does her walk through the forest suggest about the advantages of experiencing the rainforest in this way?



Learning intention: Students will learn about the biodiversity of the Daintree Rainforest

- 1. What is biodiversity?
- With the help of Matt, Shuang becomes familiar with some of the many plant species that grow in the forest.

Using the descriptions of the plant species in *Beyond the Reef* and your own online research, complete Charts 3–6 on pages **19–20**. Choose another plant species to describe. Use the blank chart to record your research.

"Jump to Charts 3–6" on page 19

 Shuang visits Wildlife Habitat. Tropical Animal Rehabilitation Centre (TARC) is located at Wildlife Habitat. TARC provides care for displaced, injured, sick or orphaned native wildlife.
 Visit Wildlife Habitat and TARC online to learn more about these organisations.

Choose one of the animal species featured in *Beyond the Reef*:

- KANGAROO
- KOALA
- ECLECTUS PARROT

or, one of the other animal species that is endemic to the Daintree Rainforest. Complete a detailed investigation using Chart 7.

"Jump to Chart 7" on page 21

Use your research to make a wall sign about the animal species that you have selected and visitors to the Wildlife Habitat could view to learn about the animal species that they might encounter



during their stay in the Daintree. Think about the most creative way to tell your audience about the animal species. Use headings and subheadings. Include images of the animal species. List your sources on the other side of your designed sign. Add your signs to the Daintree Rainforest learning walk.

- 4. As Shuang travels along the Daintree River (Julay) with David, she spies a saltwater crocodile. Imagine you are a Daintree River tour guide. Your task is to inform visitors about saltwater crocodiles. What would you tell them about the 'salties' who call the Daintree River home?
- The Daintree Rainforest is home to many insect species that are essential to the rainforest ecosystem.

BRIEF: A Daintree resort has commissioned your class to make A3 art posters of the insects of the Daintree Rainforest to display around the resort. Spend time as a class discussing the composition of the posters. What will the posters have in common? How will the posters differ? Working as an individual, choose the insect species that you will use as the subject of your poster. Use the internet to research this species. Your poster should convey information through image and text.

Add your art posters to the Daintree Rainforest learning walk.



YOUR NAME

INTERACTIVE

Common name	Fan palm tree	Common name	Strangler fig
Scientific name		Scientific name	
Description		Description	
Distribution and habitat		Distribution and habitat	
Reproduction and life cycle		Reproduction and life cycle	
Relationships with other species		Relationships with other species	
Adaptations		Adaptations	
Interesting facts		Interesting facts	
Is the species endangered?		Is the species endangered?	

