Exploring South Australia's Marine Parks

Supporting playful, inquiry-rich learning about our ocean, marine parks, Sea Country and the extraordinary marine life of South Australia.

Educator Guide



Australian Government
Parks Australia

Australian Marine Parks

Government of South Australia
Department for Environment and Water

National Parks and Wildlife Service South Australia

Marine Discovery Centre

Maria Taylor Consulting
Outside the Box Learning



Acknowledgment of Country

The Government of South Australia acknowledges Aboriginal people as the First Peoples and Nations of the lands and waters we live and work upon and we pay our respects to their Elders past, present and emerging. We acknowledge and respect the deep spiritual connection and the relationship that Aboriginal and Torres Strait Islander people have to Country.

We work in partnership with the First Peoples of South Australia and support their Nations to take a leading role in caring for their Country.

Cover image: Giant Australian Cuttlefish, Upper Spencer Gulf Marine Park, Carl Charter

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About this Resource

South Australia's marine parks are extraordinary places for learning. Beneath the water, along our coastlines and across Sea Country are living systems, remarkable species, ancient connections, changing environments and stories still being discovered. We invite students to wonder about what is beneath the water, discover the marine park closest to them, learn about the Sea Country they are connected to and begin to see themselves as part of the story.

A Suggested Learning Journey

This resource serves as a learning companion to the Porci Explores Marine Parks video.

The student inquiry cards are designed to spark curiosity and connect to key ideas. The teacher guide provides background knowledge, key concepts, curriculum connections and possibilities for extending learning.

A great way to begin is to view the video and invite students to notice, wonder and share what caught their attention. Then explore each of the card sets before returning to the video with a new lens.

Inquiry cards are organised into four connected subsets, with each exploring a different aspect of South Australia's marine parks. The cards can be explored as a sequence, used individually as provocations, shared between small groups or combined to follow students' questions and emerging inquiries.

Four Subsets to Explore

LEARN | Ocean Literacy
Begin with the globally accepted Ocean Literacy Principles. Explore how the ocean works, how it shapes our planet, the extraordinary diversity of life it supports and the many ways people and the ocean are connected.

EXPLORE | Marine Parks: Safe Places for the Sea
Discover why our ocean needs protection, what marine parks are, how they work and the people who help understand, manage and care for them.

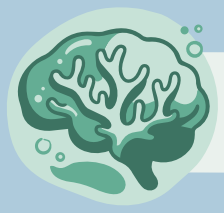
CONNECT | The World Under Water
Look beneath the surface. Explore habitats, food webs, species, movement and the connections that make marine ecosystems work.

PROTECT | Caring for Sea Country
Bring the learning back to place. Explore Sea Country, local marine parks, connection, custodianship, action and the different ways we can participate in caring for our ocean.

Using the Inquiry Cards: Prompts for Learning

Each Inquiry Card offers a series of prompts to spark curiosity, encourage exploration and extend learning.

Imagine Set the scene and tune into the idea or scenario through imagination and guided conversation.



Encourage students to pause, think and reflect on an idea, question or possibility.



Invite discussion, sharing ideas and exploring different perspectives, in pairs, small groups or as a class.



Explore, create and investigate through playful, hands-on learning experiences.



Extend learning, follow students' interests and explore concepts in greater depth.

Select, adapt and revisit the prompts to suit your students, learning context and the direction the inquiry takes!

1 | LEARN

Watch *Porci Explores Marine Parks* together for the first time. At this stage, simply watch, wonder and notice. Discuss with students: What caught their attention? What did they already know? What are they curious about?

Introduce the idea that scientists and ocean educators around the world use seven Ocean Literacy Principles to help us understand some really big ideas about the ocean. The first seven cards provide playful ways to begin exploring these ideas.

A conversation with students might sound like this...

There are seven big ideas that can help us think about our ocean. We sometimes call these the Ocean Literacy Principles. The first big idea is that Earth has one big ocean. We give different parts names, but all that ocean water is connected. The ocean is always moving, and over time it can shape our Earth, including beaches, rocks and coastlines. Have you ever seen the ocean moving and shaping the beach? It's amazing to witness.

The ocean also has a big influence on our weather and climate. And here's something pretty amazing - the ocean helps make Earth a place where we can live. It is part of the water cycle and helps control our climate, while tiny living things in the ocean help make much of the oxygen we breathe.

The ocean is also filled with an incredible diversity of life, from tiny living things we can barely see to seaweed, fish, sharks and whales. People and the ocean are connected too.

The ocean affects us, and the things people do can affect the ocean. And even though the ocean is so important, there is still so much of it that we haven't explored. Imagine what we might still discover!

Explore the Ocean Literacy Principles

Choose the cards that best suit your students. Explore one together, offer different cards to small groups, create learning invitations around several cards or follow the questions students are most curious about. There is no need to complete all seven cards before moving on.

2 | EXPLORE

After exploring some of the Ocean Literacy cards, watch *Porci Explores Marine Parks* again. This time, invite students to listen particularly for why the ocean might need our help and what marine parks do.

The Marine Parks subset introduce threats to our ocean, marine parks and their different zones, South Australia's marine parks, why they matter, the people who help care for and study them, and the core conservation zones - Sanctuary Zones and National Park Zones.

A suggested class discussion might begin with this...

We've discovered that the ocean is full of life and that everything in it is connected. But not every part of our ocean is as healthy as it could be.

Sometimes ocean plants, animals and habitats face threats. A threat is something that can cause harm or make it harder for living things and their habitats to stay healthy. Things like pollution, fishing pressure, coastal development and climate change can all put pressure on ocean environments. Who has heard of these words before?

One way we can help is through marine parks. Marine parks are special ocean places that help protect plants, animals and the habitats they depend on.

South Australia has marine parks all along our coastline and further offshore. Within marine parks there are different zones with different rules. Some are called Sanctuary Zones (state marine parks) or National Park Zones (commonwealth marine parks). These give marine life extra protection and places where animals can grow, have young and recover.

And people help look after these places too. Marine park managers, rangers and scientists observe, study and care for them so we can keep learning about what is happening beneath the water.

Explore marine parks as safe places for the sea

Return to the video and listen for these ideas. What can students hear Porci talking about now that they know more? Use the cards to investigate the ideas that spark the most curiosity. Students might locate their nearest marine park, investigate a Sanctuary Zone or National Park Zone, explore what rangers and scientists do or begin wondering why some ocean places need extra protection.

3 | CONNECT

This set invites students to investigate habitats, species and the connections between them. Explore different underwater homes, food chains and food webs, changes within ecosystems, animals that move between places, and some of South Australia's extraordinary marine species.

A conversation about connections might sound like this...

Who has dived underwater before? What did it feel like? Where were you and what did you see?

Let's all imagine we could dive beneath the surface and have a really good look around.

Every ocean animal needs somewhere to live. We call that place its habitat. Some animals live among seagrasses. Some live around rocky reefs and seaweed forests. Others live on sandy seafloors or in estuaries. Different animals need different kinds of homes.

But these aren't lots of separate little worlds. They're connected. Animals need habitats for shelter and food, and living things are connected through food chains and food webs.

That means when something changes in one part of the ocean, other things can be affected too. Imagine pulling one thread in a giant underwater web — what else might move?

Some animals even travel enormous distances through the ocean, moving between different habitats and protected places.

The more we discover about these underwater connections, the more we can understand why protecting habitats - and not just individual animals - matters.

Connect and dive into the world under water

Use these cards as invitations to investigate. Different groups might become experts on different habitats, species or connections before bringing their discoveries together. Students might create habitat models, build a living food web, follow the journey of a migratory animal or meet an extraordinary South Australian marine species.

4 | PROTECT

The final set brings the learning back to place, people and action.

Students are invited to discover their local marine park and Sea Country, think about what caring for a place means, explore actions they can take and recognise the importance of listening to and learning from Aboriginal people and communities when exploring Country and Sea Country.

Watch *Porci Explores Marine Parks* once more. This time, invite students to listen for ideas about Sea Country, caring, connection and being part of protecting the ocean.

A suggested way to begin ...

We've learned a lot about the ocean. Now let's bring our thinking back to our place.

The ocean, coastline and marine parks are also part of Sea Country. Aboriginal peoples have cared for Country and Sea Country for thousands of years, and different Aboriginal Nations and communities hold their own knowledge, stories, languages and cultural practices.

We can begin by finding out whose Country and Sea Country we are learning on and listening to local Aboriginal voices and community-approved knowledge. Do you know who cares for the Sea Country nearest you?

We can also get to know our own local marine places. Where is our closest marine park? What lives there? What makes it special? How is it being cared for?

There are things we can do too. We can learn about our local ocean, follow the rules when we visit marine parks, reduce waste, care for waterways and share what we discover with other people.

Marine parks can't solve every problem facing our ocean. But they can give marine life space to stay healthy and recover. Scientists call this resilience. Looking after our ocean takes protected places, good decisions and people working together.

Where to next?

Consider Porci's invitation: "*Learning about our marine parks and protecting them is something we can all be part of.*"

Now it's time to bring the learning together by returning to place. What do students now know about their local marine park and Sea Country? What have they noticed, wondered about or begun to care about?

The aim is to leave with a stronger connection to place and an understanding that caring for our ocean involves knowledge, respect, protection and people working together.

Australian Curriculum Connections

This resource provides opportunities to connect learning across the Australian Curriculum from Reception to Year 4.

Although curriculum connections are suggested for each inquiry card, the way this comes to life will be different in each classroom. The curriculum connections in this resource are not intended as a checklist of content to cover. Instead, they support teachers to *uncover* the curriculum within rich, meaningful learning experiences.

Use the cards as starting points. Notice where students' questions, play, investigations and ideas are taking the learning, then draw on the curriculum connections to guide next steps. The aim is to recognise the opportunities for curriculum learning that emerge as students explore, investigate, create and make sense of the world around them.

A question about an ocean animal might lead students to observe and classify, measure and map, investigate habitats, gather data or communicate what they have discovered. The curriculum is embedded within these experiences rather than sitting separately from them.

Cross-curriculum Priorities

Sustainability

The resource supports the Sustainability cross-curriculum priority by exploring the ocean as an interconnected system and considering the relationships between people, marine environments and living things.

Students investigate biodiversity, habitats, food webs, environmental pressures, marine parks and resilience. They consider how changes in one part of a system can have flow-on effects and explore how protection, management and individual and collective action can contribute to healthier marine environments.

Learning encourages students to consider positive and achievable actions and recognise that caring for the ocean involves informed choices, shared responsibility and working together towards sustainable futures.

Aboriginal and Torres Strait Islander Histories and Cultures

The resource supports the Aboriginal and Torres Strait Islander Histories and Cultures cross-curriculum priority through connections with Country/Place, Culture and People.

Students are encouraged to recognise that South Australia's coastlines, waters and marine parks are also part of Sea Country, and that First Nations peoples' relationships with Country and Sea Country are living and continuing.

Learning should be grounded in local place wherever possible. Teachers are encouraged to identify whose Country and Sea Country they are learning on, listen to and learn from local Aboriginal voices, and use Aboriginal-authored or community-endorsed sources. Knowledge, language, cultural practices and protocols are specific to Country and community and should not be presented as one shared Aboriginal perspective.

