



Common
Seas

OCEAN FOR BEGINNERS

X-CURRIC | AGES 7-11



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Welcome to Common Seas Education



Marine plastic pollution is a visible and pervasive environmental issue affecting all oceans. Recent media coverage has raised awareness of the topic, encouraging politicians, businesses and the general public to take much-needed action.

Common Seas believes that education can be an important part of the solution to addressing marine plastic pollution. The recent popularity of the topic of marine plastics has meant that there is a wealth of information and ideas for action scattered across the internet and other media.

Common Seas uniquely provides teachers with a full suite of resources across science, geography, and design and technology across Key Stages 1 to 3, that are designed to fulfil the English National Curriculum teaching requirements. Providing teachers with off the shelf lesson plans, presentations and activities they can choose to deliver in their entirety or use sections as appropriate.

Supporting a more sustainable relationship with the environment is not a quick fix, but a multi-generational endeavour. This is why Common Seas works with a range of partners to move marine plastics education from an important side issue into the mainstream.

Jo Royle
Managing Director
Common Seas

OVERVIEW

About Common Seas Education



We believe children and young people should be equipped with the skills, knowledge and experience that allow them to thrive in a world affected by climate change, while helping to create a greener, fairer and more sustainable future.

Common Seas Education provides knowledge-rich, hands-on learning experiences about plastic – including its growing role in the climate crisis. In this way, our resources exist to give every child a deeper understanding of sustainability and climate change, while helping them create tangible, positive changes in their homes, schools and wider communities.

How to use Common Seas Education

Common Seas Education provides fully resourced lesson plans and activities that enable you to teach sustainability, within the curriculum and through project-based learning. These resources have been designed to be an off-the-shelf teaching tool for your classroom. Of course, you know your students better than anyone and may want to adapt and change them to suit your needs.

Developed in collaboration with a broad coalition of educators, scientists and industry experts, we provide learning packages for geography, science, design & technology, citizenship and enrichment in primary and secondary schools.

The curriculum and beyond

The resources are aligned with the national curriculum and the DfE Strategy on Sustainability and Climate Change.

Common Seas has used the UNESCO Learning Objectives for the ocean¹ as a basis for creating a set of Ocean Plastics Learning Objectives to support educators in designing an appropriate set of learning opportunities for students. These learning objectives are listed in following section.

¹ UNESCO Ocean literacy for all: a toolkit <https://unesdoc.unesco.org/ark:/48223/pf0000260721> (see page 24)

Learning objectives

Common Seas has worked with partners to create a set of universal Ocean Plastics Learning Objectives, utilising the frameworks developed by UNESCO and those working for Ocean Literacy. These learning objectives are listed below and are subscribed to by Common Seas Education partners. We hope that these overarching learning objectives are useful to other individuals and organisations planning their own education programming to help a plastic waste free future.

Oceans for beginners 7-11			
Ocean Plastics learning objective	Lessons		
	1	2	3
Cognitive learning objectives			
• The learner understands the fundamental properties of plastics, including the use of additives.	✓	✓	
• The learner understands the scope and geographical scale of plastic use and plastic pollution historically as well as current predictions.	✓		
• The learner understands the pathways through which plastics enter the ocean and marine life.			
• The learner understands the social, environmental and economic cost of plastics across its entire life cycle.			
• The learner can identify and evaluate ways to improve the sustainability of plastics at different stages of the product life cycle ¹ .			
Socio-emotional learning objectives			
• The learner can reflect on their own use of plastics, and how this use might affect the marine environment.	✓		✓
• The learner actively seeks alternative designs, behaviours and practices that reduce their contribution to plastic pollution.			
• The learner can communicate the societal and environmental impacts of plastic use, referring to the scientific evidence base.			
• The learner is able to influence the behaviours and practices of others in their community in terms of plastic use and management.			
• The learner can collaborate at a range of scales to campaign for the reduction of plastic pollution.			
Behavioural learning objectives			
• The learner is able to access and improve waste management systems in their local area.			
• The learner can plan and implement campaigns that lead to a reduction in plastic pollution at a range of scales.			
• The learner is able to evaluate media narratives about plastic pollution and present a balanced judgement to their peers.			
• The learner is able to make informed decisions as a consumer to reduce plastic pollution.			
• The learner is able to research different approaches to design, including circularity and biomimicry.			

¹ Including improved design, alternative materials, waste management and individual behaviour.

