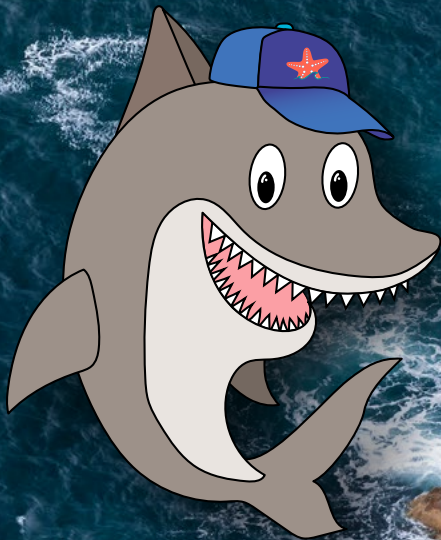




Marine Estate Agents Program



Teaching materials for Stage 2 (Years 3–4)



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Acknowledgement of Country

We would like to acknowledge the Traditional Owners from the NSW Aboriginal family groups and pay respect to their Elders, past, present and emerging. We thank them for sharing their knowledge to help the wider community learn about their culture.



Introduction

About the Marine Estate Agents Program

The Marine Estate Agents Program is an education program for HSIE and Science subjects under the NSW syllabus. Many activities are also aligned with the cross-curriculum priorities of Sustainability and Aboriginal and Torres Strait Islander Cultures and Histories.

The program's lessons are associated with the marine estate's priority initiatives:

1. Improving water quality and reducing litter
2. Delivering healthy coastal habitats with sustainable use and development
3. Planning for climate change
4. Protecting the Aboriginal cultural values of the marine estate
5. Reducing impacts on threatened and protected species
6. Ensuring sustainable fishing and aquaculture
7. Enabling safe and sustainable boating
8. Enhancing social, cultural and economic benefits
9. Delivering effective governance

You can find out more about the Marine Estate and all the project work that is being achieved across the state at marine.nsw.gov.au



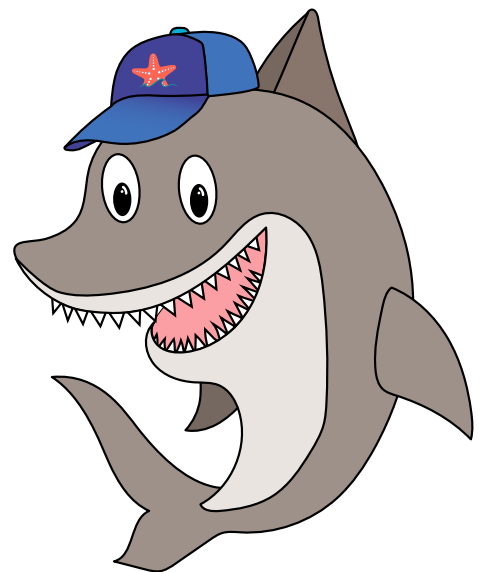
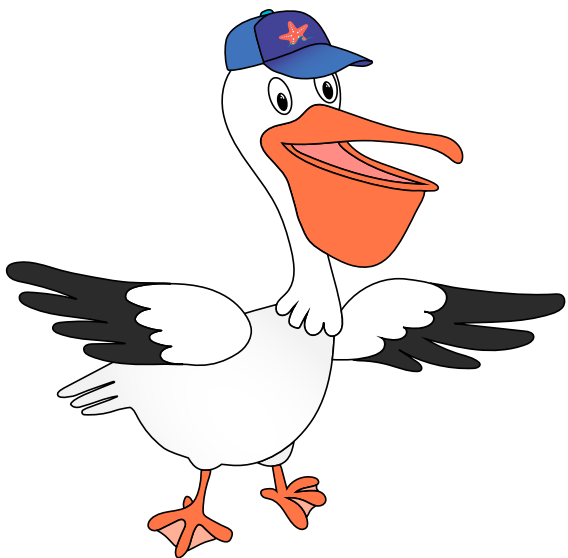
What is a Marine Estate Agent?

Marine Estate Agents are our champions or ‘agents’ of change, looking after the marine estate.

Anyone can be a Marine Estate Agent.

Several mascots have been chosen to help students connect with becoming an Agent... they are learning and doing good things in the marine estate to look after our mascots.

The Stage 2 (Years 3–4) mascots are Percy the Pelican and Jenny the Grey Nurse Shark. Percy flies over the entire coastline following the food, good weather and breeding habitat. Jenny is one of a critically endangered species that needs our support and protection. They like to be SunSmart and wear their Marine Estate Agent hats in the sun.



Once you have completed this unit of work, students can be awarded their Marine Estate Agent certificate and sea star badge.

The sea star symbol on their certificate acknowledges the student's awareness of the marine estate environment and how to look after it. It is a 'badge of honour' and it is every student's mission to help others understand this message.



Using this resource

This resource can be delivered in parts, or as a whole integrated subject. It has been designed so that teachers can pick and choose what lessons will work best for their class. It is recommended that the minimum requirement for this program is to complete the introductory **Unit 1 – The marine estate**.

Units of work

Each unit of work includes:

- key curriculum outcomes
- a suggested assessment task
- 2–4 topics with accompanying presentations and worksheets
- key identifying icons to understand what is included at first glance
- estimate time to complete the topic (this is subjective based on each teacher’s discretion)
- optional excursion activities that can be mixed and matched to suit class requirements and location suitability. .

Two units are aligned with the HSIE subjects of Geography and History. Unit 2 is aligned with the Science–Living World subject. A breakdown of each unit and its learning outcomes are shown on the following page.

Units can be applied to suit other syllabus outcomes, such as English, Technology and Visual Arts. Teachers can use the research and topic ideas from this resource to support their writing or art programs – see the example photo of applying learning about pollution in our oceans to an art project.



Videos or Apps



Reading or Research



Writing



Art or Craft



Background content

The Marine Estate Agents Program is supported by background topic-related content that can be used by teachers and students to help the teaching/learning process. The relevant topics have been referenced within the teaching materials.

To access this content, navigate to the Marine Estate Education Hub at marine.nsw.gov.au

Marine Estate Agents Activity Book

Included is the Marine Estate Agents Activity Book 2 with simple, fun activities that relate to the lessons. Once completed, these activity books show that your students know how to help our marine estate and become Marine Estate Agents.

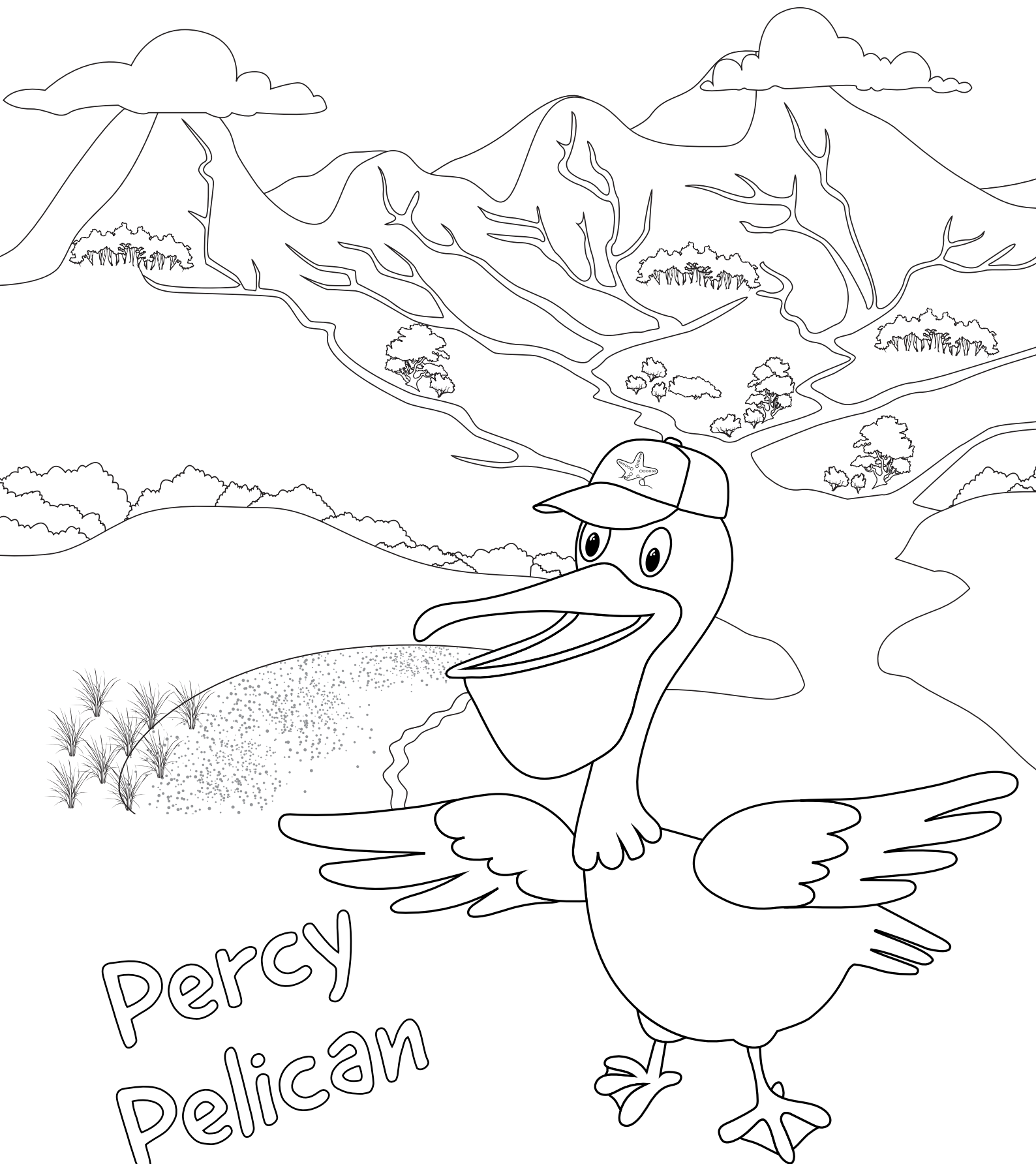
If you choose not to use the activity book, students can still receive their certificate – see page 39 of this resource.