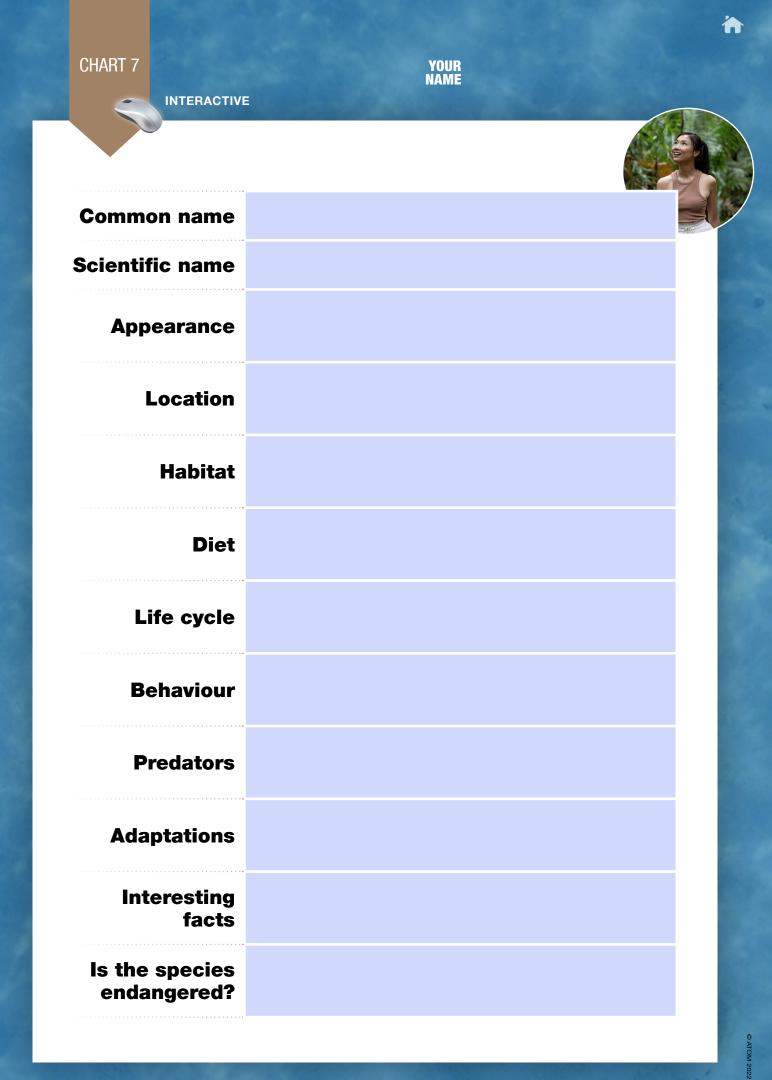
'n

YOUR NAME

INTERACTIVE

Common name	Hope's cycad	Common name	
Scientific name		Scientific name	
Description		Description	
Distribution and habitat		Distribution and habitat	
Reproduction and life cycle		Reproduction and life cycle	
Relationships with other species		Relationships with other species	
Adaptations		Adaptations	
Interesting facts		Interesting facts	
Is the species endangered?		Is the species endangered?	

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Learning intention: Students will learn more about the importance of protecting the ecological integrity of the Daintree Rainforest.

The Daintree Rainforest is an important ecosystem that needs careful management and ongoing protection.

- How can a film like *Beyond the Reef* encourage people to feel connected to the Daintree Rainforest?
- The Daintree Rainforest is a popular tourist destination. Use the Internet to research visitor experiences.

Using your knowledge of science tourism, what visitor experiences are examples of science tourism? How can science tourism build the resilience of the Daintree Rainforest?

- What if your family was able to spend a week exploring the Daintree Rainforest? What would you do? Plan your itinerary.
- 4. Use the table below to make a list of the likely impacts of tourism on the Daintree Rainforest. Your list should include both positive and negative impacts. Use a third column to provide suggestions about ways to minimise the negative impacts of tourism.
- 5. At Oaks Kitchen & Garden, Shuang meets chefs Ben and Rachel. What is permaculture? How are Ben and Rachel supporting the ecosystem? Shuang helps Ben and Rachel prepare a meal that includes a local ingredient – green ants (yangka). What is a green ant? What is the nutritional value of green ants? What do they taste like? What is the best way to eat and enjoy green ants?

- 6. The greatest threats to the Daintree Rainforest are: - CLIMATE CHANGE
 - HABITAT FRAGMENTATION
 - INTRODUCED SPECIES OF FAUNA AND FLORA

Working with a partner, compile a slide presentation about the impact of one of these threats on the Daintree Rainforest. Your slide presentation should use words, images and sound to describe the impact of the selected threat.

7. In *Beyond the Reef*, Shuang introduces the audience to people who and organisations that are working to protect the ecological integrity of the Daintree Rainforest.

The area known as the Daintree National Park is co-managed by the Queensland Government and the Eastern Kuku Yalanji people. Visit the Queensland Government Parks and Forests and Wet Tropics Management Authority websites. Spend time exploring the websites to learn about the comanagement of the Daintree National Park. Use the Internet to research other people who and organisations that are working to restore and protect the ecological integrity of the Daintree Rainforest. Share your findings with the class. The everyday actions of individuals can have a significant impact on tropical rainforest environments. Use the thinking strategy Think – Pair – Share to make a list of how everyone can help

protect the ecological integrity of the Daintree Rainforest.

 Forests are carbon sinks. They help to stabilise atmospheric temperatures and slow climate change. What is a carbon sink? Draw a flow chart to describe and explain how a

tropical rainforest acts as a carbon sink.

INTERACTIVE		YOUR NAME		
	Positive	Negative	Actions	





Learning intention: Students will learn about the Traditional Owners of the Daintree, their connection to Country and the role they play in environmental management.