Applicable standards

National Curriculum for England

KS2 Science

Element of the curriculum

Lessons

1 2 3

Animals including humans

- Identify and name a variety of living things in their local and wider environment.
- Recognise that living things can be grouped in a variety of ways.
- Recognise that environments can change and that this can sometimes pose dangers to living things.

✓ ✓ ✓
✓ ✓ ✓
✓ ✓ ✓

KS2 Geography

Element of the curriculum

Lessons

1 2 3

Geographical skills

- Use maps, atlases, globes.
- Describe and understand key aspects of physical geography.

✓ ✓ ✓
✓ ✓ ✓

KS2 English

Element of the English Programme of Study

Lessons

1 2 3

Spoken language

- Listen and respond appropriately to adults and their peers.
- Ask relevant questions to extend their understanding and knowledge
- Articulate and justify answers, arguments and opinions
- Give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings
- Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
- Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
- Participate in discussions, presentations, performances, role play, improvisations and debates
- Consider and evaluate different viewpoints, attending to and building on the contributions of others

✓ ✓ ✓
✓ ✓ ✓
✓ ✓ ✓
✓ ✓ ✓
✓ ✓ ✓
✓ ✓ ✓
✓ ✓
✓ ✓

Applicable standards

National Curriculum for England

KS2 Design and Technology			
Element of the curriculum	Lessons		
	1	2	3
Design			
• Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.		✓	
• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design		✓	
Make			
• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately		✓	
• Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities		✓	
Evaluate			
• Investigate and analyse a range of existing products			
• Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work		✓	
• Understand how key events and individuals in design and technology have helped shape the world			
Technical knowledge			
• apply their understanding of how to strengthen, stiffen and reinforce more complex structures			
• understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]			
• understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]			
• apply their understanding of computing to program, monitor and control their products.			

SCHEME OF WORK

Lesson 1: Our wonderful ocean 7-11

Overview

This lesson introduces students to the marine habitat and the wealth and diversity of life found in the ocean.

Students will learn about the five oceans and study an iconic marine species from each.

Learning outcomes

- Name a variety of ocean habitats and species that live there
- Understand the scale and depth of the ocean
- Conduct research about an iconic marine species
- Record and present findings
- Ask questions and reflect on learning

Resources



Slideshow 1:
Our wonderful ocean



Student Sheet 1a:
Marine icons factsheet



Gallery:
Living reef

Gallery:
Deep sea creatures

Gallery:
The Great Barrier Reef



Diagram:
Deep ocean poster

Subject Update:
Learn more: How many oceans are there?

Lesson 2: Our ocean and us 7-11

Overview

Students will learn about and reflect on the different ecosystem goods and services provided by the ocean through a quiz. Followed by a group task to create a diorama demonstrating how symbiotic our relationship with the ocean is.

Learning outcomes

- Give examples of how we rely on the oceans
- Understand how an ecosystem produces goods and services
- Use knowledge and understanding to plan a group project
- Work collaboratively in a group
- Justify and explain choices

Resources



Slideshow 2:
Our ocean and us



Activity Overview 2a:
Diorama



Student Sheet 2a:
Using our ocean

Student Sheet 2b:
Diorama backdrop



Thinglink:
Living reef

Lesson 3: Our ocean in crisis 7-11

Overview

Students share what they already know about marine plastics pollution. They then reflect on the validity of sources and why it's important to know where the information is coming from. Students then study the profile of an 'Ocean hero' and reflect on what they can do to make a difference.

Learning outcomes

- Discuss ideas and respond to others
- Understand facts about plastics pollution
- Explain why it is important to know the validity of a source
- Research and present information
- Share knowledge and understanding through making a pledge

Resources



Slideshow 3:
Our ocean in crisis



Student Sheet 3a:
Ocean hero profiles

Student Sheet 3b:
My ocean hero



Gallery:
Marine Plastic Pollution

Teacher guidance

The Teacher Guidance for each lesson uses a set of icons as seen below to provide visual clues to support teachers:

Lesson activities

**Explain**

teacher exposition using slides or script to support

**Demonstration / watch**

students watch a demonstration or video

**Student activity**

activity for students to complete individually such as questions on a Student Sheet

**Pair activity**

activity for students to complete in pairs

**Group work**

activity for students to complete in groups

**Whole class discussion**

teacher conducts a whole class discussion on a topic or as a plenary review

**Home learning**

home learning exercise for after school or alternatively, a lesson extension

Teacher ideas and guidance

**Assessment and feedback**

guidance to get the most from AfL (Assessment for Learning)