Curriculum Connections Overview

Card	Card name	Curriculum connections
1	The Earth has one Big Ocean with Many Features	AC9MFSP02, AC9M1SP02, AC9M2SP02, AC9M3SP02
2	The Ocean and Life in the Ocean Shape the Features of Earth	AC9SFI01, AC9SFI02, AC9S2I01, AC9S2I03, AC9S4I01, AC9S4I03
3	The Ocean is a Major Influence on Weather and Climate	AC9SFI01, AC9ADRFC01, AC9S1U02, AC9M2ST02, AC9S4I03, AC9S4I04
4	The Ocean Makes Earth Habitable	AC9SFI01, AC9S2I01, AC9S4I04, AC9S4U02
5	The Ocean Supports a Great Diversity of Life	AC9SFU01, AC9S1U01, AC9S4U01
6	The Oceans and Humans are Inextricably Connected	AC9HSFK04, AC9AVAFC01, AC9HS1K03, AC9AVA2C01, AC9AVA4C01
7	The Ocean is Largely Unexplored	AC9TDEFP01, AC9TDE2P01, AC9TDE4P02
8	Threats to Our Ocean	AC9HSFK04, AC9HS1K03, AC9HS4S01, AC9HS4S02
9	What is a Marine Park?	AC9HSFK04, AC9HS1K03, AC9HS1K04, AC9HS4S02, AC9HS4S03
10	Marine Parks for People and Nature	AC9HSFK04, AC9HS1K03, AC9HS4S05, AC9HS4S06
11	Why Marine Parks Matter	AC9SFU01, AC9S1U01, AC9S4U01
12	Marine Parks in South Australia	AC9MFSP02, AC9M1SP02, AC9M2SP02, AC9M3SP02
13	Marine Park Managers, Rangers and Scientists	AC9MFST01, AC9M1ST01, AC9M2ST01, AC9M3ST01, AC9M3ST03, AC9M4ST03
14	Sanctuary Zones and National Park Zones: Safe Places for Sea Life	AC9SFU01, AC9S1U01, AC9S4U01
15	What is a Habitat?	AC9SFU01, AC9S1U01, AC9S4U01
16	Homes Beneath the Water	AC9SFU01, AC9S1U01, AC9S4U01
17	Food Chains and Food Webs	AC9SFU01, AC9S1U01, AC9S4U01
18	Ocean Animals on the Move	AC9MFSP02, AC9M1SP02, AC9M2M01, AC9M2SP02, AC9M3M01, AC9M3SP02, AC9M4M01
19	Amazing Ocean Species	AC9SFU01, AC9S1U01, AC9S2I01, AC9S3I01, AC9S4I01
20	Nowhere Else on Earth	AC9SFU01, AC9S1U01, AC9S4I02
21	Threats to the Environment	AC9SFU01, AC9SFI01, AC9S1U01, AC9S2I01, AC9S4U01, AC9S3I01
22	Looking after Sea Country	AC9HSFK05, AC9HS2K05, AC9HS3K04
23	Custodianship and Sea Country Protocols	AC9HSFK05, AC9HS2K05, AC9HS3K04
24	Your Place	AC9HSFK04, AC9HS1K03, AC9HS2K03, AC9HS3K04
25	Sanctuary Zones and National Park Zones: Breathing Space for the Ocean	AC9SFU01, AC9S1U01, AC9S4U01
26	Our Resilient Ocean	AC9SFI01, AC9S2I01, AC9S4U01
27	Small Actions Matter	AC9HSFK04, AC9HS2S01, AC9HS4S09
28	How You Can Help	AC9HSFK04, AC9HS2S01, AC9HS4S09, AC9HS4S10

Learn: Ocean Literacy Principles

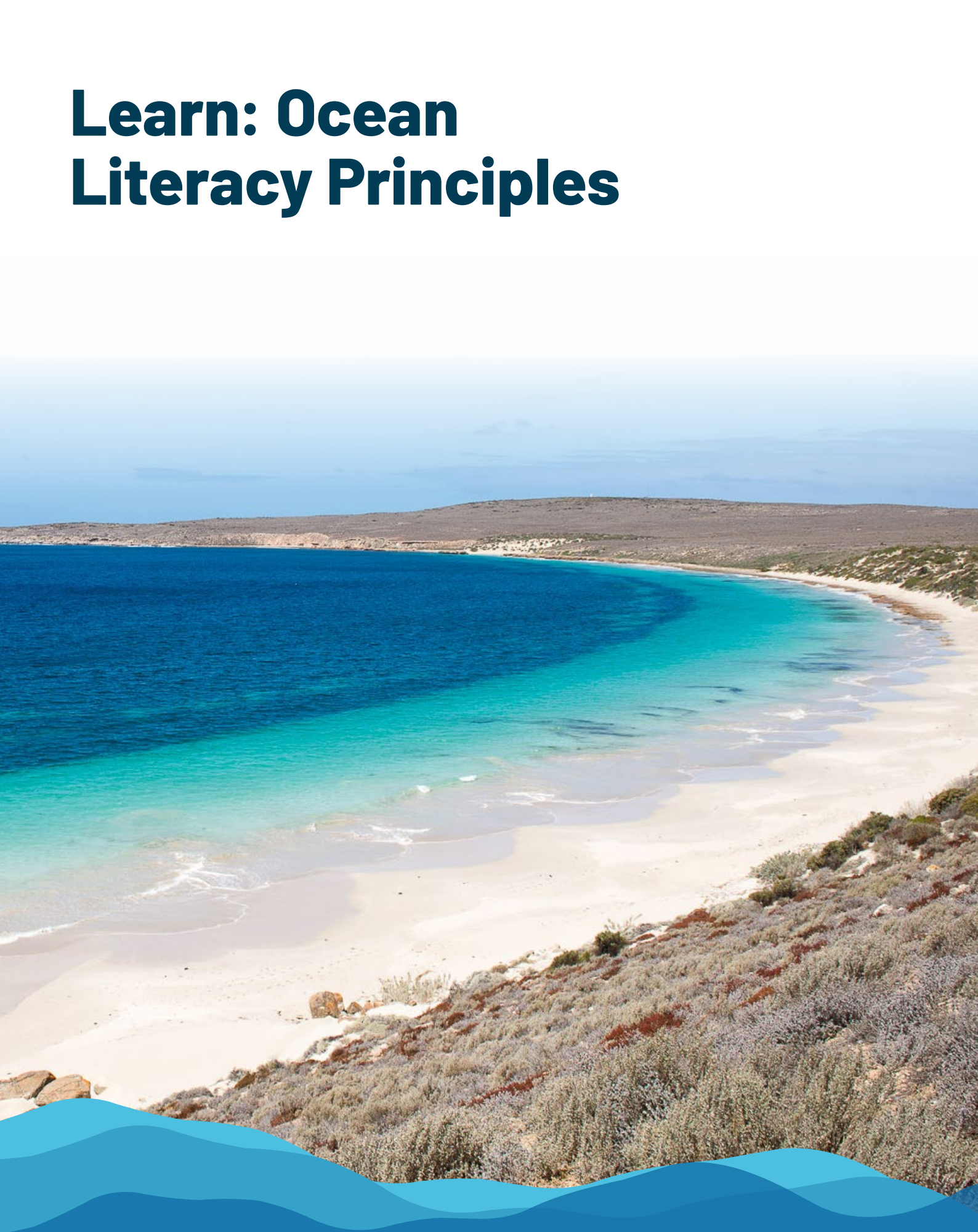


Image: Petrel Cove, St Francis Island, Nuyts Archipelago Marine Park, Shelley Paull

Card 1

The Earth has one big Ocean with Many Features

The ocean covers most of our planet. We give different parts of it names, like the Pacific, Atlantic and Indian oceans, but all this water is connected. Together, it makes one big global ocean with many different features and places.

Water carries heat, nutrients and living things around the planet. Within this one ocean are many different features and environments, from coastlines, bays and islands to reefs, underwater mountains, trenches and vast areas of deep water. Viewing the ocean as one connected system is an important foundation for understanding ocean literacy.

Engage

Imagine you are a tiny drop of ocean water. You can travel with waves and currents around the world. Where might you go? What might you pass along the way?

Explore the idea of one big, connected ocean and the many different places and features found within it.

Resources such as globes and maps are great to have on hand. A globe makes the amount of water covering Earth immediately visible and helps students see connections that can be harder to recognise on a flat map.

Invite students to trace pathways through the ocean. Can they move from the coast of South Australia to another part of the world without crossing land? Where does one named ocean become another?

STEM Practices

Systems thinking
Recognising the ocean as one interconnected system made up of many different parts.

Scientific thinking
Observing features, asking questions and comparing environments.

Spatial thinking
Exploring location, distance, direction, scale and relationships between places.

Key Concepts and Curriculum Connections

Reception
Earth has lots of water. Use globes, maps and models to notice where ocean and land are located. AC9MFSP02

Years 1–2
Earth has one big, connected ocean, even though we give different parts of it different names. Ocean places can be shallow or deep and include beaches, bays, reefs, islands and open water. AC9M1SP02

Years 3–4
Interpret and create maps and models showing ocean features, locations and relationships between places. AC9M3SP02

Key Language

ocean · connected · global · coastline · shallow · deep

Reflection and Assessment

Look for students recognising connections between bodies of ocean water, using positional and directional language and interpreting maps, globes and models to communicate spatial ideas.

Useful Resources

Globe · world map · map of Australia/South Australia · ocean and coastline photographs · loose parts · string or wool for tracing ocean journeys · atlases

Card 2

The Ocean and Life in the Ocean Shape the Features of Earth

The ocean is constantly shaping and changing the Earth. Waves, tides and currents move water, sand, sediment and rocks, gradually changing beaches and coastlines.

Marine life also plays a part. Shells, corals, reefs and other living things can help create, protect and reshape ocean environments. Some changes can happen quickly, while others take place slowly over hundreds or thousands of years.

Engage

The ocean is not just sitting beside the land — it is continually shaping it. Through observation, modelling and experimentation, explore what happens when water meets sand, rocks and other materials.

Teacher Notes

Coastlines provide an accessible way for students to see Earth processes in action. Encourage students to look for **evidence of change** rather than simply being told that change occurs.

After water moves across sand, where did the sand go? Which materials moved first? What happened around rocks or other barriers? What changes when waves become stronger?

Local beaches and coastlines provide opportunities to make this learning place-based. Photographs taken at different times (particularly before and after storms) can reveal changes that may not be obvious during a single visit.

STEM Practices

Systems thinking
Exploring connections between water, wind, land, living things and changing coastal environments.

Scientific thinking
Observing change, making predictions, testing ideas, changing variables and using evidence to explain what happened.

Design thinking
Creating and modifying models to explore how different structures, materials or arrangements respond to moving water.

Key Concepts and Curriculum Connections

Reception
Moving water can change sand, shells and other materials. Observe and describe what happens. AC9SFI01, AC9SFI02

Years 1–2
Investigate how moving water affects different materials. Make predictions, observe changes and compare what happens. AC9S2I01, AC9S2I03 (Science Inquiry)

Years 3–4
Investigate how water causes erosion and changes coastlines over time. Model and compare factors that affect these changes. AC9S4I01, AC9S4I03 (Science Inquiry)

Key Language

coastline · wave · current · erosion · sediment · change

Reflection and Assessment

Look for students noticing and describing change, making predictions before testing, explaining cause and effect and comparing erosion and movement of different materials.

Useful Resources

Sand · water · shallow trays · rocks · shells · gravel · containers for pouring · blocks or barriers · photographs of local coastlines · before-and-after coastal images

Card 3

The Ocean is a Major Influence on Weather and Climate

The ocean plays a major role in Earth's weather and climate. It absorbs energy from the sun, stores heat and moves it around the planet through ocean currents. Water also evaporates from the ocean into the atmosphere, helping form clouds and rain. These interactions influence temperatures, rainfall, winds and weather patterns around the world.

Engage

Explore the relationship between **ocean, weather and climate**. Weather is something students experience every day, making it a useful starting point for exploring a much larger Earth system.

Students might observe and describe sunshine, clouds, rain, wind and temperature, collect and compare weather data, and investigate evaporation.

The focus is on recognising **patterns and connections** rather than understanding complex climate systems.

Teacher Notes

Weather describes what is happening in the atmosphere over a short period. For example, a day might be hot, cold, windy, rainy or calm. **Climate** describes patterns of weather in a place over much longer periods of time.

The ocean and atmosphere are continually interacting. The ocean absorbs heat from the sun and releases it slowly, while currents move warmer and cooler water around the planet. Water evaporating from the ocean, enters the atmosphere and contributes to cloud formation and rainfall.

STEM Practices

Systems thinking
Exploring connections between the ocean, sun, atmosphere, water, temperature and weather.

Scientific thinking
Observing, measuring, recording and comparing weather conditions and using evidence to identify patterns.

Mathematical thinking
Collecting, representing and comparing data such as temperature, rainfall and wind observations.

Key Concepts and Curriculum Connections

Reception
Observe and describe daily weather, ask questions about what is happening and represent weather through movement and sound. AC9SFI01, AC9ADRFC01

Years 1–2 — Explore daily and seasonal changes in weather. Collect weather information through observation, organise and represent data and look for patterns over time. AC9S1U02, AC9M2ST02

Years 3–4
Observe and record weather conditions over time, construct representations to organise information and identify patterns, and use observations as evidence. AC9S4I03, AC9S4I04 (Science Inquiry)

Key Language

weather · climate · temperature · evaporation · atmosphere · current

Reflection and Assessment

Look for students making connections between the sun, ocean, clouds and rain; accurately observing, measuring and recording weather; and using observations as evidence.