The Traditional Owners continue to manage the land and marine environments of the Daintree Rainforest and the Great Barrier Reef. The Eastern Kuku Yalanji people are the Traditional Owners of the Daintree. Shuang spends time with Juan to learn about his connection to Country.

- 1. Why is the Daintree important to the Eastern Kuku Yalanji people?
- In late 2021, the Daintree National Park was handed back to the Eastern Kuku Yalanji people. Use the Internet to research the return of the land to its Traditional Owners. Explain the historic, cultural and environmental significance of the handback.
- 3. Shuang participates in a smoking ceremony to welcome her to Country. What is a smoking ceremony? What is a Welcome to Country? Aside from welcoming people to Country, on what other occasions are smoking ceremonies performed?



- 4. Shuang visits Cooya Beach (Kuyu Kuyu). Use Google Earth to locate Cooya Beach. Write a description of the location and the geographic characteristics of Cooya Beach. Find an image of Cooya Beach. Use the image that you have found and the description that you have written to become the final page in Shuang's travel journal.
- 5. Juan shows Shuang the mangroves that grow where the rainforest meets the reef. What is a mangrove? What are the physical characteristics of mangrove habitat? What evolutionary adaptations make mangrove survival possible? Draw a labelled diagram to show how mangroves protect the rainforest and the reef.
- Shuang and Juan gather and hunt the ingredients for a cook-up.
 What do they find in 'nature's pantry'? Make a

list of the ingredients that they source through foraging and fishing. Research each ingredient's nutritional value and use in cooking.

- 7. Juan has made damper. What is damper? Have you ever tasted damper? Have you ever made damper? Hold a class damper bake-off.
 - Working with a partner, source a recipe for damper.
 - Write a production plan.
 - Make and bake your damper.
 - Plate up a piece of your damper for the tasting panel to sample.
- 8. Using this sequence of *Beyond the Reef* as evidence, explain the importance of valuing and sharing traditional ecological knowledge.



LEAVING A MARK

'Your life will leave a mark in this world. Now is the time to decide what that mark will be.' – Shuang Hu

In the closing sequence of *Beyond the Reef*, Shuang Hu explains the importance of protecting the Great Barrier Reef and Daintree Rainforest for future generations to enjoy. She reminds the audience that the smallest actions when combined make the biggest impact.

You are a youth environment ambassador. You have been asked to prepare a statement on why we need to take better care of either the Great Barrier Reef or Daintree Rainforest and how this can be achieved.

Write a five-minute speech to present as part of a class forum titled "Building a resilient reef and rainforest".

BEHIND THE SCENES

Beyond the Reef is a documentary. A documentary is a non-fiction text that represents events and people from real life. The purpose of a documentary could be to provoke thought, educate or persuade. To be successful a documentary also needs to engage its audience. Have you watched other documentaries? Share your experiences of this genre with the class. In what ways is *Beyond the Reef* like other documentaries that you have watched? How does it differ? Share your responses to these questions with the class.

- What do you think is the purpose of Beyond the Reef?
- Who do you think is the intended audience of Beyond the Reef? Why? Who else do you think would enjoy watching Beyond the Reef? Why?
- What is Premium Large Format (PLF) cinema? Have you experienced PLF cinema before? Share your experiences of this format with the class. Describe your viewing experience of *Beyond the Reef*. Explain how watching *Beyond the Reef* in a PLF cinema shapes an audience's experience of the film. How might watching *Beyond the Reef* on a smaller screen or device affect the viewing experience? Why do you think the film's director, Luke Wheatley decided to use PLF and 8k resolution?
- What is Shuang Hu's role in *Beyond the Reef*?
- Imagine you had the opportunity to interview the film's director, Luke Wheatley. Compile a list of five questions you would like to ask him about the making of *Beyond the Reef*. Are any of your questions answered in the 'Director's statement'? Share your questions with the class. What do your peers think Wheatley would say in answer to your questions?
- What challenges do you think the filmmakers may have encountered during the filming of *Beyond the Reef*?
- How is music used to shape our understanding of the story told by *Beyond the Reef*?



GOING FURTHER

What are Australia's other natural wonders? Working as a class, make a list of these places. Your task is to choose one of the natural wonders from the list as the focus of an extended investigation.