Stage 2 Learning Outcomes

	Unit 1: The marine estate	Unit 2: Marine ecosystems	Unit 3: Catchment action	Unit 4: Fishing adventures
Topics	What is the marine estate? Experiences at the beach Connections through sea tucker Looking after the marine estate	A marine creature's home Threats to wildlife How many fish can I catch?	Looking after the whole catchment Taking action against climate change	Being safe on fishing trips Know the limits
Background content	The marine estate Traditional use	Ecosystems in the marine estate	Catchment management Climate change	Fishing and boating
Syllabus Link	GE2-2 GE2-3 GE2-4	ST2-4LW-S	GE2-2	GE2-2
Cross-curriculum priorities	Aboriginal and Torres Strait Islander Culture and Histories	Sustainability	Sustainability	Sustainability
Excursion Activity	A special place Items on the beach Quiet time	Marine ecosystem investigation	Items on the beach	Get hooked... it's fun to fish Fishing workshop





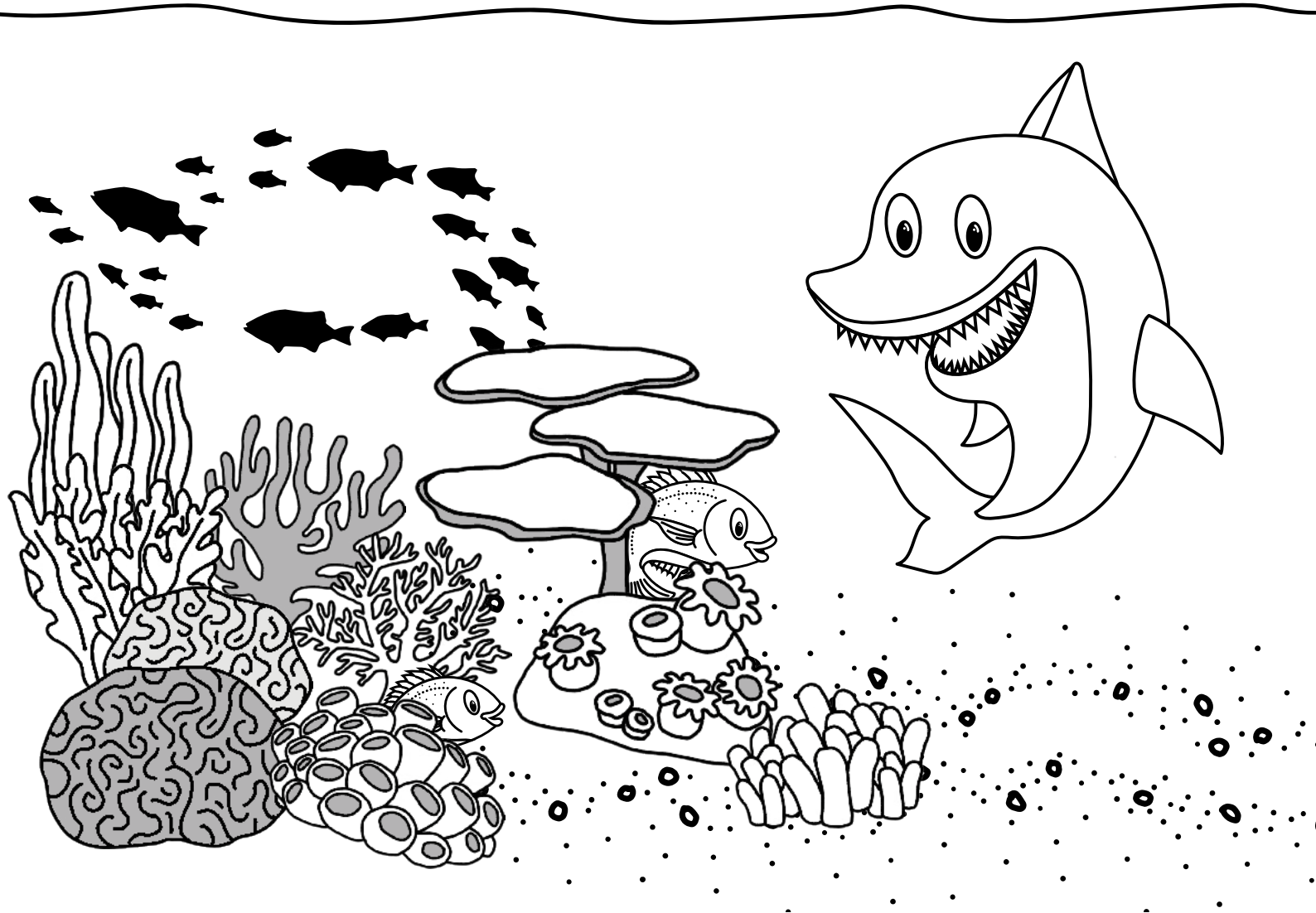
Percy
Pelican

I'm a Marine Estate Agent.

**I fly all around the marine estate helping people understand
the connections between the mountains and the coast.**

You can be a Marine Estate Agent too!

Jenny Grey Nurse Shark



I'm a Marine Estate Agent.

**I swim up and down the coast helping people understand
that I play an important role in the marine estate.**

I am critically endangered and need YOUR help.

Become a Marine Estate Agent and care for Jenny's habitat.

Unit 1: The marine estate

Content focus

Students are introduced to the term ‘marine estate’, where it is found and the importance of looking after it. Students identify the ways people interact with the beach, their experiences and their actions for looking after that environment.

Students learn about traditional sea tucker and fishing methods. They will investigate how middens connect Aboriginal people to their culture, Country and history and why they are important to understand the history of local sea tucker and the value placed on these sites.

Students investigate who is responsible for looking after the marine estate and what they can do to help.

Key Vocabulary

Marine estate, estuary, headland, coastal, mangrove, seagrass, management, parks, reserves, legend/key, sea tucker, Sea Country, midden.

Excursion Activities

The following excursion activities can be used to support this unit:

- A special place
- Items on the beach
- Quiet time

Resources

Presentation: The marine estate

Map: [Marine protected areas](#)

Template: Marine estate survey

Materials: Middens in a jar (see activity)

Marine Estate Agents Activity Book 2 – Areas in the marine estate, At the beach, Traditional fishing tools, Look after the marine estate

Assessment task

Students create a brochure about looking after the marine estate (see Lesson 3).

Curriculum outcomes

HSIE: Geography

GE2-2 describes the ways people, places and environments interact

GE2-3 examines differing perceptions about the management of places and environments

GE2-4 acquires and communicates geographical information using geographical tools for inquiry

Cross-curriculum priorities

Aboriginal and Torres Strait Islander Culture and Histories

Concepts

Place: the significance of places.