Useful Resources

Thermometer · weather chart · rain gauge · windsock or ribbon · clear containers · water · local weather data · coastal and inland maps · photographs of different ocean weather conditions

Card 4

The Ocean Makes Earth a Habitable Place to Live

Life on Earth cannot exist without life in the ocean. The ocean is an important part of the water cycle and helps control our climate. Tiny living plant-like things in the ocean also help make much of the oxygen we breathe. Even when we are far from the sea, we depend on it.

Engage

We need the ocean to live. Begin by thinking about some of the less visible ways the ocean supports life on Earth.

Explore connections between the ocean, water and the air we breathe or investigate the water cycle, oxygen production and the role of tiny marine organisms.

Teacher Notes

One of the most surprising ideas for students may be that some of the oxygen they breathe is connected to life in the ocean. Tiny marine organisms, including **phytoplankton**, use sunlight to photosynthesise and produce oxygen.

The ocean is also a major part of Earth's water cycle. Water evaporates from the ocean, enters the atmosphere and eventually returns to Earth's surface as precipitation. This movement of water connects the ocean with rivers, waterways, land and living things.

Consider: How might the ocean be connected to the water we drink, the rain that falls and the air we breathe?

STEM Practices

Systems thinking
Recognising connections between the ocean, atmosphere, water, climate and living things.

Scientific thinking
Asking questions, observing patterns and using evidence to develop explanations.

Modelling
Using diagrams, movement, materials and physical models to represent processes such as the water cycle.

Key Concepts and Curriculum Connections

Reception
Explore how water and air support life. Ask questions about some of the ways the ocean is connected to life on Earth. AC9SFI01

Years 1–2
Explore connections between the ocean, water, air and living things using observations, images and models. AC9S2I01 (Science Inquiry)

Years 3–4
Describe how water moves between the ocean, atmosphere and land through evaporation, condensation and precipitation as part of the water cycle. AC9S4U02, AC9S4I04 (Science Inquiry)

Key Language

habitable · oxygen · phytoplankton · atmosphere · water cycle · photosynthesis

Reflection and Assessment

Look for students making connections between the ocean and life on Earth, explaining how ocean water connects with rain and freshwater and using models to represent movement within the water cycle.

Useful Resources

Globe · water-cycle images · blue fabric · clear containers · images of phytoplankton · magnifiers/ microscopes where available · cards or loose parts for creating systems and cycles

Card 5

The Ocean Supports a Great Diversity of Life

The ocean is full of life. It is home to tiny living things we can barely see, colourful fish, animals without backbones (invertebrates) like crabs and sea snails, seaweed, seagrass, sharks, whales and thousands of other species. Different ocean habitats provide places for living things to find food and shelter and grow.

Engage

Discuss what exists beneath the water and compare ideas across the class. Consider and compare different marine species and the places where they live.

Teacher Notes

South Australia is an exciting place to explore ocean diversity. Our waters form part of the **Great Southern Reef**, a vast temperate reef system stretching across southern Australia. South Australian waters are home to thousands of species, including leafy sea dragons, Australian sea lions, blue devils and many other remarkable forms of marine life.

A **habitat** is the place an organism lives and finds what it needs to survive. An **ecosystem** takes the thinking further; it includes living things, their environment and the many relationships between them.

STEM Practices

Systems thinking — recognising that species, habitats and ecosystems are made up of many connected parts.

Scientific thinking — observing, identifying, sorting, classifying and comparing marine life and using observations to develop explanations.

Mathematical thinking — grouping and classifying, noticing patterns and comparing quantities and features.

Key Concepts and Curriculum Connections

Reception
Observe marine plants and animals, compare their features and group them in different ways. AC9SFU01

Years 1–2
Identify what marine plants and animals need to survive and how different habitats provide food, water and shelter. AC9S1U01

Years 3–4
Explore relationships between living things within marine habitats, including how organisms depend on each other for food and survival. AC9S4U01

Key Language

diversity · species · habitat · ecosystem · organism · community

Reflection and Assessment

Look for students noticing similarities and differences between marine life, using observable features to sort and classify and recognising relationships between living things within a habitat.

Useful Resources

South Australian marine species images · photographs of rocky reefs, seagrass, sandy seafloors and other habitats · sorting hoops · loose parts · underwater footage · species and habitat cards

Card 6

The Oceans and Humans are Inextricably Connected

We are all connected to the ocean. It gives us oxygen, food, resources and places to explore, connect and enjoy.

The ocean influences our lives, and what we do can influence the ocean too, so we all have a role in caring for it.

Engage

Encourage students to explore their individual relationship with the ocean and recognise that everyone has an ocean story.

You might draw on memories, feelings and sensory experiences of being near the ocean. Students don't need to have spent lots of time at the beach to have an ocean connection. The invitation can begin with family stories, waterways or simply curiosity about the ocean.

Students might draw, map or create a short spoken or written text sharing their own ocean connection.

Teacher Notes

Ocean connections can be recreational, environmental, cultural, social and personal.

Sensory memory can be a powerful entry point. What did the place sound like? How did the water feel? What could students smell? What did they notice under their feet? Who were they with?

There is also an important relationship between **connection and care**. Knowing, experiencing and developing relationships with places can influence how people value and care for them. This creates a natural bridge from learning about the ocean towards thinking about our role in protecting it.

For Aboriginal and Torres Strait Islander peoples, connections with ocean and coastal places can also be part of ongoing relationships with **Sea Country, culture and identity**. This is a much deeper concept that should be explored respectfully and, where possible, through local First Nations voices and knowledge holders.

STEM Practices

Systems thinking — recognising the many ways people and the ocean influence and depend on one another.

Scientific thinking — observing places closely, asking questions and using sensory observations to notice features and changes.

Spatial thinking — locating and mapping significant ocean and coastal places and recognising relationships between waterways, coastlines and communities.

Key Concepts and Curriculum Connections

Reception
Explore why places are special to people and represent personal connections and ideas through visual arts. AC9HSFK04, AC9AVAFC01

Years 1–2
Describe personal experiences and places, using sensory and topic-specific language to communicate ideas to others. AC9HS1K03, AC9AVA2C01

Years 3–4
Create spoken, written or multimodal texts that describe experiences, places and different perspectives about connections with the ocean. AC9AVA4C01

Key Language

connection · place · belonging · community · ocean · responsibility · Country · Sea Country · custodianship

Reflection and Assessment

Look for students sharing different experiences and perspectives, using sensory language to describe places, communicating personal connections with ocean places and recognising that people may value the same place differently.

Useful Resources

Local coastline and marine park maps · photographs of South Australian coastal places · drawing and mapping materials · loose parts · natural materials · student or family photographs where appropriate · books and stories about local ocean places.

Card 7

The Ocean is Largely Unexplored

Only a small part of our ocean has been explored. There are still many places we know very little about and many mysteries waiting to be discovered. Every year, scientists are making new ocean discoveries. What might future ocean explorers find?

Engage

There is still so much about our ocean that we don't know!

We might wonder about what could exist beneath the surface and imagine ways of exploring places humans find difficult to reach. Students may investigate why ocean exploration is challenging and how scientists use science, engineering and technology to observe, record and understand environments far beneath the surface.

Invite students to design, draw or build a tool that could help scientists explore an inaccessible part of the ocean. What would it need to do?

Teacher Notes

The idea that large parts of our own planet remain unexplored can be surprising for students. Use this uncertainty as an opportunity rather than rushing to provide answers.

Ocean science continues to change as new technologies allow scientists to reach deeper places, collect better information and observe marine life in new ways.

Scientists may know what they want to investigate, but they also need ways to get there, see it, measure it, record it and return information to the surface.

Not knowing is an important part of science. Questions and uncertainty are often where scientific investigation begins.

STEM Practices

Scientific thinking — wondering, questioning, observing, collecting evidence and using new information to develop explanations.

Design thinking — identifying the challenges of ocean exploration and imagining, designing, testing and improving possible solutions.

Systems thinking — recognising relationships between the features of the ocean and the living things found there.

Technological thinking — considering how tools and technologies extend what humans are able to see, measure and explore.

Key Concepts and Curriculum Connections

Reception
Explore needs and opportunities for designed solutions and communicate ideas through drawing, modelling or making. AC9TDEFP01

Years 1–2
Generate and communicate ideas for a tool that could help people explore the ocean through describing, drawing or modelling. AC9TDE2P01

Years 3–4
Identify challenges of ocean exploration and design a possible solution. Explore materials and communicate design ideas using drawings, models and technical language. AC9TDE4P02

Key Language

explore · discover · depth · pressure · technology · evidence

Reflection and Assessment

Look for students asking questions about unexplored environments, identifying problems ocean explorers need to solve, generating and communicating design ideas and explaining how a designed tool could help scientists explore or collect information.

Useful Resources

Images or footage of deep-ocean environments · torches · dark fabric · ocean-depth images or diagrams · measuring tools · construction materials ·

Marine Parks: Safe Places for the Sea



Sponge Garden on Shipwreck

HMAS Hobart Shipwreck – Rapid Head Sanctuary Zone, Encounter Marine Park
Photo credit – Stefan Andrews courtesy Great Southern Reef Foundation

Card 8

Threats to Our Ocean

A threat or pressure is something that can cause harm or make it harder for plants, animals and habitats to stay healthy.

Our ocean faces many different threats and pressures. Pollution, rubbish, fishing, mining, building and development, introduced marine pests and a changing climate can all affect ocean habitats and the living things that depend on them.

There are many ways we can help protect our ocean. Marine parks are one important way. They help reduce or manage some threats, pressures and activities, giving marine plants, animals and habitats places where they can be protected.

Engage

Our ocean faces different threats and pressures, and there are things we can do to reduce their impact.

Notice what students already understand about threats to the ocean. What have they seen, heard about or experienced? Students may investigate a particular pressure, consider what causes it and explore what might be affected.

Teacher Notes

The words threat and pressure can encompass many different issues. Keep the discussion grounded in examples students can understand, while recognising that some pressures are complex and occur on a much larger scale.

Marine parks are one part of this response. They can help reduce or manage some activities and pressures and protect important habitats and marine life.

Exploring environmental pressures should help students see that there are practical ways people can care for and protect marine environments.

STEM Practices

Scientific thinking — observing changes, asking questions, investigating causes and effects and using evidence to understand impacts on marine environments.

Design thinking — identifying a problem and considering, designing or improving possible ways to reduce its impact.

Systems thinking — recognising that changes in one part of a marine ecosystem can affect habitats, plants, animals and people in other parts of the system.

Key Concepts and Curriculum Connections

Reception

Recognise that ocean places can change and suggest simple ways people can help care for them. AC9HSFK04

Years 1–2

Explore natural and managed features of places, how places can change and ways they can be cared for. AC9HS1K03

Years 3–4

Investigate how people use and manage environments and resources and consider actions that can reduce pressures on marine environments. AC9HS4S01, AC9HS4S02 (HASS Skills)

Key Language

threat · pressure · impact · pollution · habitat · marine park

Reflection and Assessment

Look for students identifying different threats or pressures affecting marine environments, making connections between a pressure and what might be affected and explaining possible ways a pressure could be reduced or managed.

Useful Resources

Images of healthy and impacted marine environments · local beach or coastal photographs · maps of South Australian marine parks · recycled and loose parts materials

Card 9

What is a Marine Park?

Marine parks are special places in the ocean that help protect animals, plants and the habitats they depend on. They have different zones where different activities are allowed, including high conservation zones such as Sanctuary Zones (state marine parks) and National Park Zones (Commonwealth marine parks). These zones are a bit like underwater national parks, protecting animals, plants and habitats from threats and pressures.

Engage

What does it mean to protect a place?

Why might some places need particular rules about what people can and cannot do there?

We might begin by making connections with places students already know are protected, such as national parks or conservation parks.

Students may explore a marine park near where they live, investigate the habitats and species found there and begin to discover how different zones help protect marine environments.

Teacher Notes

South Australia's 26 marine parks span State and Commonwealth waters. Zones are named differently across State and Commonwealth marine parks but play the same or similar roles. Marine parks are not places where all human activity is excluded. Different zones provide different levels of protection and help manage what activities can occur. **Sanctuary Zones** and **National Park Zones** provide a high level of protection by restrict activities that remove or harm marine life.

Marine parks help manage pressures on marine environments while providing places where ocean life can grow and thrive.

STEM Practices

Scientific thinking — observing and identifying marine plants, animals and habitats and asking questions about what they need to survive.

Spatial thinking — using maps to locate marine parks, habitats and different zones.

Systems thinking — recognising connections between habitats, marine life, human activities, threats and the ways marine environments are managed.