Your extended investigation should acknowledge the Aboriginal name of the place. You should provide a map of the place and a description of the place's location and geographic characteristics with a particular focus on why it is a natural wonder. Include information about the Traditional Owners and their ongoing connection to the Land and/or Sea Country, as well as the recent history of the place. Make sure that you have described and explained the environmental, social, cultural, economic and spiritual significance of the place. Identify why the place is a popular destination and explain how tourism is managed to protect and/or restore the natural environment.

Think of a creative way to format the extended investigation to best communicate why the place you have selected is an iconic and valuable Australian landmark.

LUKE WHEATLEY | DIRECTOR

A passionate creative marketer, Luke has worked in various marketing roles across the FMCG range category including natural health. entertainment, food and travel. Luke was the Head of Acquisitions and Marketing for Magna Pacific, Australia's largest film distribution company and was responsible for more than \$30M at the Australian and New Zealand box office. Luke created and directed the travel series, The 48 Hour Destination which was broadcast on Network 10. TV1 and National Geographic. He has directed the digital series The WOW List, which earned more than 5.000.000 views along with *The Expert Series* and has recently directed the latest Global Flight Centre brand ad. Luke was a finalist in the Best Content Strategy for 2019.

RECOMMENDED LINKS

Great Barrier Reef

Australian Government: Great Barrier Reef Marine Park Authority https://www2.gbrmpa.gov.au/about-us https://www.reefed.edu.au/ reef-guardian-school-portal Great Barrier Reef Foundation https://www.barrierreef.org/ UNESCO World Heritage Convention – Great Barrier Reef https://whc.unesco.org/en/list/154/

Daintree Rainforest

Queensland Government Department of Environment and Science: Parks and Forests https://parks.des.qld.gov.au/parks/daintree Daintree Discovery Centre https://www.discoverthedaintree.com/ National Parks – Daintree National Park https://national-parks.org/australia/daintree

CREDITS

Presented by SHUANG HU

Directed by LUKE WHEATLEY

Written by GEORGIA HARRISON

Produced by STEVE JAGGI and BECKIE ADAMS



APPENDIX 1. AUSTRALIAN CURRICULUM LINKS

English

Year 5

- Use comprehension strategies to analyse information, integrating and linking ideas from a variety of print and digital sources (ACELY1703)
- Plan, draft and publish imaginative, informative and persuasive print and multimodal texts, choosing text structures, language features, images and sound appropriate to purpose and audience (ACELY1704)
- Plan, rehearse and deliver presentations for defined audiences and purposes incorporating accurate and sequenced content and multimodal elements (ACELY1700)

Year 6

- Use comprehension strategies to interpret and analyse information and ideas, comparing content from a variety of textual sources including media and digital texts (ACELY1713)
- Plan, draft and publish imaginative, informative and persuasive texts, choosing and experimenting with text structures, language features, images and digital resources appropriate to purpose and audience (ACELY1714)
- Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements for defined audiences and purposes, making appropriate choices for modality and emphasis (ACELY1710)

Year 7

- Discuss aspects of texts, for example their aesthetic and social value, using relevant and appropriate metalanguage (ACELT1803)
- Plan, draft and publish imaginative, informative and persuasive texts, selecting aspects of subject matter and particular language, visual, and audio features to convey information and ideas (ACELY1725)

Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements to promote a point of view or enable a new way of seeing (ACELY1720)

Year 8

- Share, reflect on, clarify and evaluate opinions and arguments about aspects of literary texts (ACELT1627)
- Create imaginative, informative and persuasive texts that raise issues, report events and advance opinions, using deliberate language and textual choices, and including digital elements as appropriate (ACELY1736)
- Plan, rehearse and deliver presentations, selecting and sequencing appropriate content, including multimodal elements, to reflect a diversity of viewpoints (ACELY1731)

Year 9

- Explore and reflect on personal understanding of the world and significant human experience gained from interpreting various representations of life matters in texts (ACELT1635)
- Create imaginative, informative and persuasive texts that present a point of view and advance or illustrate arguments, including texts that integrate visual, print and/or audio features (ACELY1746)
- Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements for aesthetic and playful purposes (ACELY1741)

Year 10

Analyse and evaluate how people, cultures, places, events, objects and concepts are represented in texts, including media texts, through language, structural and/or visual choices (ACELY1749)