Space: the significance of location.

Environment: the significance of the environment and the interrelationships between humans and the environment.

Inquiry skills

Acquiring geographical information: develop geographical questions to investigate, collect and record relevant geographical data.

Processing geographical information: constructing tables and graphs, interpret geographical data to draw conclusions.

Communicating geographical information: present findings in a range of communication forms, reflect on their learning and suggest responses to their findings.

Geographical tools

Maps: identify location, direction

Graphs and statistics: tally charts, column graphs, pictographs.

What is the marine estate?

Overview

Students are introduced to the term 'marine estate', where it is found and the importance of looking after it.

Description

Introduction to the marine estate

Show students a slideshow of images from the marine estate. Help students understand that all these images are from an area we call the 'marine estate'. This area includes estuaries, mangrove forests, seagrass beds, urban foreshores, saltmarshes, beaches, open ocean, rocky shores, oyster reefs, marinas, reefs, offshore islands, coastal lagoons and wetlands. Students correctly identify the illustrations in the *Marine Estate Agents Activity Book 2 - Areas in the marine estate*.

Show students a map of the NSW Marine Protected Areas, which includes the marine estate. Help them identify the different components on the map - title, key/legend and north arrow. Is there anything missing on the map? (Hint: distance measure)

The map has zones with different colours. Using the key, students identify what they represent and where they are found. Help explain what they represent:

- National parks - conservation areas on land
- NSW marine estate - coastline
- NSW marine parks - conservation areas in the marine estate
- Aquatic reserves - conserve biodiversity in the marine estate

Discuss with students:

- Why are these areas important for the environment?
- What are some of the living things found in the marine estate? Such as fish, coral, mangroves, whales, people etc.
- Discuss the importance of the marine estate to people (food, recreation, industry/business, transport, cultural connections) and wildlife (shelter and food).

Inquiry questions

How do people's perceptions about places influence their views about the protection of places?

Resources

Presentation: The marine estate

Map: [Marine protected areas](#)

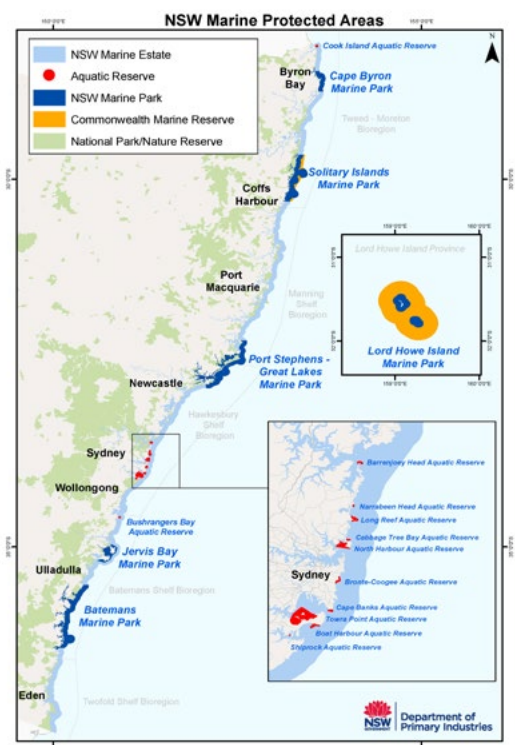
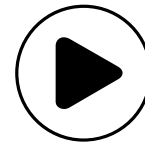
Marine Estate Agents Activity Book 2 - Areas in the marine estate

Background topic

Marine estate

Estimated time

1 lesson



Experiences at the beach

Overview

Students identify the ways people interact with the beach, their experiences and actions for looking after that environment.

PLEASE NOTE: This lesson can be modified to suit your school's local area or student experiences anywhere in the marine estate, or on a river if you're inland in NSW. It is important to understand the message that we need to respect the marine estate and other aquatic environments that we enjoy visiting.

Description

Survey the class

One area of the marine estate that we can all associate with is the beach, whether it be visiting the beach, or seeing images on TV or in photos.

Start the lesson by asking students if they like going to the beach. Inform them that you're going to perform a class survey about their experiences going to the beach. A survey is a way we gather data/information to find out what people think about a topic. See the survey template for ideas on how to design your survey form.

Students respond by putting their hands up and the results are recorded on the board. Keep the responses visible as students make column graphs for each survey question.

Survey other classes

Provide students with the survey questions on a data recording sheet. Take them to other classes and have them survey at least two students each.

Tabulate all the results in a spreadsheet on a SmartBoard. Students must recreate their tables and display the results for each question in picture or column graphs.

- What do the responses tell us about students' experiences at the beach?
- Are people being responsible and picking up their rubbish?

Students record their thoughts about the data below each column graph.

Discuss: Do you think the positive experiences at the beach make you want to look after it? Would you want to look after it more if you didn't like the beach?

In the *Marine Estate Agents Activity Book 2-At the beach*, students complete the following sentence and draw a picture to match: "When I'm at the beach, I..."

Inquiry questions

How do people's perceptions about places influence their views about the protection of places?

Resources

Template: Marine estate survey

Marine Estate Agents Activity Book 2-At the beach

Background topic

Marine estate

Ecosystems

Estimated time

1 lesson



Beach survey



“It’s important that Marine Estate Agents know how people use the marine estate so that we can look after it properly. Survey your classmates about going to the beach.”



1. Do you like going to the beach?

Yes

No

2. When do you go to the beach? (tick all that apply)

Summer

Autumn

Winter

Spring

3. Who do you go to the beach with?

Family

Friends

4. What activities do you like to do at the beach?

5. Do you pick up your rubbish when leaving the beach?

Always

Sometimes

Never

6. Do you pick up other people’s rubbish when leaving the beach?

Always

Sometimes

Never

Connections through sea tucker

Overview

Students learn about traditional sea tucker and fishing methods. They will investigate how middens connect Aboriginal people to their culture, Country and history and why they are important to understand the history of local sea tucker and the value placed on these sites.

Description

Cultural fishing

Inform students that coastal Aboriginal people have been living off sea tucker for thousands of years. Sea tucker is the Aboriginal lingo for food from or near the ocean. Ask students:

- What sea tucker do you think Aboriginal people might have eaten before Europeans arrived?
- What sea tucker do you think Aboriginal people still eat today?
- How do you think their use or reliance on this kind of food has changed over time?
- What management practices do you think Aboriginal people may have used to ensure there were enough fish to go around? Answers may include:
 - Restrictions on who and when fishing or collecting can occur
 - Seasonal changes in diet due to availability
 - Traditional hunting techniques meant harvests may have been smaller.
- What equipment did they have to go fishing? How might this have impacted their catch size?

Students are introduced to traditional fishing methods and the methods used to determine when and how to catch fish. Discuss how the scientific principles of observation, testing and design could affect the success rate of traditional fishing.

Watch the video [How to catch sea tucker](#) and listen to Wayne, Ronnie and Bruce talk about how to harvest sea tucker, the materials they use to make tools and the importance of not taking too much from the sea – take only what you need.

Alternatively, invite a Traditional Owner/Elder or cultural educator to the class (either in person or via Zoom) to talk about traditional fishing methods and the equipment used.

Other videos on cultural fishing techniques and sea tucker:

- [Arrawarra Fish Traps, Coffs Coast Regional Park](#)
How are these fish traps different to the way we catch fish today?
- [Fishing with Bunda](#)
How did Bunda catch his fish compared to his brother? Was his method similar to the Arrawarra Fish Traps?

In the *Marine Estate Agents Activity Book 2*, students correctly label the tools on the *Traditional fishing tools* activity sheet.

Inquiry questions

How does the environment support the lives of people and other living things?

How can people use places and environments more sustainably?

Resources

Middens in a jar

- jars
- shells
- sand
- charcoal

Marine Estate Agents Activity Book 2 – Traditional fishing tools

Additional notes

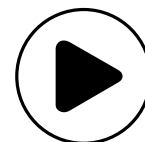
An Aboriginal Education Officer should be present when delivering this activity.

Background topic

Traditional use

Estimated time

2 lessons



What's in my midden?

Show students a photo of a midden, don't tell them what it is and ask them to describe what they are seeing. Does it look like anything important? Have you seen something like this before? Then, inform students that the shells are part of middens, which are very special places for Aboriginal people.