Key Concepts and Curriculum Connections

Reception

Recognise marine parks as special ocean places and explore why people might care for and protect them. AC9HSFK04

Years 1–2

Identify marine parks as managed places and explore how people care for and protect places through particular actions and rules. AC9HS1K03, AC9HS1K04

Years 3–4

Explore how marine environments are important to people and animals and how management can help protect habitats and the resources they support. AC9HS4S02, AC9HS4S03

Key Language

marine park · protect · habitat · zone · Sanctuary Zone · National Park Zone · pressure · thrive

Reflection and Assessment

Look for students describing the purpose of a marine park and recognising that marine parks contain different zones with different rules.

Useful Resources

South Australian marine park maps · images of local marine habitats and species · photographs or maps showing marine park zones · large maps of the South Australian coastline

Card 10

Marine Parks for People and Nature

Marine parks protect ocean plants, animals and habitats, but they are also places for people to enjoy. Different parts of a marine park can have different rules. People might swim, surf, kayak, snorkel, dive or fish in some places, while other areas give marine life extra protection by not allowing certain activities.

Engage

What does it mean to share an ocean place?

Who uses this place? What do they need? How can we care for it together?

Students might explore a marine park map and use activity symbols to decide where different activities could occur. Encourage them to explain their thinking. There isn't necessarily one solution; the richness is in considering different needs and deciding how a place might be shared and protected.

Teacher Notes

South Australia's 26 marine parks span across State and Commonwealth waters. They are divided into different **zones.** These zones are named differently across the State and Commonwealth Marine Parks – but play the same roles. These zones help manage what activities can occur in different places.

Many recreational activities can continue within marine parks. Depending on the zone, people may swim, surf, kayak, snorkel, dive, boat and fish.

Sanctuary Zones (state) or **National Park Zones** (commonwealth) provide a higher level of protection and do not allow fishing, but people can still visit and enjoy them through low-impact activities such as swimming, surfing and snorkelling.

STEM Practices

Systems thinking — recognising that people, activities, habitats and species are all part of an interconnected system.

Design thinking — considering different needs, making decisions and developing possible solutions for sharing and protecting a place.

Scientific thinking — considering how different human activities might affect habitats and living things.

Key Concepts and Curriculum Connections

Reception
Explore how people use special places and suggest ways they can be enjoyed and cared for. AC9HSFK04

Years 1–2
Explore how places can be used in different ways and how people can help care for and protect them. AC9HS1K03

Years 3–4
Consider how people use and value environments and how management decisions can help balance human activities with caring for natural environments and resources. AC9HS4S05, AC9HS4S06 (HASS Skills)

Key Language

marine park · zone · sanctuary · Sanctuary Zone · National Park Zone · protect · shared use · recreation

Reflection and Assessment

Look for students considering the needs of both people and marine life, recognising that different activities can have different impacts and beginning to understand that rules can be a way of caring for and sharing a place.

Useful Resources

Local marine park and zoning maps · South Australian marine habitat images · marine species images · activity cards or symbols — swimming, fishing, surfing, boating, snorkelling, kayaking · loose parts

Card 11

Why Marine Parks Matter

South Australia's ocean is part of the Great Southern Reef and is home to thousands of different species. Many are found nowhere else in the world. Leafy sea dragons, Australian sea lions, blue devils, sea snails, crabs, sponges and many other living things all rely on healthy habitats to survive. Marine parks help protect these special places and the life within them.

Engage

"Protecting a place can help protect everything that depends on it." Have a class discussion about this.

Consider the needs of a marine animal: food, shelter, space and a safe place to grow. Explore the connections between species, habitats and human activities, and consider what might happen when one part of an ecosystem changes.

The important idea is that marine parks don't protect one animal at a time**.** They help protect whole places and the many connections within them.

Teacher Notes

The Great Southern Reef stretches across Australia's southern coastline and supports an incredible diversity of marine life. South Australia's part of this reef system is particularly special because of the high number of species found here and nowhere else.

Every species depends on its habitat in different ways. Rocky reefs, seaweed forests, seagrass meadows, sandy seafloors and other marine environments provide places to feed, shelter, reproduce and grow.

Marine parks work alongside other forms of protection, including fisheries management and the protection of particular species. By managing activities and reducing some pressures, marine parks can help habitats and the species within them remain healthier.

Encourage students to think in **connections rather than individual parts**.

What does this animal need? What does it depend on? What depends on it?

STEM Practices

Systems thinking — exploring the relationships between species, habitats and the wider marine environment.

Scientific thinking — observing, comparing and classifying species and using evidence to investigate what living things need to survive.

Cause-and-effect thinking — predicting how a change to one part of a habitat or ecosystem might affect other parts.

Key Concepts and Curriculum Connections

Reception
Explore what living things need to survive and make connections between marine animals and the places they live. AC9SFU01

Years 1–2
Identify the basic needs of marine animals, including food, water and shelter, and describe how marine habitats help meet these needs. AC9S1U01

Years 3–4
Explore relationships between living things within marine habitats and consider how changes to one part of a habitat can affect other living things. AC9S4U01

Key Language

Great Southern Reef · species · habitat · biodiversity · unique · ecosystem · endemic · interconnected · pressure · protect

Reflection and Assessment

Look for students making connections between a species and its habitat, identifying what living things need to survive and recognising that many species can depend on the same habitat.

Useful Resources

Images of Great Southern Reef habitats · South Australian marine species images · habitat cards · loose parts · string or wool for creating connections · maps of the Great Southern Reef and South Australian marine parks

Card 12

Marine Parks in South Australia

South Australia has 26 marine parks. Nineteen are along our coastal waters (state marine parks) and another seven are further offshore in deeper Commonwealth waters (commonwealth marine parks). This means that wherever you live in South Australia, there may be a marine park closer than you think.

Engage

Marine parks aren't somewhere far away — they are part of South Australia's coastline and our local places.

Students might locate themselves, the coastline and their nearest marine park on a map. Or compare different marine parks, their locations and habitats, and explore the difference between coastal and offshore waters.

A starting question might be: Where is our closest marine park?

Teacher Notes

South Australia's marine parks stretch along the coastline and protect a diverse range of habitats and species.

Nineteen marine parks occur in South Australian coastal waters and are managed by National Parks and Wildlife Service South Australia – these are called State marine parks. A further **seven marine parks** occur in Commonwealth waters further offshore and are managed by Parks Australia – these are called Commonwealth marine parks.

As they are managed by different parts of the Government, their zones that play similar roles are named differently. However both State and Commonwealth marine parks aim to achieve the same thing – whole of ecosystem conservation.

This card is an opportunity to build students' understanding of **coastal waters, offshore waters, shallow water and deeper water**. These don't need to become complex definitions. Maps, photographs and comparisons can help students notice how ocean environments change as we move away from the coastline and into deeper water.

Most importantly, make this learning **local**. Locate the school first. Then the coastline. Then the nearest marine park. Give students a reason to see marine parks as places that belong to their own South Australian story.

STEM Practices

Spatial thinking — using maps to explore location, direction, distance and relationships between places.

Mathematical thinking — comparing distances, using scale and interpreting spatial information.

Scientific thinking — comparing marine environments, habitats and species and asking questions about why different places support different life.

Key Concepts and Curriculum Connections

Reception
Locate familiar places and marine places in relation to one another and use everyday language to describe where they are. AC9MFSP02

Years 1–2
Use maps to locate the coastline and marine parks and describe their positions in relation to familiar places. AC9M1SP02, AC9M2SP02

Years 3–4
Use and interpret maps to locate marine parks, coastlines and other key features and describe their positions in relation to one another. AC9M3SP02

Key Language

marine park · coastal waters · offshore waters · shallow · deep · coastline

Reflection and Assessment

Look for students locating themselves in relation to the coast; using maps to ask and answer questions, comparing locations and developing a stronger sense of their own connection to local marine places.

Useful Resources

South Australian marine parks map · map of South Australia · local coastline map · globe · string or wool · rulers or measuring tools · marine park photographs · habitat and species images

Card 13

Marine Park Managers, Rangers and Scientists

Lots of people help look after marine parks. Marine park managers and Rangers help people understand marine parks and make sure their rules are followed. Marine scientists also study what is happening underwater and watch how habitats and species change over time.

Engage

Students are invited to step into the roles of the people who look after and learn from marine parks.

They might create a simple survey, record what they observe and compare results from different places or different sets of footage.

Explore what a Ranger or marine scientist does and practise observing and counting marine life.

Teacher Notes

Marine park managers and Rangers help marine parks work in practice. Their roles can include educating visitors and communities, managing activities and helping people understand and follow marine park rules.

Scientists help us understand what is happening beneath the water. In South Australia, marine scientists use methods including diver surveys, habitat mapping and BRUVs (Baited Remote Underwater Video systems).

BRUVs allow scientists to record marine life underwater and use the footage to identify, count and measure species without a diver needing to remain in the water.

Scientists can collect information from inside and outside marine parks, Sanctuary Zones and National Park Zones and compare what they find. When surveys are repeated over time, patterns and changes can begin to emerge.

Scientists don't simply *look* at the ocean. They observe, count, measure, record, compare and use evidence to ask and answer questions. This information can then be used by Marine Park Managers to better manage the marine park.

STEM Practices

Scientific thinking — observing, questioning, counting, measuring, recording, comparing and using evidence to identify patterns.

Technological thinking — exploring how cameras, mapping tools and other technologies allow scientists to investigate environments that can be difficult for people to access.

Key Concepts and Curriculum Connections

Reception
Observe and count marine life and record what is found using objects, images or simple representations. AC9MFST01

Years 1–2
Collect, sort and record information about marine life to answer questions and compare what is found. AC9M1ST01, AC9M2ST01

Years 3–4
Collect, record, represent and compare data about marine species and habitats, and use the results to identify patterns and communicate findings. AC9M3ST01, AC9M3ST03, AC9M4ST03

Key Language

Marine park manager · Ranger · marine scientist · survey · monitor · evidence · data · habitat mapping · observe · measure

Reflection and Assessment

Look for students asking questions that can be investigated, recording observations, comparing sets of information and using evidence rather than guesses to explain what they think is happening.

Useful Resources

Underwater habitat photographs or footage · marine species images · simple survey sheets or clipboards · counters · tally sheets · pencils · magnifiers · marine park maps · examples or images of BRUVS and other marine monitoring equipment

Card 14

Sanctuary Zone and National Park Zones: Safe Places for Sea Life

Some parts of South Australia's state marine parks are called Sanctuary Zones. In commonwealth marine parks these are called National Park Zones. These places give marine life extra protection. People can still enjoy Sanctuary or National Park Zones by doing low-impact things like swimming and snorkelling, but fishing and other extractive activities are not allowed. With fewer pressures, habitats and living things have a chance to grow, recover and become healthier.

Engage

Students are invited to explore what can happen when **nature is given time, space and protection**.

Students might consider what animals need to live, grow and have young. They may explore cause and effect — what might change when pressures are reduced, why recovery takes time and how protecting one part of an ecosystem can have flow-on effects for other living things.

Teacher Notes

Sanctuary Zones (state marine parks) and National Park Zones (commonwealth marine parks) are key conservation areas within South Australia's marine parks. Although they are named differently across state and commonwealth waters, they play the same role. Fishing is not permitted, but low-impact activities such as swimming, snorkelling, boating and surfing can still take place.

Reducing pressures can allow marine habitats and populations to move towards a more natural state. Animals may have greater opportunities to grow, live longer and reproduce, while healthier habitats provide food and shelter for many other species.

These changes don't happen overnight. **Nature needs time to recover.** Scientists monitor Sanctuary Zones and National Park Zones over many years to understand what is changing and how marine life is responding.

This introduces the important idea of **resilience** — the ability of an ecosystem to cope with and recover from pressures and change. Sanctuary Zones and National Park Zones cannot prevent every threat to the ocean, but healthier ecosystems may be better placed to respond when challenges occur.

STEM Practices

Systems thinking — exploring how changes to one species, habitat or pressure can have flow-on effects through an ecosystem.

Scientific thinking — predicting, observing, comparing and using evidence collected over time to understand change.

Mathematical thinking — comparing numbers, size and diversity of species and looking for patterns in data collected over time.