**Guidance**

further information on how to run an activity or learning step

**Idea**

optional idea to extend or differentiate an activity or learning step

**Information**

background or further information to guide an activity or explanation

**Technical**

specific ICT or practical hints and tips

**Health and safety**

health and safety information on a specific activity

Our wonderful ocean



Age 7-11



60 minutes

Curriculum links

- Recognise the diversity of life and range of habitats in the ocean
- Name the five oceans and recall facts about the species which reside there
- KS2 English: Spoken language

Resources



Slideshow 1:
Our wonderful ocean



Student Sheet 1a:
Marine icons factsheet



Diagram:
Deep ocean poster



Gallery:
Living reef

Gallery:
Deep-sea creatures

Gallery:
The Great Barrier Reef



Subject Update:
Learn more: How many oceans are there?

Extension or home learning

Students choose a different iconic marine species and create a postcard with pictures and information to send to the headteacher.

Lesson overview

This lesson introduces the marine habitat and encourages a discussion around what students already know about the ocean. Students use globes and maps to discover that we live on a blue planet and to understand the scale and depth of the ocean. Students learn the names of the five oceans and are introduced to five iconic species from a variety of habitats. They then conduct their own research using fact-sheets, books and online resources to discover more about these species, presenting their findings in a poster.

Lesson steps

Learning outcomes

1. The depth and breadth of the ocean (10 mins)

Students are introduced to the oceans before they study maps and globes to discover the scale of the ocean. They then look at galleries and diagrams to understand the depth of the ocean and how life differs in different ocean zones. Students locate and name the oceans.

- Name a variety of ocean habitats and species that live there

2. Ocean habitat introduction (10 mins)

Students are introduced to the marine habitat and share their prior knowledge about oceans and the creatures that live there.

- Understand the scale and depth of the ocean

3. Ocean icons (15 mins)

Students are introduced to five iconic species, from a range of ocean habitats and research facts about these species.

- Conduct research about an iconic marine species

4. Creating a poster (15 mins)

Students create a fact-sheet poster about one of the iconic species, drawing and labelling their features and describing its habitat.

- Record and present findings

5. Reflection (10 mins)

In pairs students recall three new things about oceans they learnt today. Students reflect on what else they would like to know and share questions with the teacher.

- Ask questions and reflect on learning

Step Guidance

Resources

1
10
mins



Step 1 introduces the oceans and their importance to life on earth. It involves students studying maps and globes to discover the scale of the ocean. Students look at galleries to understand the depths of the ocean and how life differs in different ocean zones.

- Using maps, globes and slides 3-4 explain that it is sometimes referred to as a blue planet due to 71% of the planet being covered in water. Explain that the ocean produces half the oxygen we breathe and captures at least 16 times the amount of carbon compared to land.
- Display slide 5, explain that there are five oceans; Atlantic, Arctic, Indian, Pacific and Southern Ocean.
- Ask students to locate them on maps and globes.

Slideshow 1:
Slides 1-5

2
10
mins



- Step 2 introduces students to the marine habitat and asks them to share their prior knowledge about the ocean and the creatures that reside there.
- Use slides 6-7 to introduce the lesson and the learning outcomes.
- Ask students to share what they know about the ocean with a partner and take some feedback.
- Explain that in pairs, students will have 30 seconds to name as many marine animals as they can think of, keeping a tally on mini-whiteboards. Encourage them to avoid repetition.
- Students share how many they recalled.

Using slides 8-11 show Diagram: Deep ocean poster to demonstrate how deep the different zones are and how life varies depending on depth.

Look at Galleries: Living reef, Deep-sea creatures, The Great Barrier Reef and allow students to ask questions and share their thoughts about the variety of marine species. Explain to the students that, later on, they will be creating information posters about the marine life that they are learning about in this lesson so they should take notes to help them.

Slideshow 1:
Slides 6-11

Gallery:
Living reef

Gallery:
Deep sea creatures

Gallery:
The Great Barrier Reef

Diagram:
Deep Ocean Poster

Step Guidance

Resources

3

15
mins



Step 3 introduces students to five marine icons from a range of ocean habitats.