Students are introduced to the importance of middens in the cultural landscape—how they represent communal gathering sites, showcase available food sources and indicate the time of occupation in an area. For local Aboriginal people, middens represent a connection to Country, to Dreaming and their ancestors.

Watch the video [What's in my midden?](#) to learn how important middens are to presenters Wayne Carberry and Lynne Thomas.

Look at photos of middens to see how the shells, charcoal and food debris build up in layers. Photos can be found on the Internet. Complete [What's in my midden?](#) activity sheet using the photos.

Middens in a jar

Collect a number of shells and other small debris (making sure they contain no living animals) from your local area. In small groups, students create their own 'midden in a jar'—layering up sand, shell materials and other debris along the outer edge of a glass or clear plastic jar so that the layers can be visible.

Take photos of the jar middens. All jar middens need to be emptied at the end of the activity so shells and other debris can be left behind. Check beforehand whether shell collecting is allowed at the site you are going to as rules vary depending on location—see notes below. It is encouraged that teachers support the creation of jar middens back in the classroom.

Supporting activities

[WilderQuest Campfire](#) An introduction to what connection to Country and storytelling means to Aboriginal people.

[360 Aboriginal Storytelling](#) Dolphin Story

Rules for collecting

Collecting shells and shell grit is prohibited in national parks, nature reserves and Aboriginal areas. Unoccupied shells and shell grit may be collected in other habitat protection and general-use zones for non-commercial purposes. Collecting is not allowed in sanctuary zones, which provide the highest level of protection for biodiversity and natural and cultural features.

Looking after the marine estate

Overview

Students investigate who is responsible for looking after the marine estate and what they can do to help.

Description

Looking after the marine estate

Remind students about the different areas of the marine estate. Then, reinforce this with the marine estate map.

Discuss the topic: Who looks after the marine estate?

Many different people manage areas and help look after different parts of the marine estate. This includes people who look after the fish and ocean life, boat harbours, water quality, parks and reserves and cultural heritage.

We can all help look after the marine estate every time we visit. In the survey, how many people in the classroom picked up their rubbish? How many picked up other people's rubbish? How many other students picked up rubbish? This is a great way that we can help look after the marine estate.

Brainstorm all the ways that students could actively help look after the marine estate, for example put rubbish in the bin, don't take marine items (like shells and seaweed) home, obey any signs, keep your dog on its leash and pick up after your dog. These actions are recorded in the *Marine Estate Agents Activity Book 2 - Look after the marine estate*.

Students create a brochure about looking after our marine estate, focusing on actions that can be undertaken to look after our marine/coastal areas. Have a competition for the best brochures. The top 3 can be printed, folded and sent home to parents from across the school.

See the following page for a brochure example.

Inquiry questions

How do people's perceptions about places influence their views about the protection of places?

Resources

Marine Estate Agents Activity Book 2 - Look after the marine estate

Background topic

Marine estate

Estimated time

2 lessons



Brochure produced by

Saxon Rapley
Medowie Christian School



Local Land Services

6

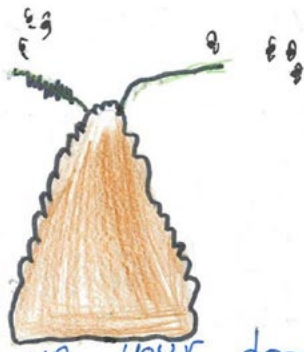
awesome ways to keep
our waterways clean



Stormwater from Medowie flows
into Grahams Town Dam.
It is up to all of us to keep it clean.



You can get
Fined for:
• Not Picking up
dog poo: \$275
• littering: up to
\$250.



Pick up your dog
Poo so it doesn't get
washed down the drain.



We want to help
our water ways
by picking up rubbish.



leaking oil is not
good for our waterways



It's better to give
your car a wash
at your local car
wash. No soap down
the drain.



Unit 2: Marine ecosystems

Content focus

Students learn about marine ecosystems, the living and non-living elements that can be found in them and that ecosystems can be complex interactions between these elements. Students discuss, research and compare the similarities between two ecosystems.

Students are introduced to the grouping of living things by their conservation classification. Students then investigate a threatened marine species and compare them with another species.

Key Vocabulary

Habitat, ecosystem, living things, non-living things, threatened species, ecological community, conservation status, vulnerable, endangered, extinct.

Excursion Activities

The following excursion activity can be used to support this unit:

- Marine ecosystem investigation

Resources

Presentation: Marine ecosystems

Information sheet: Conservation status

Template: Threatened species flipbook

Marine Estate Agents Activity Book 2 – Seagrass ecosystem, Help Me, Please!

Assessment task

Students reflect on their learning and create a visual representation (digital, artwork, model/diorama) of an ecosystem (Lesson 1) that would support a threatened species they have researched (Lesson 2).

Curriculum outcomes

Science

ST2-4LW-S compares features and characteristics of living and non-living things

Cross-curriculum priorities

Sustainability

Working scientifically

Processing and analysing data: use a range of methods to represent data, including tables and column graphs, identify patterns and trends in gathered data, compare results with predictions, suggest possible reasons for findings.

Communicating: represent and communicate observations, ideas and findings, using formal and informal representations.

Design and production

Researching and planning: produce labelled and annotated drawings including digital graphic representations.

Adaptations

This unit could be applied as an English unit using the research topics to further develop persuasive and informative texts.

Our marine ecosystems

Overview

Students learn about marine ecosystems, the living and non-living elements that can be found in them and that ecosystems can be complex interactions between these elements. Students discuss, research and compare the similarities between two ecosystems.

Description

An introduction to marine ecosystems

Introduce students to the term 'ecosystem'. An ecosystem consists of all the plants and animals that live in an environment and how they interact with each other. Living things interact with each other and also with non-living things like soil, water and air. Ecosystems often contain many living things and can be as small as your backyard or as large as the ocean.

Show your students a short slideshow of images that showcase the different ecosystems found across the marine estate (beach, mangroves, saltmarsh, estuary, coastal lagoon, rock platform/rocky shore, reef, deep ocean). Discuss each slide, the different plants or animals they can see, what is living and non-living (soil, sand, rocks) and if they have seen any of these ecosystems.

Students complete an ecosystem illustration in the *Marine Estate Agents Activity Book 2 – Seagrass ecosystem*.

Compare two ecosystems

Students form pairs and are provided with two ecosystems – e.g. mangrove and beach, reef and lagoon, saltmarsh and beach, rocky shore and deep ocean. They will compare the two ecosystems using a Venn diagram of living, non-living and similar features. Before students begin, they need to predict the number of shared elements. Students then record all the living and non-living elements they can think of before researching more on a computer.

They discuss the similarities between the two ecosystems and record them in the centre of the Venn diagram. Students report their findings to the class. Discuss the similarities and differences that can be identified across all the groups, and if the groups' results met their predictions. Finally, discuss how we can look after these areas to protect the ecosystem and wildlife.

Inquiry questions

How are environments and living things interdependent?

Resources

Presentation: Marine ecosystems

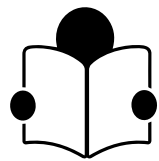
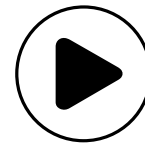
Marine Estate Agents Activity Book 2 – Seagrass ecosystem

Background topic

Ecosystems

Estimated time

2 lessons



Protecting wildlife

Overview

Students are introduced to the grouping of living things by their conservation classification. Students then investigate a threatened marine species and compare them with another species.

Description

Conservation status

Many factors are used to assess a species' conservation status, including the number of individuals remaining, the overall increase or decrease in the population over time, breeding success rates and known threats.

Introduce students to the term 'threatened species'.

A threatened species is an animal, plant or ecological community (a community of species) whose numbers have dropped so low they struggle to survive. As a result, they are in danger of becoming extinct.

Australian state governments have different systems for categorising and listing threatened species. The NSW categories for threatened species currently are:

- Species presumed extinct
- Endangered species
- Endangered population
- Endangered ecological community
- Vulnerable species

Brainstorm the reasons that some animals might become threatened.

Threatened species investigation

Students are introduced to four marine threatened marine species:

- [White's Seahorse](#)
- [Grey Nurse Shark](#)
- [Pied oystercatcher](#)
- [Green sea turtle](#).

Divide students into four groups. Each group will research their threatened species (using resources supplied). Assign a different research task to each student in the group, for example:

- What do they look like? What are their identifying features?
- Where do they live?
- What do they eat?
- What is their life cycle? i.e. do they lay eggs or have live young?
- Why are they under threat?
- How can we look after them?