Key Concepts and Curriculum Connections

Reception
Explore what marine plants and animals need to live and grow and consider how a protected place can help meet those needs. AC9SFU01

Years 1–2
Explore how marine habitats meet the needs of living things and predict what might happen when some pressures are reduced. AC9S1U01

Years 3–4
Explore relationships between living things in a marine habitat and use observations or data to investigate how changes within a habitat can affect the living things that depend on it. AC9S4U01

Key Language

Sanctuary Zone · National Park Zone · protection · pressure · recover · resilience · regenerate

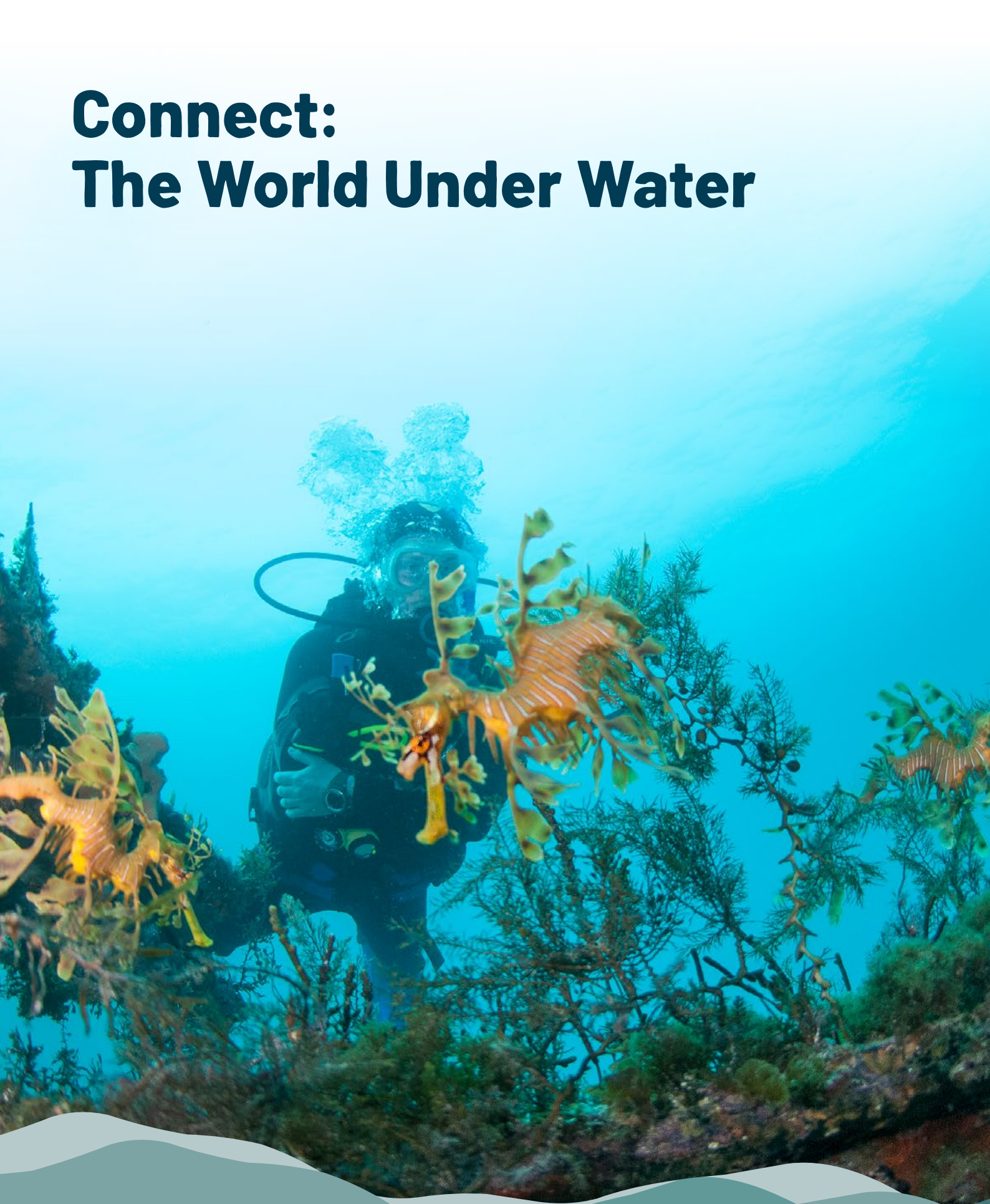
Reflection and Assessment

Look for students predicting what might happen over time, identifying cause-and-effect relationships, and understanding that recovery can be gradual and that healthy ecosystems can cope better with change.

Useful Resources

Marine park zoning map · before-and-after habitat images · species images or models · loose parts · two trays or spaces for comparative habitat models · counters · string or wool for food-web connections

Connect:
The World Under Water



Diver and Leafy Seadragons

Rapid Bay Jetty – Encounter Marine Park
Photo credit – Carl Charter

Card 15

What is a Habitat?

A habitat is a home for living things. Beneath the water, habitats can include seagrass meadows, seaweed forests on rocky reefs, sandy seafloors, estuaries and shellfish reefs. Each habitat provides different places for marine life to live and grow. Healthy habitats are the foundation of healthy marine ecosystems.

Engage

Explore the key ideas of **habitat as home**. Consider what an ocean animal needs from its home and investigate why particular species are suited to particular habitats. How might changes to a habitat affect the species living there?

Teacher Notes

A habitat is more than somewhere an animal happens to be. It provides the conditions and resources it needs to survive.

Compare habitats using prompts such as: What could hide here? Where could an animal find food? What might be different about living in seagrass compared with a rocky reef?

This lays the groundwork for later exploration of ecosystems, food webs and the importance of protecting habitats within marine parks.

STEM Practices

Systems thinking — connecting species with the different parts of a habitat they depend upon.

Scientific thinking — observing, comparing and classifying habitats and species and using evidence to explain where organisms might live.

Key Concepts and Curriculum Connections

Reception — Observe and group marine animals using their features and where they might be found. AC9SFU01

Years 1–2 — Identify the basic needs of animals, including food, water and shelter, and explore how different marine habitats meet these needs. AC9S1U01

Years 3–4 — Explore how living things interact within a habitat, including relationships between producers and consumers. AC9S4U01

Key Language

habitat · shelter · seagrass · rocky reef · estuary · survive

Reflection and Assessment

Look for students connecting species with their needs; comparing habitats; explaining why an animal might live in one place rather than another; and recognising that **different habitats support different communities of life**.

Useful Resources

Habitat photographs · marine species cards · loose parts · natural materials · underwater footage · local marine park images

Card 16

Homes Beneath the Water

The ocean is filled with very different kinds of homes. Some are bright and shallow, while others are deep and dark. Some are covered in seaweed or seagrass, while others are rocky, sandy or muddy. Different homes support different communities of marine life.

The seafloor is not one continuous, identical environment. Beneath South Australian waters are seagrass meadows, rocky reefs and seaweed forests, sandy and muddy seafloors, shellfish reefs and deeper-water habitats.

Light, depth, water movement, shelter and the type of seafloor all influence what can live in each place.

Engage

Take an **imaginary journey across the seafloor**, noticing how underwater environments change.

Encourage students to consider what they might see on the seafloor. It might be rocky, sandy, bright, dark, covered or open. A great next step is to begin asking why those differences matter to the species living there.

Teacher Notes

Encourage students to look closely at images before naming or explaining everything. What do they notice? Where could something hide? Which habitat appears to have more structure? Where might light reach most easily?

STEM Practices

Scientific thinking — observing, comparing, classifying, identifying patterns and developing explanations.

Spatial thinking — considering depth, position, structure and relationships within underwater environments.

Systems thinking — connecting environmental conditions with the organisms that live there.

Key Concepts and Curriculum Connections

Reception — Observe and describe features of marine habitats and the living things found within them. AC9SFU01

Years 1–2 — Compare marine habitats and identify how their features provide for the needs of different living things. Use observations to identify patterns, make predictions and compare findings. AC9S1U01

Years 3–4 — Investigate how the physical features and conditions of marine habitats influence the living things found there. Make observations, identify patterns and use evidence to develop explanations. AC9S4U01

Key Language

seafloor · seagrass · seaweed forest · rocky reef · shallow · deep

Reflection and Assessment

Look for students noticing differences between habitats, using environmental clues to predict what might live there, making comparisons and connecting physical features with living communities.

Useful Resources

Large habitat images · underwater footage · fabric · loose parts · natural materials · torches · species images

Card 17

Food Chains and Food Webs

Ocean life is connected through food chains and food webs. Tiny organisms can become food for larger animals, which can then become food for something else. Most animals are connected to many other living things, creating a web of relationships. Healthy habitats help provide the food and shelter that keep these connections going.

Marine organisms depend on one another for food and energy. A **food chain** shows a simple pathway of who eats whom, while a **food web** reveals the many overlapping feeding relationships within an ecosystem. In reality, most marine species belong to complex food webs rather than a single chain.

Engage

Explore how ocean life is connected through food.

Explore simple relationships between food sources and what eats them. Document food chains and food webs and consider what happens when one species increases, decreases or disappears.

Teacher Notes

A food chain is easier to understand before building a web.

As students add species, encourage the model to become messy. That complexity is useful — it demonstrates that one animal may eat several things and also be eaten by several others.

Avoid presenting predators as "bad". Predation is a natural and important part of healthy ecosystems.

STEM Practices

Systems thinking — seeing relationships and flow-on effects across an ecosystem.

Scientific thinking — using knowledge and evidence about feeding relationships to build and test explanations.

Modelling — representing relationships that are difficult to observe directly.

Key Concepts and Curriculum Connections

Reception — Explore how living things have basic needs, including food, and identify simple feeding relationships between marine animals. AC9SFU01

Years 1–2 — Explore how marine animals obtain food and represent simple feeding relationships between living things. AC9S1U01

Years 3–4 — Construct and interpret food chains and food webs, identifying producers and consumers and predicting how changes can affect other living things within an ecosystem. AC9S4U01

Key Language

food chain · food web · predator · prey · producer · consumer

Reflection and Assessment

Look for students following connections and recognising that one species can have several relationships.

Useful Resources

Marine species cards · string/wool · hoops · clips · large floor space · habitat images

Card 18

Ocean Animals on the Move

Not all ocean animals stay in one place. Whales, sharks, fish, birds and other migratory species can travel enormous distances through the ocean to find food, have young or move between important habitats. Their journeys can take them through many different ocean places and protected areas.

These journeys can cross marine parks, state boundaries and even international waters, showing why protecting marine species can require connected places and cooperation across large areas.

Engage

Students are invited to follow the journey of **an animal on the move**.

Imagine you are a whale beginning an enormous ocean journey. You travel past beaches and cliffs, through deep water and across marine parks. What might you see along the way? What do you need to survive?

Students might map a simple journey between places an animal needs or investigate migration routes and the different habitats and pressures encountered along the way.

Teacher Notes

Migration provides a powerful way to show that animals don't recognise the boundaries we draw on maps.

A whale may move through protected and unprotected waters during one journey. This means protecting one location can be important, but animals may also depend on many other places along their route.

Use maps to make scale visible. Students are often surprised by how far some marine species travel.

STEM Practices

Spatial thinking — mapping routes, location, distance and direction.

Scientific thinking — investigating patterns in animal movement and considering why migration occurs.

Mathematical thinking — measuring and comparing distances and representing movement using maps and data.

Key Concepts and Curriculum Connections

Reception — Explore how animals move between places and represent familiar locations and pathways using simple maps or models. AC9MFSP02

Years 1–2 — Explore why marine animals move between habitats and represent their journeys using maps, directions and distances. AC9M1SP02, AC9M2M01, AC9M2SP02

Years 3–4 — Investigate migration routes and patterns, measure and compare distances, and use maps and data to represent how migratory species depend on multiple habitats. AC9M3M01, AC9M3SP02, AC9M4M01

Key Language

migration · migratory · journey · route · habitat

Reflection and Assessment

Look for students exploring why animals move, connecting movement with survival needs and recognising that **one animal can depend on many different places**.

Useful Resources

World, Australian and SA maps string/wool · rulers · species images · migration-route information · floor maps

Card 19

Amazing Ocean Species

South Australia's ocean is home to thousands of different species. Some are colourful, some are camouflaged, some are tiny and some are enormous. Many have unusual features that help them find food, stay safe, move or survive in their habitat. Some South Australian marine species are found nowhere else in the world.

Engage

Students are invited to **meet the locals**.

Rather than focusing only on famous marine animals, introduce students to the surprising diversity of South Australian life — leafy sea dragons, blue devils, Australian sea lions, sea snails and many others.

Students might notice unusual colours, shapes and movement or investigate how particular features and behaviours help a species survive.

Teacher Notes

This is a great card for beginning with **wonder**.

Show an image first. What do students notice? What do they wonder? How might it move? Where could it live? Why might it look this way?

Then investigate.