- Create sustained texts, including texts that combine specific digital or media content, for imaginative, informative, or persuasive purposes that reflect upon challenging and complex issues (ACELY1756)
- Plan, rehearse and deliver presentations, selecting and sequencing appropriate content and multimodal elements to influence a course of action (ACELY1751)

HASS

Year 5

- The influence of people, including Aboriginal and Torres Strait Islander Peoples, on the environmental characteristics of Australian places (ACHASSK112)
- The environmental and human influences on the location and characteristics of a place and the management of spaces within them (ACHASSK113)
- Locate and collect relevant information and data from primary sources and secondary sources (ACHASSI095)
- Interpret data and information displayed in a range of formats to identify, describe and compare distributions, patterns and trends, and to infer relationships (ACHASSI100)
- Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict the probable effects (ACHASSI104)
- Present ideas, findings, viewpoints and conclusions in a range of texts and modes that incorporate source materials, digital and non-digital representations and disciplinespecific terms and conventions (ACHASSI105)

Year 6

Locate and collect relevant information and data from primary sources and secondary sources (ACHASSI123)

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- Interpret data and information displayed in a range of formats to identify, describe and compare distributions, patterns and trends, and to infer relationships (ACHASSI128)
- Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict the probable effects (ACHASSI132)
- Present ideas, findings, viewpoints and conclusions in a range of texts and modes that incorporate source materials, digital and non-digital representations and disciplinespecific terms and conventions (ACHASSI133)

Year 7

- The way that flows of water connect places as they move through the environment and the way these affect places (ACHASSK183)
- Economic, cultural, spiritual and aesthetic value of water for people, including Aboriginal and Torres Strait Islander Peoples and peoples of the Asia region (ACHASSK186)
- Apply a methodology to locate and collect relevant information and data from a range of primary sources and secondary sources (ACHASSI153)
- Interpret and analyse data and information displayed in a range of formats to identify and propose explanations for distributions, patterns, trends and relationships (ACHASSI158)
- Reflect on learning to propose personal and/or collective action in response to an issue or challenge, taking into account different perspectives, and describe the expected effects (ACHASSI162)
- Present ideas, findings, viewpoints, explanations and conclusions in a range of texts and modes that incorporate source materials, citations, graphic representations and discipline-specific terms, conventions and concepts (ACHASSI163)

Geography

Year 7

The way that flows of water connects places as it moves through the environment and the way this affects places (ACHGK038)

- Economic, cultural, spiritual and aesthetic value of water for people, including Aboriginal and Torres Strait Islander Peoples and peoples of the Asia region (ACHGK041)
- Develop geographically significant questions and plan an inquiry, using appropriate geographical methodologies and concepts (ACHGS047)
- Apply geographical concepts to draw conclusions based on the analysis of the data and information collected (ACHGS052)
- Present findings, arguments and ideas in a range of communication forms selected to suit a particular audience and purpose; using geographical terminology and digital technologies as appropriate (ACHGS053)
- Reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic and social considerations, and predict the expected outcomes of their proposal (ACHGS054)

Year 8

- Different types of landscapes and their distinctive landform features (ACHGK048)
- Spiritual, aesthetic and cultural value of landscapes and landforms for people, including Aboriginal and Torres Strait Islander Peoples (ACHGK049)
- Human causes and effects of landscape degradation (ACHGK051)
- Ways of protecting significant landscapes (ACHGK052)
- Develop geographically significant questions and plan an inquiry using appropriate geographical methodologies and concepts (ACHGS055)
- Apply geographical concepts to draw conclusions based on the analysis of data and information collected (ACHGS060)
- Present findings, arguments and ideas in a range of communication forms selected to suit a particular audience and purpose; using geographical terminology and digital technologies as appropriate (ACHGS061)

Reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic and social considerations, and predict the expected outcomes of their proposal (ACHGS062)