Students record these details in their threatened species flipbook. The group will need to share this information among themselves. Each group presents their research to the rest of the class.

Inquiry questions

How can we group living things?

What are the similarities and differences between the life cycles of living things?

Resources

Information sheet: Conservation status

Fact sheets: Threatened species

Template: Threatened species flipbook

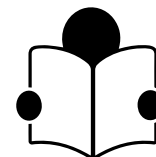
Marine Estate Agents Activity Book 2 – Help me, Please!

Background topic

Ecosystems

Estimated time

3 lessons



Each group then uses a Venn diagram to compare their animal with one of the other group's animals to determine what is similar and what is different.

Threatening processes

Students refer to the research in their flip books and why their species is under threat. This is called a threatening process. Go through all the threats as a class. They could include:

- habitat loss
- environmental changes, such as climate change or pollution
- over-harvesting
- light pollution from cities
- boats and other marine vessels
- invasive species impacts.

In the *Marine Estate Agents Activity Book 2 - Help me, Please!* students name one threatening process for each of the four threatened species. They need to also record one action that we can do to reduce that threatening process.

Extension activity

Apply the [Biodiversity Sustainability Action Process](#) to your marine estate threatening processes

Conservation status



What is a threatened species?

A threatened species is an animal, plant or ecological community whose population has dropped so low that they are struggling to survive and are in danger of becoming extinct.

Some reasons that plant and animal species become threatened include:

- Predation and competition from invasive plants and animals
- Loss of habitat
- Changes to their habitat
- Fragmentation (breaking up) of habitat
- Illness and disease
- Food shortage
- Pollution
- Competition from human processes, such as over-fishing.

Levels of threat

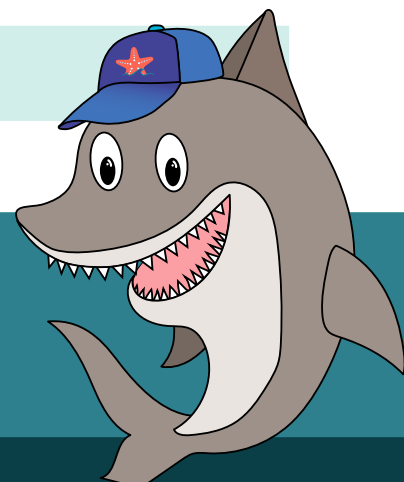
Plants, animals and ecological communities can be classified under different levels of threat. In Australia, all native species and communities are given a classification, under legislation, to help identify their **conservation status**.

Least Concern	There are healthy populations and no concerns about the species becoming threatened in the area.
Near Threatened	A species' numbers have dropped to a point that they may become a threatened species in the future if this continues.
Vulnerable	A species' numbers have been dropping significantly but it is not yet endangered.
Endangered	A species' numbers are so low that it is close to becoming extinct.
Critically Endangered	A species' numbers are so low that it is extremely close to becoming extinct.
Extinct in the Wild	There are no more of a species left in their native habitats but there are some in captivity. A species' numbers are so low that it is close to becoming extinct.
Extinct	There are no more of a species left anywhere in the world.

Note: This table is a combination of local, national and international categories.

Did you know?

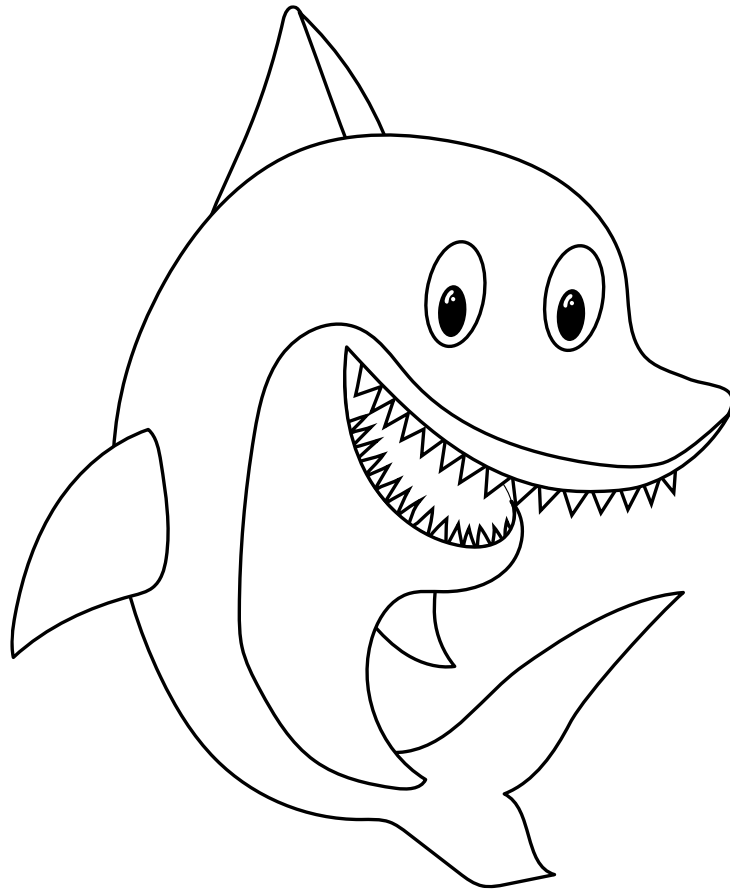
Jenny the Grey Nurse Shark is **Critically Endangered** in NSW. It's her job as a Marine Estate Agent to look after Grey Nurse Shark habitat.



My flipbook



Threatened species profile



What does it look like?

Where does it live?

What does it eat?

What is its life cycle?

Why is it under threat?

How can we look after it?

Unit 3: Catchment action

Content focus

Students are introduced to the concept of a catchment and how actions that occur in the catchment can impact the marine estate. Students develop an understanding that it is important to look after the entire catchment, not just the coastline, when we look after the marine estate.

Students look at the impact climate change has on the landscape and how this affects the marine estate.

Key Vocabulary

Catchment, climate change, greenhouse gases, microplastics.

Excursion Activities

The following excursion activities can be used to support this unit:

- Items on the beach

Resources

Information sheet: Plastic waste and climate change - what's the connection?

Marine Estate Agents Activity Book 2 - Where does the water flow? Climate change actions

Assessment task

Students participate in the creation of artworks that are made out of plastics, waste and/or recycled materials about the impact of waste on the catchment and/or marine estate. Artworks could be displayed in the school office for parents to see.

Curriculum outcomes

HSIE: Geography

GE2-2 describes the ways people, places and environments interact

Cross-curriculum priorities

Sustainability

Concepts

Environment: the significance of the environment in human life, and the important interrelationships between humans and the environment

Interconnection: no object of geographical study can be viewed in isolation

Sustainability: the capacity of the environment to continue to support our lives and the lives of other living creatures into the future

Inquiry skills

Acquiring geographical information: collect and record relevant geographical data and information, for example, by using visual representations, the media or the internet.

Communicating geographical information: reflect on their learning to propose individual action in response to a contemporary geographical challenge.

Geographical tools

Visual representations: photographs, illustrations, diagrams, story books, multimedia, web and app tools.

Looking after the whole catchment

Overview

Students are introduced to the concept of a catchment and that actions that occur in the catchment can impact the marine estate. Students develop an understanding that it is important to look after the entire catchment, not just the coastline, when we look after the marine estate.

Description

What is a catchment?

Introduce students to the vocabulary term 'catchment'.

A catchment describes any surface where water falls and drains to an end point. That means that everywhere on Earth is located within a catchment. A catchment can be small like the roof of a house, or it can be huge, like the Murray-Darling Basin.

Whatever we do in a catchment affects the water that flows through it. For example, if a town pollutes its river water then other water users downstream will be using that same polluted water. This is not healthy for our wildlife, our agriculture or our own health.

To look after our catchments, we need to be careful about how we look after our land and everything it supports. A healthy landscape gives us healthy and productive farms, wildlife that flourishes and happy communities.

Watch [A Catchment Story](#) by Field of MARS Environmental Education Centre to help describe a how a catchment works.

Watch the [Love it or lose it](#) videos to help develop an understanding of how our actions can impact a catchment.

Discuss with students how the activities in a catchment can impact the marine estate and what activities we can do in a catchment to help look after the marine estate.