Features such as camouflage, body shape, colour, feeding structures and movement can be explored in relation to habitat and survival.

Keep returning to South Australian species. Students don't need to travel to tropical coral reefs to encounter extraordinary marine biodiversity. **Remarkable ocean life exists right here in South Australia part of the Great Southern Reef!**

STEM Practices

Scientific thinking — observing closely, questioning, comparing, classifying and using evidence to explain features and behaviours.

Systems thinking — connecting species with habitats, food and other organisms.

Design thinking — recognising how form and function are related and using biological features as inspiration for ideas and designs.

Key Concepts and Curriculum Connections

Reception — Observe and describe the external features of marine animals and group them according to similarities and differences. AC9SFU01

Years 1–2 — Compare the features of marine species and explore how the places they live meet their needs. Ask questions, make predictions and use observations to investigate similarities and differences. AC9S1U01, AC9S2I01

Years 3–4 — Observe and compare marine species, pose questions about their features and behaviours, and use observations and evidence to develop explanations about living things within marine environments. AC9S3I01, AC9S4I01

Key Language

species · adaptation · camouflage · behaviour · feature · biodiversity · Great Southern Reef

Reflection and Assessment

Look for students noticing small details, connecting body features with function and showing growing curiosity about **local marine biodiversity**.

Useful Resources

High-quality South Australian species photographs · underwater footage · species cards · habitat images · drawing/modelling materials

Card 20

Nowhere Else on Earth

South Australia's ocean is part of the Great Southern Reef - home to more than 7,500 species, and many of them are found nowhere else on Earth. Our cool southern waters, influenced by large currents from the west and the east, have helped create an unusual mix of marine life. This means some of the creatures living just off our coastline are truly one of a kind.

Engage

Invite students to imagine discovering a marine animal or plant living just off the South Australian coastline that cannot naturally be found anywhere else in the world.

What would make that species special? Where might it live, and why might this particular part of the ocean be the right home for it?

Use images of South Australian marine life to spark noticing, wondering and questions about what lies beneath our local waters and what makes some of these species unique.

Teacher Notes

Introduce the word **endemic**: a plant or animal is endemic when it is naturally found only in a particular place or region.

Encourage students to investigate where a species naturally occurs and use evidence to determine whether it is endemic to South Australia, southern Australia or a broader region.

The Great Southern Reef provides a useful context for this investigation. Extending across southern Australia, it supports kelp forests, rocky reefs and an extraordinary diversity of marine life, including many species with limited distributions.

Keep the emphasis on discovery and connection. The important understanding is that the marine environments along southern Australia support biodiversity that is distinctive on a global scale.

STEM Practices

Scientific thinking — observing, identifying and comparing marine species, asking questions, investigating where species naturally occur and using evidence to make claims.

Design thinking — deciding how to represent and communicate information about a species through a profile, model, museum display or other format.

Key Concepts and Curriculum Connections

Reception — Observe and compare South Australian marine species, noticing features that make them similar or different and asking questions about where they live. AC9SFU01

Years 1–2 — Investigate where different marine species live, ask questions about patterns in their distribution and use information to compare species and habitats. AC9S1U01

Years 3–4 — Investigate the distribution of marine species, identify patterns in where they occur and use information and evidence to explain what makes some species distinctive to particular regions. AC9S4I02

Key Language

endemic • species • biodiversity • habitat • distribution • marine life • Great Southern Reef

Reflection and Assessment

Look for students using information or evidence to describe where a species occurs and identifying connections between a species and its habitat.

Useful Resources

Maps of southern Australia and the Great Southern Reef · species information from trusted marine science and conservation sources · materials for creating species profiles, models or a class mini museum

Card 21

Threats to the Environment

Everything in the ocean is connected. When one part of an ecosystem changes, the effects can flow through to other living things and habitats. Changes such as pollution, fishing pressure, marine heatwaves and harmful algal blooms can put pressure on marine environments.

Engage

Explore how a change in one part of a marine ecosystem can affect other living things and habitats.

Begin with a healthy seagrass meadow and identify some of the connections between habitat, food and species. Introduce one change — remove a species or food source, damage the habitat, or introduce a pressure such as pollution or a harmful algal bloom. Follow the connections to consider what else might be affected.

Teacher Notes

Marine ecosystems are networks of interconnected living things and habitats. Plants and algae provide food and habitat, small animals are eaten by larger animals, and habitats provide places to feed, shelter, reproduce and grow.

Use the string-web activity to make these connections visible. Begin with species, habitats and food sources, then remove or change one element. Follow the strings to see where the effects might travel. The aim is not to predict every ecological consequence accurately, but to develop an understanding that changes can have flow-on effects.

Pollution, fishing pressure, marine heatwaves and harmful algal blooms provide examples of pressures that can affect South Australian marine environments. For older students, investigate a real example and use available information to identify what happened, what was affected and the connections between them.

STEM Practices

Scientific thinking — asking questions, investigating changes and using evidence to develop explanations.

Systems thinking — identifying connections between species, habitats, food sources and environmental conditions.

Cause-and-effect thinking — exploring how a change in one part of an ecosystem can affect other parts.

Key Concepts and Curriculum Connections

Reception — Explore connections between living things and their environment, ask questions and predict what might happen when something changes. AC9SFU01, AC9SFI01

Years 1–2 — Explore how habitats meet the needs of living things, model simple connections and make predictions about how environmental changes might affect plants and animals. AC9S1U01, AC9S2I01

Years 3–4 — Model relationships between living things within habitats, investigate environmental change and use evidence to explain possible flow-on effects within an ecosystem. AC9S4U01, AC9S3I01

Key Language

ecosystem · connection · pressure · pollution · harmful algal bloom

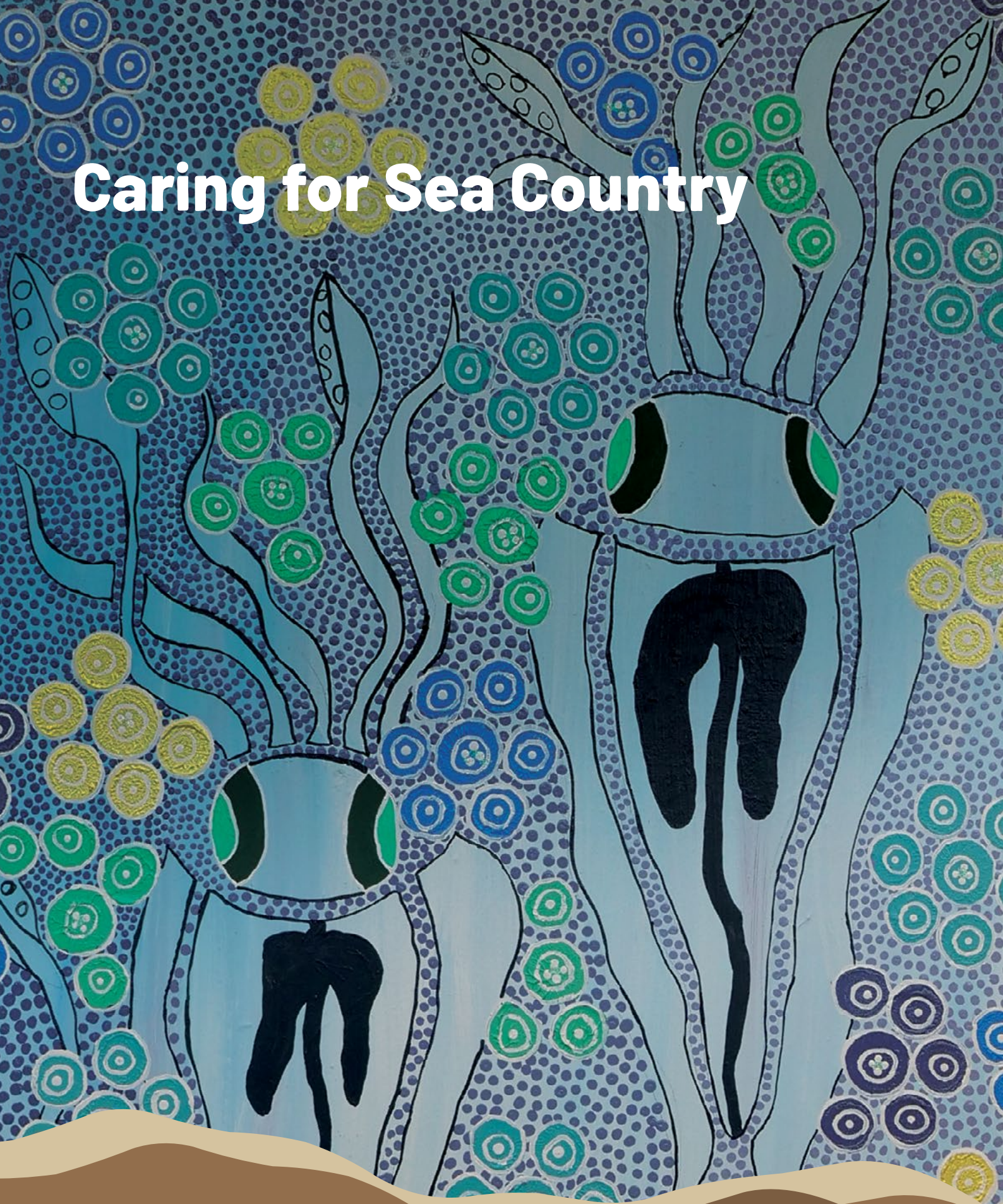
Reflection and Assessment

Look for students identifying connections within marine ecosystems, predicting what might happen when one-part changes and explaining possible flow-on effects.

Useful Resources

Marine species and habitat images · string or wool · species cards · habitat cards · information or images showing environmental pressures · large floor space

Caring for Sea Country



Squid at Ceduna Jetty, Nuyts Archipelago Marine Park, painting by Wirangu artist Vernon Penong Miller.

Card 22

Looking after Sea Country

These are also important areas of Sea Country for First Nations communities, who have been living in harmony with and protecting their Sea Country for thousands of years. While you are finding out where your local marine park is, you should also discover what Aboriginal Country this marine park is on.

We are intrinsically connected to the ocean. This connection can be seen in the air we breathe, the food we eat, our livelihoods, pastimes, spirituality and identity. For Southern Sea Country Aboriginal peoples, the coastline, reefs, islands, estuaries and open waters are far more than geographical features - they are living, breathing places woven into identity, kinship and cultural lore.

Engage

Explore the concept that caring for the ocean is also about **knowing and caring for place**.

Begin with places that are important to students and what it means to know and care for them. Locate your nearest marine park and investigate whose Country and Sea Country it is on. Explore First Nations peoples' continuing connections with Country and Sea Country and how knowledge, relationships and responsibility are part of caring for these places.

Teacher Notes

Sea Country is not simply another name for the ocean. For First Nations peoples, Country and Sea Country are interconnected living places encompassing land, waters, living things, people, culture and relationships.

Keep learning local wherever possible. When students locate their nearest marine park, also investigate **whose Country and Sea Country they are on**. Different Aboriginal Nations and communities hold their own languages, cultural knowledge, stories and practices, so use local Aboriginal-authored or community-endorsed sources wherever possible.

Marine parks are one contemporary way marine environments are protected. Other approaches include fisheries management, protected-species legislation and rules governing activities. These contemporary approaches sit alongside much longer First Nations histories of caring for Sea Country.

STEM Practices

Systems thinking — recognising connections between people, water, land, living things and place.

Scientific thinking — observing environments closely and recognising the importance of knowledge developed through ongoing observation of and relationship with place.

Inquiry thinking — asking whose Country and Sea Country we are on, seeking appropriate sources and learning from local knowledge.

Key Concepts and Curriculum Connections

Reception
Explore the importance of Country/Place to First Nations peoples and identify the Country/Place on which the school and local places are located. AC9HSFK05

Years 1–2
Explore connections between First Nations peoples and local Country/Place, including land, sea, waterways, living things, language and culture. AC9HS2K05

Years 3–4
Investigate the ways First Nations peoples are interconnected with Country/Place and how these continuing relationships connect people, identity, culture, land, waters and living things. AC9HS3K04

Key Language

Sea Country · Country · connection · culture · kinship · responsibility

Reflection and Assessment

Look for students recognising that places can have cultural as well as environmental significance. Support them to be curious about whose Country and Sea Country they are learning on; connecting knowing a place with caring for it; and recognising First Nations peoples' relationships with Sea Country as **living and continuing**.