Year 9

- The perceptions people have of place, and how these influence their connections to different places (ACHGK065)
- The effects of people's travel, recreational, cultural or leisure choices on places, and the implications for the future of these places (ACHGK069)
- Develop geographically significant questions and plan an inquiry that identifies and applies appropriate geographical methodologies and concepts (ACHGS063)
- Apply geographical concepts to synthesise information from various sources and draw conclusions based on the analysis of data and information, taking into account alternative points of view (ACHGS068)
- Present findings, arguments and explanations in a range of appropriate communication forms, selected for their effectiveness and to suit audience and purpose; using relevant geographical terminology, and digital technologies as appropriate (ACHGS070)
- Reflect on and evaluate findings of an inquiry to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic, political and social considerations; and explain the predicted outcomes and consequences of their proposal (ACHGS071)

Year 10

- Human-induced environmental changes that challenge sustainability (ACHGK070)
- Environmental world views of people and their implications for environmental management (ACHGK071)

- The Aboriginal and Torres Strait Islander Peoples' approaches to custodial responsibility and environmental management in different regions of Australia (ACHGK072)
- The application of systems thinking to understanding the causes and likely consequences of the environmental change being investigated (ACHGK073)
- The application of geographical concepts and methods to the management of the environmental change being investigated (ACHGK074)
- The application of environmental economic and social criteria in evaluating management responses to the change (ACHGK075)
- Develop geographically significant questions and plan an inquiry that identifies and applies appropriate geographical methodologies and concepts (ACHGS072)
- Apply geographical concepts to synthesise information from various sources and draw conclusions based on the analysis of data and information, taking into account alternative points of view (ACHGS077)
- Present findings, arguments and explanations in a range of appropriate communication forms, selected for their effectiveness and to suit audience and purpose; using relevant geographical terminology, and digital technologies as appropriate (ACHGS079)
- Reflect on and evaluate findings of an inquiry to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic, political and social considerations; and explain the predicted outcomes and consequences of their proposal (ACHGS080)

Science

Year 5

- Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)
- Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE083)

Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS093)

Year 6

- The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)
- Scientific knowledge is used to solve problems and inform personal and community decisions (ACSHE100)

Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate (ACSIS107)

Year 7

- Interactions between organisms, including the effects of human activities can be represented by food chains and food webs (ACSSU112)
- People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity (ACSHE121)
- Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS133)

Year 8

- Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSHE135)
- People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity (ACSHE136)
- Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (ACSIS148)

Year 9

- Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176)
- Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (ACSIS174)

Year 10

- Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere (ACSSU189)
- Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (ACSIS208)

Sustainability

All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.

OI.4

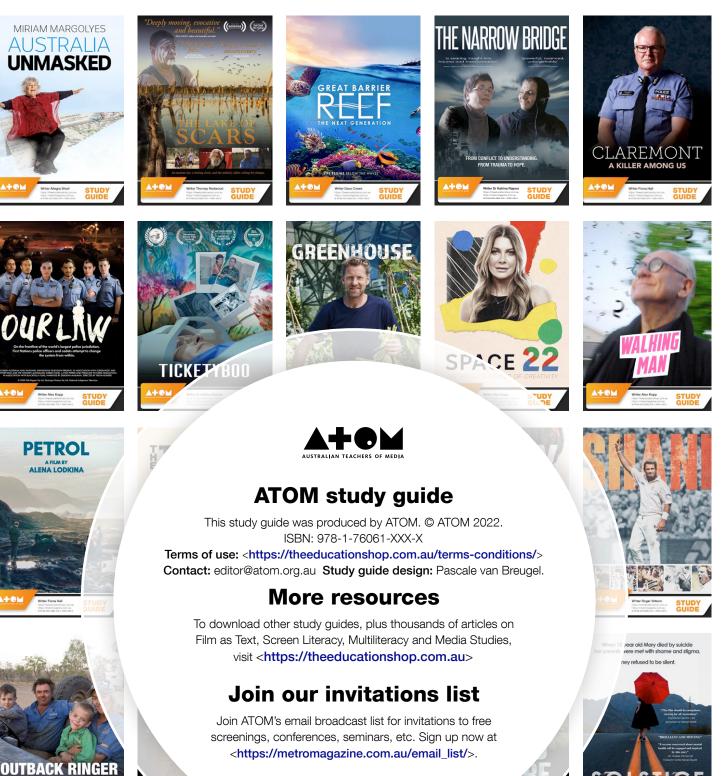
World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice, are essential for achieving sustainability.

01.7

Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.

OI.9

Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments.







SEASON TWO