Inquiry questions

What are the features of, and activities in, places?

How can we care for places?

Resources

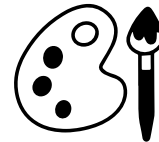
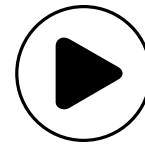
Marine Estate Agents Activity Book 2 - Where does the water flow?

Background topic

Catchments

Estimated time

2 lessons



The following activities can be completed in the classroom to reinforce how catchments work and why it is important to look after the landscape to maintain good water quality.

- As a class, create your own [catchment model](#).
- Students create a video similar to [What is a catchment?](#)
- Deliver the activity [Catchment management: the story of a river](#)
- Create your own catchment story and discuss the impacts on the catchment and ways that these impacts could be reduced. Alternatively, students write a short story about a catchment. Their story should describe the ways that humans interact with the marine estate and the activities undertaken to protect them.
- Students create a mind map on ways to reduce pollution in a catchment to protect parts of the marine estate.
- Conduct an emu parade on the school grounds to reduce school litter finding its way into local creeks, rivers or the ocean.

In the *Marine Estate Agents Activity Book 2 - Where does the water flow?* students draw the flow of water in a catchment from the mountains to the ocean.

Action against climate change

Overview

Students look at the impact climate change has on the landscape and how this affects the marine estate.

Description

What is climate change?

Introduce students to the concepts of weather and climate.

Weather is a specific event, like a rainstorm or hot day, that happens over a few hours, days or weeks. Climate is the average weather conditions in a place over 30 years or more.

Watch this video for a [crash course in climate change](#).

There are many actions we can take to reduce the emission of greenhouse gases and slow the rate of climate change. Brainstorm some of these actions.

Show students this short video on [kids talking about climate change](#) and complete the *Marine Estate Agents Activity Book 2 – Climate change actions* activity. Revisit the classroom brainstorm and compare them with the actions from the video.

Activity book answers: When we talk about climate change, we mean how the Earth's TEMPERATURE is getting HOTTER because of HUMAN activity. CARBON traps heat in the Earth's atmosphere. It puts nature out of BALANCE. If it gets too hot on the planet, the ICEBERGS will melt and the SEA will RISE. Climate change means there could be more DISASTERS.

Students read the [Climate Witness story](#) from Penina Moce, Fiji.

Ask students some focus questions to reflect on what they have learned.

- Why do you think it is harder for Penina to find fish and shellfish than it was before?
- Why do you think the coral has now changed from being colourful to being white?
- What did Penina say was happening to the coastline?
- Have you noticed any changes like this happening near you?
- How do you think these changes would impact you if they were happening in your community?
- What actions can we take to reduce the emission of greenhouse gases?

Plastic pollution

Start with the climate change action brainstorm and inform students that they will be investigating why we need to reduce our use of packaging and recycle more. Using the information sheet on plastic waste and climate change, students identify a number of plastic-related sources of greenhouse gases that could influence climate change.

Inquiry questions

How can people use places and environments more sustainably?

Resources

Information sheet: Connection between plastic waste and climate change

Marine Estate Agents Activity Book 2 – Climate change actions.

Additional notes

For a detailed introduction to the concepts of weather and climate use Primary Geography Alive [Unit 3 Places are Similar and Different – Lesson 1](#)

Watch this short video about the [types of weather conditions there are in Australia](#)

Background topic

Catchments

Climate change

Estimated time

2 lessons



Students research:

- how plastics are made – they are made from oil (fossil fuels) that are extracted from the earth
- where they are used – they are used in most household items
- how and where they are discarded – thrown in the rubbish bin that is discarded in plastic bags that end up in landfill or rubbish that is often thrown out and carried by the wind (refer back to the catchment activity)
- the impact that plastics have on the marine environment – ingested by marine life, impacts habitats and releases greenhouse gases when heated on the water’s surface.

Students create a visual art piece about the impact of plastic debris on marine life. Run a waste-to-art program in the classroom and put the items on display in the school foyer.

Save the whales

This creative work ‘Save The Whales’ was made from collected rubbish thrown from people’s cars. With respect for Country, the 5-year-old artist created a story about how we need to clean up our act for a healthy environment and to protect our waters and wildlife.

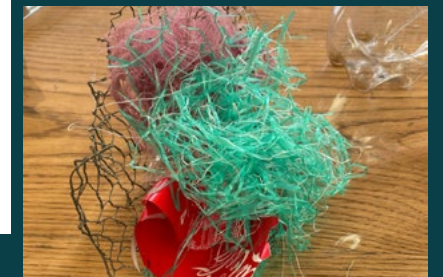
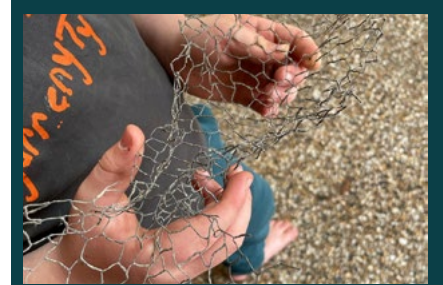
Extension activity

Students make a personal pledge to take action to reduce their use of plastic. Ask students to choose a plastic reduction action and practice it for two weeks. At the end of their two weeks, they report back to the class how it has worked for them. Ask students if they could commit to another two weeks.

Students write their pledge on a sheet of paper and display it in the classroom.

Actions can include:

- take my own bag to the supermarket (including fresh produce bags)
- actively purchase products based on their level of packaging
- refuse single-use items and actively use reusable alternatives
- host a class or school [waste-free lunch challenge](#)
- set up container collection stations at school to encourage recycling.



Connection between plastic waste and climate change



At least 8 million tonnes of discarded plastic enters our oceans each year.

Plastic has even been found in the deepest place on Earth – in the Mariana Trench, nearly 11 kilometres below sea level.



In our oceans, plastic leaves a deadly legacy. **Plastic directly chokes and smothers many marine animals and habitats and can take hundreds of years to break down.**

As it breaks down, sunlight and heat cause the plastic to release powerful greenhouse gases. **As our climate changes, the planet gets hotter and the plastic breaks down into more methane and ethylene, increasing the rate of climate change.** It's a big, growing cycle.

Smaller particles, known as microplastics, are ingested by marine animals, including plankton and some of the fish we eat. Plankton play a critical role in taking carbon dioxide out of the atmosphere and water, storing it in deep ocean sinks.

Plastic consumption on land is driving the plastic pollution crisis.

SOURCE: wwf.org.au



Unit 4: Fishing adventures

Content focus

Students identify equipment that is needed to be safe when going fishing and learn about the reason for bag and size limits when fishing to keep wild fish stocks sustainable.

Key Vocabulary

Fishing tackle, angler, size limit, bag limit.

Excursion Activities

The following excursion activities can be used to support this unit:

- Get hooked... it's fun to fish (this is an education program that includes an excursion to a local waterway to practice skills learnt in the classroom)
- Fishing workshop

Resources

Worksheet: Know your catch and limits

Marine Estate Agents Activity Book 2 – Weather check, Be safe when fishing

Assessment task

Students create a comic strip that includes characters and speech content that teaches at least one safety tip when going fishing, for example:

Frame 1: kid walks backwards with his fishing rod and fish.

Frame 2: adult stops kid before he/she falls into a hole in the rocks.

Frame 3: adult gives the warning to always know where you're walking, especially on rocks.

Curriculum outcomes

HSIE: Geography

GE2-2 describes the ways people, places and environments interact

Mathematics

MA2-5NA uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers

MA2-9MG measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres and measures, compares and records temperatures

Cross-curriculum priorities

Sustainability

Concepts

Environment: the significance of the environment in human life and the interrelationships between them.

Inquiry skills

Acquiring geographical information: collect and record relevant geographical data and information by observing.

Processing geographical information: represent data by constructing tables or graphs.

Communicating geographical information: present findings in a range of communication forms.

Geographical tools

Fieldwork: observing, measuring, collecting and recording data.

Graphs and statistics: tally charts, pictographs, data tables, column graphs, simple statistics.

Being safe on fishing trips

Overview

Students identify equipment that is needed to be safe when going fishing.

Description

What do we need on our fishing trip?

Before the lesson, ask students to bring in their favourite bit of fishing tackle, if they have some.