Useful Resources

Local Country and Sea Country maps · local marine park map · local Aboriginal-authored or community-endorsed resources · local language resources where appropriate · photographs of local coastal places

Card 23

Custodianship and Sea Country Protocols

Caring for Sea Country includes respecting Country, culture and the people who hold knowledge about it. Different Aboriginal Nations and communities have their own knowledge, stories, languages and cultural practices. When we visit, learn about or share stories of Sea Country, it is important to listen, learn and show respect.

Engage

Explore what it means to know and care for a place over a long time.

Consider what people need to know about a place to care for it well. Explore how knowledge about seasons, plants, animals, water and Sea Country can develop through observation and be shared across generations.

Teacher Notes

Sea Country protocols differ between Aboriginal Nations, communities and places. They can include knowledge about when, where and how to gather food and resources, caring for important places and species, respecting cultural responsibilities and understanding seasonal changes.

These practices are grounded in deep knowledge of local environments and relationships between people, plants, animals, water, land and sea.

Sustainability through this lens is not simply about taking less. It is about relationships, responsibility, respect and reciprocity, and understanding that people are part of Country and have responsibilities to care for it.

Avoid presenting Aboriginal knowledge or Sea Country protocols as one set of practices shared by all Aboriginal peoples. Where possible, connect learning with the appropriate local Aboriginal Nation, community and sources.

STEM Practices

Scientific thinking — noticing relationships between people, seasons, plants, animals, water, land and sea, and considering how knowledge of environmental change develops through careful observation over time.

Systems thinking — exploring how people and environments are interconnected and how actions in one part of a system can affect others.

Key Concepts and Curriculum Connections

Reception — Explore why Country/Place is important to First Nations Australians and how people can know, respect and care for important places. AC9HSFK05

Years 1–2 — Explore First Nations peoples' connections to Country/Place and how knowledge, practices and responsibilities are connected to particular places. AC9HS2K05

Years 3–4 — Investigate the ways different First Nations peoples are interconnected with Country/Place and how knowledge, relationships and responsibilities contribute to caring for places over time. AC9HS3K04

Key Language

Sea Country • Country • custodianship • protocols • responsibility • respect • reciprocity • sustainability

Reflection and Assessment

Look for students explaining that caring for Sea Country involves knowledge, relationships and responsibilities and recognising that protocols belong to particular First Nations peoples and places.

Useful Resources

Use local, Nation-specific Aboriginal sources wherever possible, alongside appropriate resources about Sea Country, Caring for Country and Aboriginal ecological knowledge.

Card 24

Your Place

Wherever you live in South Australia — Adelaide, Fleurieu, Yorke or Eyre Peninsulas, the Far West Coast, Kangaroo Island, the South East or somewhere in between — the ocean is part of your bigger story. There are marine parks all along and beyond our coastline. Getting to know your local marine park is one way to begin caring for it.

Engage

Explore the marine park closest to where you live.

Locate it on a map and investigate what makes this place distinctive — its coastline, habitats, marine life and other features. Consider what you already know or have experienced there and what else you would like to discover.

Teacher Notes

South Australia's marine parks protect the diverse habitats, species and ecosystems found across our waters. Scientists monitor these places over time, gathering evidence that helps us understand how marine environments are changing and how protection is working.

One useful concept to introduce is **resilience** — the ability of an ecosystem to respond to disturbance and recover. A healthy, diverse ecosystem may be better equipped to cope with stresses and threats.

Marine heatwaves, harmful algal blooms, pollution and other environmental pressures can place stress on marine ecosystems. Protecting habitats and the relationships between living things is one way of giving ecosystems the best opportunity to respond and recover.

Keep this learning grounded in **place**. The important connection is that marine parks protect real places that students can locate, investigate and begin to know.

STEM Practices

Scientific thinking — observing and investigating the habitats, species and features of a local marine environment and considering how scientists gather evidence about change over time.

Systems thinking — recognising connections between habitats, species, environmental conditions and human actions within a marine ecosystem.

Key Concepts and Curriculum Connections

Reception — Explore familiar places, identify their features and represent where places are located. AC9HSFK04

Years 1–2 — Locate and describe local places and their features, investigate connections people have with places, and represent locations using maps. AC9HS1K03, AC9HS2K03

Years 3–4 — Investigate the natural features of places, people's connections with them and ways places can be cared for and protected. Locate and represent places and information using maps. AC9HS3K04

Key Language

marine park • place • habitat • ecosystem • resilience • monitoring • protection

Reflection and Assessment

Look for students who can identify or locate a South Australian marine park, describe some of its habitats, species or features, make connections between their own experiences and the marine environment and explain why protecting and monitoring these places matters.

Useful Resources

South Australian marine parks maps and park information · photographs and maps of the local coastline · species and habitat information · students' own photographs, drawings, stories or memories of visits to the coast

Card 25

Sanctuary Zones and National Park Zones: Breathing Space for the Ocean

Sanctuary Zones and National Park Zones are special places inside marine parks where ocean life gets extra protection. People can still swim, snorkel, surf and explore, but fishing and other extractive activities are not allowed. This gives plants, animals and habitats more time and space to grow and stay healthy.

Sanctuary Zones and National Park Zones provide places where species can grow, reproduce and maintain healthy populations. They also protect the habitats that marine life depends upon.

Engage

Explore the idea that **sometimes protecting a place means giving living things space and leaving them there**.

We might begin with the familiar idea of *sanctuary*. What does it mean to feel safe or protected? What might a place like that look or feel like? Students can then transfer this thinking to the ocean. What could sanctuary mean for a fish, crab, seagrass meadow or rocky reef?

This card is particularly rich for exploring the relationship between **protection and use**. *How can people continue to enjoy a place while also protecting what lives there?*

Teacher Notes

A Sanctuary Zone (state marine parks) or National Park Zone (commonwealth marine parks) is **one type of zone within a marine park**. It provides a high level of protection by preventing the removal or harm of marine plants and animals, including through fishing.

Sanctuary Zones and National Park Zones are not places people must stay out of. People can still visit, swim, snorkel, surf, paddle, observe marine life and enjoy these environments.

Use the idea of **breathing space** as a simple way into the concept, while making clear that Sanctuary Zones and National Park Zones have a specific management purpose.

Where possible, locate a Sanctuary Zone near your school and investigate what habitats and species are protected there. Then look further offshore for National Park Zones in Commonwealth Marine Parks.

STEM Practices

Scientific thinking — observing marine habitats and species and investigating how protection can support marine life and healthy ecosystems.

Design thinking — considering how an area can be managed so people can experience and enjoy it while marine life remains protected.

Systems thinking — recognising relationships between fishing, protection, habitats, populations and the health of marine ecosystems.

Key Concepts and Curriculum Connections

Reception

Explore how places are used and cared for and how living things have different needs within the places where they live. AC9SFU01

Years 1–2

Explore how places can be used, managed and cared for, and how habitats provide for the needs of living things. AC9S1U01

Years 3–4

Investigate how people use and manage environments and consider how protecting habitats can support living things and their interactions within an ecosystem. AC9S4U01

Key Language

sanctuary · Sanctuary Zone · National Park Zone · protect · marine park · habitat · fishing · population

Reflection and Assessment

Look for students explaining what *sanctuary* means in their own words and making connections between protection, healthy habitats and marine life.

Useful Resources

South Australian state marine park and Sanctuary Zone maps · South Australian commonwealth marine park and National Park Zone maps · images of marine species, habitats and zones · marine park signs and symbols · mapping materials

Card 26

Our Resilient Ocean

Marine parks are important, but they can't solve every problem facing our ocean. Sanctuary Zones and National Park Zones reduce some pressures and give marine life a better chance to stay healthy and recover when challenges occur. Scientists call this resilience. Looking after the ocean takes marine parks, good decisions and people working together.

Engage

Invite students to imagine two underwater habitats facing the same big challenge. One is already healthy and full of life. The other has been under lots of pressure. Which might have a better chance of recovering? Why? Use their ideas to begin exploring what it might mean for an ocean habitat to be resilient.

Teacher Notes

Resilience describes the ability of an ecosystem to respond to disturbance and recover. Marine ecosystems can experience many pressures, including warming waters, marine heatwaves, pollution, habitat damage, introduced species and harmful algal blooms.

Marine parks cannot prevent every pressure, particularly large-scale challenges such as climate change. However, reducing some pressures can help protect habitats, species and ecological relationships and support the capacity of ecosystems to respond to change.

Keep the idea of resilience concrete for younger students. Rather than focusing heavily on individual threats, explore what helps an ecosystem remain healthy — diversity, habitat, connections between living things and reducing pressures where we can.

STEM Practices

Scientific thinking — observing relationships within marine ecosystems, asking what happens when conditions change and using evidence to consider how ecosystems respond.

Systems thinking — exploring connections between species, habitats and environmental conditions, and considering how a change in one part of an ecosystem can affect other parts.

Key Concepts and Curriculum Connections

Reception — Explore the features of living things and the environments in which they live and ask questions about what helps marine life stay healthy. AC9SFI01

Years 1–2 — Explore how habitats meet the needs of living things and predict how changes in environmental conditions might affect marine plants and animals. AC9S2I01

Years 3–4 — Investigate relationships between living things and their habitats, identify patterns and use evidence to explain how environmental change can affect interconnected marine ecosystems. AC9S4U01

Key Language

resilience • ecosystem • habitat • pressure • recovery • Sanctuary Zone • National Park Zone • biodiversity

Reflection and Assessment

Look for students who can explain resilience in simple terms, identify some of the features that can contribute to a healthy marine ecosystem and recognise connections between habitats and living things.

Useful Resources

South Australian marine park information and maps · photographs or examples of healthy marine habitats · simple food webs or ecosystem models · information about current marine science, monitoring and conservation projects in South Australia

Card 27

Small Actions Matter

The things we do every day can affect our ocean. Using less plastic, reducing waste, saving energy, fishing sustainably, caring for waterways and making thoughtful choices can all help. Learning about local marine places and sharing what we know matters too. Lots of small actions can add up to something bigger.

Engage

Invite students to imagine one piece of rubbish being stopped before it reaches a drain. Then another. And another. Now imagine a whole street, school or community doing the same thing. What could all those small actions add up to? Use this idea to begin thinking about how individual and collective actions can make a difference.

Teacher Notes

Many of the pressures affecting our oceans are connected to what happens on land. Energy use and carbon emissions contribute to climate change and warming oceans. Rubbish and pollution can travel through streets, drains and waterways to the sea. The seafood we choose can influence how marine species and ecosystems are managed.

There are many ways people can make choices that reduce these pressures. This might include reducing energy use and waste, avoiding single-use plastics, keeping rubbish out of waterways, choosing sustainable seafood, respecting wildlife and marine park rules or sharing what we know with others. Individual actions matter, but collective action matters too. Families, schools, communities, First Nations communities, scientists, governments and organisations can all contribute to caring for marine environments.

Keep the focus practical and achievable. The aim is not for students to feel responsible for solving large environmental problems, but to recognise that everyday choices connect with broader collective efforts to care for the ocean.

STEM Practices

Scientific thinking — investigating how everyday actions can connect with waterways and marine environments and looking for evidence of the difference actions can make.

Design thinking — identifying an action students can take, trying it out and developing a way to track, communicate or improve what they do.

Key Concepts and Curriculum Connections

Reception — Explore how people care for places and identify simple actions that can help care for living things and environments. AC9HSFK04

Years 1–2 — Explore how people use and care for places, identify actions that can help protect local environments and consider how choices can make a difference. AC9HS2S01

Years 3–4 — Investigate how people can care for environments, consider different actions and use information or observations to propose and reflect on individual and collective action. AC9HS4S09

Key Language

action • choice • impact • waste • waterways • sustainability • community • collective action

Reflection and Assessment

Look for students making connections between everyday choices and marine environments and identifying realistic actions that can reduce impacts.

Useful Resources

Local stormwater and waterway maps or images · waste and recycling information · sustainable seafood information · examples of school or community environmental projects

Card 28

How You Can Help

Everyone can help care for our ocean, and caring can begin with knowing your place. Start by getting to know your local marine park. Visit it, learn what lives there and understand the rules that help protect it. You can also share what you discover and help other people understand why these places matter.

Engage

Students are invited to explore the idea that **knowing and connecting with a place can help us understand how to care for it**.

Students may then consider what they, their class, school, family or community could realistically do. This might involve sharing knowledge, creating signage, performances or artworks, participating in a beach clean-up or revegetation project, reducing waste, supporting a local organisation or helping others discover why their local marine environment matters.

Teacher Notes

Avoid presenting ocean care simply as a list of 'good environmental behaviours'. Help students understand **why an action matters and how it connects to the health of a particular place**.