Introduce the lesson with a talk about activities we can do at the beach, river or lagoon. One of those activities is fishing. Why do we go fishing? [relax, fun, food]

Lead a guided discussion on the different items that you might need when going fishing and write the answers on the board. Some students may be very familiar with fishing, while others are not. As you go around the classroom, ask students who brought in a bit of fishing tackle to show the class and describe how it is used. Have students record the different items on their fishing checklist.

Items could include:

- Fishing rod
- Bait
- Burley
- Bag/bucket
- Tackle (lures, hooks, sinkers)
- Knife
- Pliers
- Water bottle
- Anchor
- Flares
- Torch
- Mobile phone in ziplock bag
- Ruler to measure fish length
- Life jacket
- Hat
- Sunscreen
- Non-slip shoes
- Adult

Weather check

Before we head out on our fishing trip, what's the most important thing we need to check? [the weather]

Show students how to check the weather by going to the Bureau of Meteorology website: www.bom.gov.au

Once you have accessed the site's home page, follow these steps to bring up the correct forecast:

- click on the map of New South Wales
- click on 'District and Marine Forecasts'
- click on a part of the map that suits your area.

Students complete the *Marine Estate Agents Activity Book 2 - Weather check* activity.

Inquiry questions

How does the environment support the lives of people?

What helps us to stay healthy and safe?

Resources

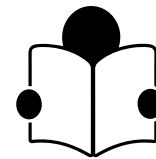
Marine Estate Agents Activity Book 2 – Weather check
– Be safe when fishing

Background topic

Fishing and boating

Estimated time

2 lessons



Being safe when fishing

We have checked the weather. We have our fishing gear. Now, where do we go? Some students will have some good ideas of where to go fishing.

How can we be safe in these areas? How can we be safe around open water?

Students identify the items they will need to be safe on a fishing trip.* Discuss those items you need when fishing from land compared to those items you need in a boat. Why are those items needed? How do they keep you safe?

- Life jacket
- Hat
- Sunscreen
- Non-slip shoes
- Adult
- Water bottle
- Torch
- Mobile phone in ziplock bag

What are other things you can do to be safe when fishing?

- Don't turn your back on the water/waves.
- Always look behind you before casting your fishing line.
- Know where you are treading so you don't slip over.
- Don't run on rocks or slippery surfaces.
- Always tell someone where you are going.

In the *Marine Estate Agents Activity Book 2 - Be safe when fishing*, students identify the safety items we need on a fishing trip.

* This could be delivered as a role-play exercise as students come up to a table of items (more than those listed here) and have to pick the correct items to take on their fishing trip (items could be printed photos of safety equipment).

Know the limits

Overview

Students learn about the reason for bag and size limits when fishing to keep wild fish stocks sustainable.

Description

Know your catch and the limits

Supply students with the worksheet: Know your catch and limits.

Using the presentation: Know your fish and other marine life and, with either the [Saltwater bag and size limits](#) website or using the [FishSmart app](#) on a phone or tablet, go through each of the 14 species and try to identify them. Students record their answers on the worksheet.

Using the above website or app, students must also record the size limit (if there is one) and catch/bag limit.

Discuss the reason why there might be size and bag limits for certain species and how we can fish sustainably so there are enough wild fish for the future.

Students complete the *Marine Estate Agents Activity Book 2 – Fish in the limits* activity.

Limits explained

Size limits

There are minimum and maximum legal size limits for some fish species that are caught with rod and line or other permitted devices.

Size limits let fish:

- reach maturity
- complete their breeding cycle
- contribute to sustainable fish stocks.

Bag limits

The bag limit is the maximum number of fish per person per day. Bag limits are typically put in place for several biological and social reasons including:

- conserving fish stocks
- sharing the catch between recreational fishers and other users
- encouraging responsible and ethical use of fisheries resources
- assisting in reducing illegal fish sales
- protecting threatened or vulnerable species.

Bag limits apply to all forms of recreational fishing for fish and invertebrates, including line fishing, spearfishing, hand gathering, prawn scooping, drag netting, bait collection and the use of crab traps, nets and lobster pots.

Inquiry questions

How does the environment support the lives of people?

How can people use places and environments more sustainably?

Resources

Presentation: Know your fish and other marine life

Worksheet: Know your catch

Marine Estate Agents Activity Book 2 – Fish in the limits

Additional notes

Download the [Get Hooked kids activity sheets](#) for more fun learning about fish and the marine environment.

Background topic

Fishing and boating

Estimated time

2 lessons



Know your catch



You've gone on a big fishing trip in the school holidays and caught lots of fish and other marine life. But did you know what you caught? Let's find out.

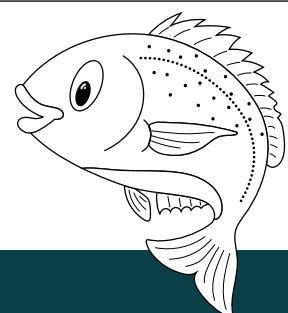
STEP 1: Using the presentation: **Know your fish and other marine life**, go through each photo and description and see if you can identify the species. You can use the NSW FishSmart app, or look through the list of fish on this website:

bit.ly/fish-limits

STEP 2: Record the fish name, the size limit (if there is one) and the bag limit in the table.

Fish or other marine life	Size limit (if any)	Bag Limit
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

Why do you think there might be size and bag limits for certain species?



Excursion suggestions

Excursions greatly enhance students' ability to experience the marine estate and to understand and connect with the environment. It is recommended to contact a local community group, tourism operator, [National Parks](#) or fisheries office as they run guided excursion activities in various locations along the NSW coastline.

The following excursion activities are optional and have been provided to help plan a school or class excursion to the marine estate. A sample risk management plan has been included to help facilitate the excursion process, however, only tasks/activities associated with a marine estate excursion have been included. You must follow your school's risk management procedures.

A special place

Visit a special place in the marine estate that is close to your school. If possible, invite someone to come down to talk about why that place is special to them. They could be someone who works in the area, a Traditional Owner or a parent. Explore their special place together and encourage your students to ask questions. At the end of the walking tour, start a discussion of the ways that the children could help to look after this place.

If suitable, have students find their own special place when on the excursion. Have them sit quietly in their special place and use their eyes, ears and touch to 'connect' to that spot. When back in the classroom students can paint an image that represents that place. Display the artworks in the classroom and see how many are similar or different.

Quiet time

When exploring a coastal ecosystem ask students to sit by themselves (make sure there are at least two arm lengths between each person) and be very quiet.

- Instruct students to close their eyes and listen to the surrounding noises. What can you hear?
- Instruct students to look at something interesting. What did you see?
- Instruct students to take a deep breath. What did you smell?
- Instruct students to put their hands on the ground. What did you feel?
- Ask students: How did this activity make you feel?

Items on the beach

Take your class on an excursion to a local beach, or another natural spot in the marine estate. As you walk along you will find different items that are lying around – some are natural, and others are man-made. Collect some different items and place them in a rubbish bag. Gather students in a circle and empty the contents of the bag on the ground.

Have a discussion about:

- What items belong on the beach?
- What items don't belong on the beach? Are they man-made?
- How they got to the beach?
- Are there any items that could harm wildlife?

Sort the items into groups – leave behind, rubbish, recycle. Create a tally sheet of the different items as they are sorted into groups. When back in the classroom, students create a column graph showing the number of items against their groups. Students compare the groups of items and use the data to interpret the cleanliness of their marine estate place.

As you continue your excursion, collect more rubbish using gloves and tongs. Place the rubbish in bins on the way back to school. Take photos of what you found along the excursion to use back in the classroom.

Needs of living things

When on an excursion take a close look at the different living things you can find. Discuss the basic needs of these living things – air, food, water and shelter. Here are some examples:

Crab

- Air: Oxygen is absorbed by their gills.
- Food: Filter out tiny food from the sand.
- Water: They live mostly in water.
- Shelter: Bury themselves in the sand or hide under rocks.

Turban snail

- Air: Oxygen is absorbed by a gill.
- Food: Feed on algae that grows on rocks.
- Water: They live mostly in water.
- Shelter: Shells provide shelter for the snail living inside. Their strong suction onto rocks makes it hard for predators to remove them from their shell. They have a shell-like 'door' that they can close if pulled from rocks.

Sea star or Starfish

- Air: Oxygen is absorbed through their bodies.
- Food: Sea stars eat by unloading their stomach onto their prey, waiting for it to dissolve and sucking it all back in again.
- Water: They live in water.
- Shelter: Their strong suction-cup, tubular feet on the base of their arms allows them to hang on tight to rocks and other strong surfaces.