For example, rather than simply suggesting 'pick up rubbish', investigate: Where might this rubbish go? What could it affect? Why does removing it matter?

Keep action local, realistic and purposeful. Students do not need to take responsibility for solving complex environmental problems. Observing, asking questions, sharing knowledge, changing a habit, caring for a small area or helping someone else understand why a place matters all can be meaningful forms of participation.

Where appropriate, investigate the Aboriginal language and knowledge connected with your local coast and Sea Country. Seek reliable local sources and recognise that language, knowledge and cultural authority are specific to Country and community.

The goal is to build **agency and hope**. Give students genuine opportunities to decide what they care about, what they want others to know and how they might contribute.

STEM Practices

Scientific thinking — observing local environments, identifying pressures, asking questions and gathering information to understand what might help.

Design thinking — identifying a local need or message and designing, testing and improving a response.

Systems thinking — recognising connections between people, choices, waterways, coastlines, habitats, marine life and the wider ocean.

Technological thinking — choosing and using appropriate tools and technologies to investigate, document, monitor or communicate action.

Key Concepts and Curriculum Connections

Reception

Explore how people care for places and identify simple ways to contribute to caring for a local environment. AC9HSFK04

Years 1–2

Investigate how people care for places, consider actions that could help a local environment and communicate ideas about what could be done. AC9HS2s01

Years 3–4

Investigate a local environmental issue or need, consider possible responses and use information to propose and communicate individual or collective action. AC9HS4S09, AC9HS4S10

Key Language

care · connect · action · community · protect · Sea Country · stewardship · hope

Reflection and Assessment

Look for students explaining why a particular action might make a difference or demonstrating agency by developing and communicating their own ideas for action.

Useful Resources

Local marine park maps · local species guides · local environmental and community organisations · beach and coastal investigation materials · marine park

Next Steps

Keep Exploring

We hope this resource is a starting point for exploring South Australia's marine parks with your students.

It provides a platform to begin noticing what is there, ask questions, make connections and discover why these places matter.

There is no need for the learning to stop with the final card. After all, sometime the best classrooms are 'roofed only by the sky.' (Margaret McMillan)

Take the ideas outside, visit a local marine park, investigate the plants and animals that live there, talk with people who know and care for these places, and keep finding ways for students to connect with and care for our ocean.

Look further offshore and locate a commonwealth marine park – find out how they connect with state marine parks through habitats, species and ocean currents.

Keep Learning

There is plenty more to discover about South Australia's marine environments, marine parks and the people working to understand and care for them.

Porci's Ocean Patrol
Join Porci – a South Australian porcupine fish as he discovers the marine life of South Australia. Discover the wonderful creatures, how to keep them healthy, and about Aboriginal culture.

Marine Parks South Australia
Explore South Australia's marine parks, sanctuary zones, maps, activities and information for visitors.

Parks Australia
Explore Australia's Commonwealth marine parks and learn more about marine environments beyond South Australian coastal waters. The seven Commonwealth Marine Parks connected to South Australia are part of the South West and South East Network of marine parks.

National Parks and Wildlife Service South Australia
Discover parks, places, wildlife and ways to explore and care for South Australia's natural environments.

Marine Discovery Centre
Find marine education, experiences and resources that help students discover more about South Australia's coast and ocean.

Good Living Blog
Good Living is where you'll discover the beauty of South Australia's national parks, learn how you can make a difference to climate change, relish in the iconic River Murray, and connect with the simple pleasures of nature in your own backyard.

Share Your Adventures

We would love to see where the learning takes you. Share the questions your students ask, the things they discover, the places you explore and the ideas or actions that grow from your learning. Tag us in @NPWSSA on Facebook or @nationalparkssa on Instagram or get in touch with us online.

Additional Resources

These websites include videos, images, downloadable resources and ideas to support further learning.

Marine Discovery Centre | Porci's Ocean Patrol
Explore the Porci's Ocean Patrol videos and supporting activities. A great place to continue learning about the Great Southern Reef, South Australian marine life, habitats and caring for our ocean.

Great Southern Reef Foundation | Educator Hub
A rich collection of marine education resources, videos, photographs and classroom activities. Search by topic or year level and explore kelp forests, food webs, cuttlefish, marine parks, restoration and more. The free image and video library is particularly useful for classroom provocations.

Marine Parks South Australia | Learn
Explore South Australia's marine parks, the plants and animals they protect, sanctuary zones, maps, marine science and teacher resources. A useful starting point for finding and investigating your local marine park.

Commonwealth Marine Parks – Parks Australia - Explore South Australia's offshore commonwealth marine parks – part of the South-west and South-east networks.

South-west Marine Parks Network | Australian Marine Parks | Parks Australia

South-east Marine Parks Network | Australian Marine Parks | Parks Australia

National Parks and Wildlife Service South Australia Marine Parks Teacher Resources
Teacher and student resources exploring South Australia's marine environments, including marine parks, Australian sea lions, sharks and rays and Ocean Literacy. Includes downloadable teaching resources and videos.

Great Southern Reef Foundation: Enriching Ocean Literacy with First Nations Insights
Explore how teachers can enrich their curricula by integrating First Nations perspectives, with special insights from Emmalene Richards, a proud Barngarla woman from Port Lincoln.

Marine Parks South Australia | Plants and Animals
Discover some of the species and habitats found within South Australia's marine parks. Includes photographs, regional information and downloadable *Beach Explorer's* and *Underwater* guides.

Great Southern Reef Foundation | White Rock – Junior Primary Resources
Designed specifically for Foundation to Year 2, with storytelling, discussion and hands-on activities introducing the Great Southern Reef, kelp forests, marine life and environmental change.

National Parks and Wildlife Service South Australia Australian Sea Lion Resources
Downloadable classroom resources include *Australian sea lions and their habitats* for Foundation–Year 2 and *Cleaning up the ocean* for Years 3–4.

Green Adelaide Resources

Downloadable guides, teacher packs, and educational resources to help build a cooler, greener, and wilder metropolitan South Australia.

UNESCO | Ocean Literacy
A great starting point for exploring Ocean Literacy and the seven Ocean Literacy Principles. Find background information, teaching ideas, activities and resources for exploring our relationship with the ocean.

UNESCO | Ocean Literacy Portal
Explore a collection of lesson plans, activities, videos and downloadable resources connected to ocean learning and the seven Ocean Literacy Principles.

National Marine Educators Association | Ocean Literacy
Learn more about the Ocean Literacy framework, the seven Essential Principles and the development of ocean literacy education.

References

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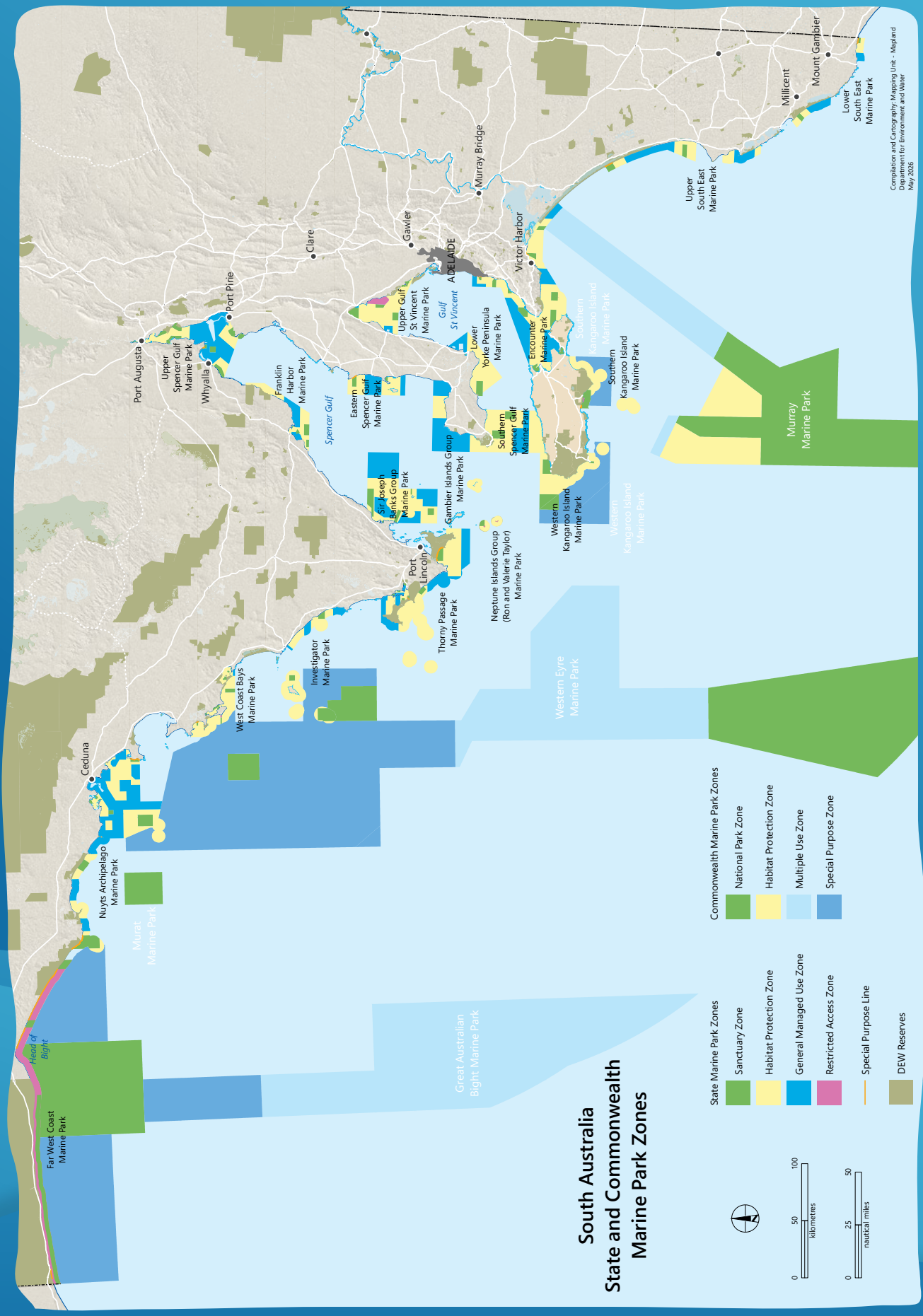
South Australian Marine Park Zone Descriptions and Map

Category	State Marine Parks	Commonwealth Marine Parks
Management	Managed by the South Australian (State) Government	Managed by the Australian (Federal/ Commonwealth) Government
Regulations and Zoning	Four zone types with varying degrees of protection. • General Managed Use Zone -most sustainable activities allowed • Habitat Protection Zone – protects seafloor habitats, but other sustainable activities allowed (that don't impact the seafloor) • Sanctuary Zone -no extractive activities allowed • Restricted Access Zone – no access allowed	Four zone types with varying degrees of protection. • Multiple Use Zone – most sustainable activities allowed • Special Purpose Zone – permits specific industrial practices depending on the specific park's management plan. • Habitat Protection Zone – protects seafloor habitats, but other sustainable activities allowed (that don't impact the seafloor) • National Park Zone – no extractive activities allowed
Boundaries	Limited to South Australia's territorial waters – coastal waters from 0 to 3 nautical miles from land and surrounding islands	Within Australian waters extending from the state waters boundary (3 nautical miles) to the Exclusive Economic Zone (200 nautical miles). Commonwealth marine parks may also span different states as they are not governed by states.
Purpose	Aim to protect and conserve the marine environment and its biodiversity	Aim to protect and conserve the marine environment and its biodiversity

For more in depth learning about South Australia's State and Commonwealth Marine Parks you may like to utilise the in depth resources - Be part of an invention convention about Marine Parks in South Australian waters and – Understanding more about Marine Parks in South Australian waters.

South Australia State and Commonwealth Marine Park Zones



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www.marinediscoverycentre.com.au/porci-s-ocean-patrol

Acknowledgements

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This resource has been developed to support Reception to Year 4 teachers and students to explore South Australia's marine parks through curriculum-connected learning.

It serves as the perfect companion to Porci Explores Marine Parks and draws on the knowledge and expertise of the South Australian Department for Environment and Water, Parks Australia, the Marine Discovery Centre, Fastbreak Films and Outside the Box Learning.

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Australian Government
Parks Australia

Australian Marine Parks

Government of South Australia
Department for Environment and Water

National Parks and Wildlife Service SOUTH AUSTRALIA

Marine Discovery Centre

FASTBREAK FILMS

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