Seagull

- Air: Seagulls breathe air like other land-based animals.
- Food: Feed on small crustaceans, fish and if you're unlucky, hot chips!
- Water: Can drink freshwater and also get moisture from their food.
- Shelter: Roost in large flocks on islands when breeding. Can be found roosting on boats or rooftops.

Photo: School excursion (Ian Kerr, DPI)

Marine ecosystem investigation

Choose a marine ecosystem that you plan to visit. Before the visit, show students a presentation of the different marine ecosystems in NSW, including coral reef, rocky shore, seagrass meadow, mangrove, saltmarsh, sandy shore and open ocean. Discuss the different living things or features in the photos.

Brainstorm the features, plants or animals that you hope to see on your excursion. Create a worksheet from this session. Include tasks for students to investigate, such as:

- Sketching what they see – nature journaling
- Making leaf/shell rubbings
- Taking photos or video
- Using field guides to identify birds or plants
- Survey the number and types of rubbish found
- Using apps to record where they walked.

Back in the classroom, students create a visual representation of their marine ecosystem. This could be a poster, presentation, video or other format.



Get hooked

Get Hooked... It's Fun to Fish program is designed for school students in Stage 2. This NSW DPI program will introduce students to all things fishy.

The program:

- teaches students the basic skills necessary for recreational fishing with the view that it will become a lifelong interest
- introduces students to the concept of sustaining quality aquatic habitats by practising safe and responsible fishing
- allows all NSW schools equitable access to the program
- is delivered with all COVID-safe precautions.

As well as learning all about fishing, your class will get the chance to wet a line in a local waterway where all the in-class lessons are put into practice.

For more information www.dpi.nsw.gov.au/fishing/recreational/resources/fishing-workshops/get-hooked

Fishing workshops

NSW DPI runs free fishing workshops for kids aged 8-14. Students will learn about fishing rules, how to cast, knot tying, baiting and rigging followed by a supervised fishing session with our Education Officers and Fishcare Volunteers.

For more information: www.dpi.nsw.gov.au/fishing/recreational/resources/fishing-workshops/kids

Risk management plan

This risk management plan only includes tasks/activities that are specific to an excursion to the marine estate and does not include general risks such as food allergies or those related to transport to/from the excursion. It is intended as a guide only and no liability is accepted for its use. Please refer to your school's safety and risk management policies prior to undertaking field trips.

There can be limited mobile phone reception in some locations, so please make sure you have alternative means of communication.

Risk levels (as modelled from the Department of Education's Excursions Policy):

- 1 and 2 Extreme risk; deal with the hazard immediately
- 3 and 4 Moderate risk; deal with the hazard as soon possible
- 5 and 6 Low risk; deal with the hazard when able.

Task/activity	Hazard and associated risk	Risk level	Elimination or control measures	Who	When
Observing animals and plants	Bites and stings from insects, spiders, ticks and snakes (including allergies)	4	Ensure participation of students with known allergies has been considered, implement appropriate risk controls, e.g. a trained staff member is available to provide appropriate first aid and emergency response (e.g. adrenaline auto-injector, such as EpiPen®, for student with anaphylaxis).	Teachers	Before
		5	Ensure staff and students are aware of emergency response procedures.		
	Exposure to sun	5	Ensure students are wearing enclosed footwear and long pants and avoid walking through long grass.	All	Before and During
		4	Ensure students wear hats, shirts with sleeves and 30+ sunscreen.		
		4	Ensure students are provided with insect repellent on the day.		
		6	Don't touch animals or hazardous plants.		During
		6	Carry a first aid kit which includes general use adrenaline auto-injector such as EpiPen®.		

Task/ activity	Hazard and associated risk	Risk level	Elimination or control measures	Who	When	
Walking in a marine park or other protected area	Uneven ground surfaces, bites and stings, exposure to sun, wind, rain and dehydration	4	Notify Sea Rangers of expected arrival and departure times, number of participants and students with medical conditions.	Coordinating Teacher	Before	
		3	Identify participants with known medical conditions and ensure appropriate medication/treatment is available.			
	Allergies to insects, reptiles and plants Becoming lost or isolated from the group Change in weather conditions	3	Ensure participation of students with known allergies has been considered and implement appropriate risk controls (e.g. trained staff member can apply first aid such as EpiPen® for anaphylaxis).	Teachers		During
		4	Ensure staff and students are aware of emergency procedures, including knowing the symptoms of heat exhaustion/stroke.			
		6	Check weather forecast on day of excursion. Do not undertake physical activity in hot weather			
		5	Emergency plans communicated for dealing with potential incidents.			
		5	Carry a first aid kit.			
		5	Sea Ranger staff to lead the walk. Adult supervision at front and back to keep the group together.			
		3	Ensure all participants carry water bottles. Take extra water to refill water bottles.			
		4	Staff carry insect repellent and additional sunscreen and ensure rest breaks are taken in the shade.			
		5	Wear enclosed footwear suitable for walking, clothing to protect arms and legs and suitable for changing weather conditions.	All		
		5	Wear hats, shirts with sleeves and sunscreen while outdoors. Seek out shade wherever possible to avoid heat exhaustion.			

Glossary

Angler: a person who tries to catch fish with a rod and line.

Bag limit: the maximum number of fish or invertebrates legally able to be taken per person per day.

Catchment: also known as a drainage basin, describes any surface where water falls, is collected and drains to a common endpoint.

Climate change: the long-term change in climate over time. Also used to refer to how our climate is being affected by human activities.

Coastal: the zone where the land meets the ocean.

Conservation status: how likely it is for that species to survive now or in the future, or classification to identify the level of threat that species is under.

Ecological community: a naturally occurring group of native plants, animals and other organisms living in a unique location.

Ecosystem: a community of organisms and their physical environment interacting together.

Endangered: a classification of a plant, animal or ecological communities' conservation status that identifies a species' numbers are so low that it is close to becoming extinct.

Estuary: where the freshwater from a river or creek meets the saltwater of the ocean.

Extinct: there are no more of a species left anywhere in the world.

Fishing tackle: the equipment that is used in the sport of catching fish.

Greenhouse gases: gases in Earth's atmosphere that trap heat.

Habitat: where a plant or animal lives.

Legend/key: a visual explanation of symbols that appear on a map.

Living things: things that are now or were once alive.

Management: the planning and actions that people take to look after something.

Mangrove: a species of tree that live in intertidal areas and have aerial structural roots and exposed breathing roots.

Marine estate: the NSW marine estate includes the ocean, estuaries, coastline, offshore islands and coastal wetlands, lakes and lagoons.

Microplastics: tiny plastic particles that result from both commercial product development and the breakdown of larger plastics.

Midden: an occupation site where Australia's Indigenous people left the remains of their meals.

Non-living things: anything that was never alive.

Parks and reserves: places where the plants, animals, landforms and/or cultural features are protected or managed for conservation.

Sea Country: coastal zone that holds spiritual significance for cultural practices and activities.

Sea tucker: plants and animals that are harvested from the coastal environment by Australia's Indigenous people.

Seagrass: flowering plants that live and reproduce entirely within seawater.

Size limit: the specified minimum length and/or maximum length of a species of fish that may be legally in your possession.

Threatened species: an animal, plant or ecological community (a community of species) whose numbers have dropped so low they are struggling to survive.

Vulnerable: a classification of a plant, animal or ecological communities' conservation status that identifies a species' numbers have been dropping significantly but is not yet endangered.

References

Click, Tap or Scan the QR Codes

Websites



NSW Marine Estate



NSW Dept Primary Industries - Fishing



NSW Environment and Heritage



WilderQuest Campfire



Biodiversity Sustainability Action Process



Geography Teachers Association NSW



Climate Witness story



Love it or lose it



Plastic waste and climate change

Videos



Fishing with Bunda



A Catchment Story



Types of weather conditions in Australia



A crash course in climate change



Kids talking about climate change

Activities



Catchment model



Catchment management: the story of a river



This is to certify that

is a Marine Estate Agent.

They have pledged to look after
the NSW marine estate and to
help others look after it too.





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Acknowledgements

We acknowledge we live and work on Country and Sea Country, which always was and always will be Aboriginal land. We acknowledge the Traditional Custodians of the land and waters and we respect Aboriginal Elders, past, present and emerging. We celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to Country and Sea Country across NSW.

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