- Look at and read from slides 12-16 to introduce the marine icons; tiger shark, green turtle, Japanese spider crab, bottlenose dolphin and sea pig.
- Explain that students should choose (or you can allocate) one of the marine icons to research using fact-sheets and books. If you have access to tablets or laptops students can also access the Ocean for beginners collection at encounteredu.com/discover/collections to gather further information.
- You may wish to differentiate this activity by specifying the number or type of facts students gather i.e. diet, habitat, appearance, threats etc.
- Students can work in groups to research their marine icon but should produce individual posters.
- Student sheet 1a has the information from the powerpoint slides, this could be printed off and used to support target students where necessary.

Slideshow 1:
Slides 12-16

Student Sheet 1a:
Marine icons factsheet

4

15
mins



In step 4 students use the information they have gathered to make a marine icon poster.

- Hand out paper and explain that students should draw their marine icon in the middle, labelling its significant features. Consider modelling how you would do this yourself so they know what you are expecting from them.
- They should then add the facts they have gathered (including describing its habitat) around the poster and decorate accordingly.

Slideshow 1:
Slide 17

5

10
mins



Step 5 asks students to reflect on their learning and think of questions that they would like to find out more about.

- In pairs students recall three facts they learnt today.
- Give students the opportunity to ask questions, this can be used as an opportunity to clear up any misconceptions or write a list of further questions for investigation.
- You may wish students to share their posters with the class or put them up on display.
- Review learning outcomes with a show of hands.

Slideshow 1:
Slides 18-20

+

15
mins

Students choose a different iconic marine species and create a postcard with pictures and information to send to the headteacher.

Marine icons factsheet



Bottlenose dolphin



Bottlenose dolphins live all over the world. They are excellent swimmers, because of their arrow-like shape. Bottlenose dolphins are some of the cleverest organisms on Earth because of their large brain. Dolphins cannot breathe underwater and must rise to the surface to breathe oxygen from the air. They breathe through a hole in the top of their head, it's like a nostril but a dolphin has no sense of smell. Dolphins sleep by resting one half of their brains at a time. They talk to one another by making clicking sounds underwater. Instead of ears, dolphins hear by feeling vibrations through their heads and jaw bones. Dolphins eat fish, squid and crustaceans.

Tiger shark



One of the largest sharks in the world, the tiger shark is one of the top predators on the Great Barrier Reef. They are also found in the Caribbean, Mexico, India and Africa. They get their name from the dark vertical stripes along their sides that resemble a tiger's stripes. They are solitary creatures, mainly hunting at night. Adult tiger sharks have no natural predators. Most fish have four pairs of gills, but sharks have five. Most sharks are carnivorous, but they don't hunt humans, sometimes they bite people by accident if they mistake them for a seal or big fish. Tiger sharks are often found close to the coast in warmer waters.



Green turtle



Green turtles are one of the six species of sea turtle that are found on the Great Barrier Reef. Green turtles lay their eggs in pits they dig on beaches on islands and cays. Female turtles return to the beaches where they hatched to lay their eggs. Their eggs are made of a soft, bouncy material so they don't break when they hit the sand. Turtles don't have teeth, instead their jaws have razor sharp edges that they use to slice through their food – sea grass and algae. Sea turtles have see-through eyelids that they use like a pair of goggles to see underwater.

Japanese spider crab



The Japanese spider crab has the largest leg span of any crab reaching up to 5.5 meters, their bodies can grow to be up to 40cm across. They are omnivores, eating both plants and animals, they are also scavengers and will consume dead animals. They can mainly be found in the temperate waters of the Pacific Ocean near Japan and have been found as deep as 300 meters. Crabs have two big front claws which they use to cut up and crush their food and to pick things up. They communicate with each other by waving their claws and tapping on rocks. Crabs have eyes on stalks, so they can look for danger in two directions at once.



Sea pig



The sea pig is a type of sea cucumber that can live at a depth of 5 kilometers. It is the only sea cucumber that has 'legs'. These are not true legs but water filled tubes attached to the side of the sea pig. These small animals vacuum the sand, sucking up rotting tissue for food. Sea pigs often gather in large numbers when there is an abundance of food – they tend to all face in the same direction, probably to filter food from the currents. Sea pigs live in the Hadal Zone, the darkest part of the ocean, in deep sea trenches.

Our ocean and us



Age 7-11



60 minutes

Curriculum links

- Understand how ocean ecosystems can provide goods and services
- Reflect on how important ocean health is for the whole planet
- KS2 English: Spoken language
- KS2 Design and Technology Design: Design, Make, Evaluate

Resources



Slideshow 2:

Our ocean and us



Activity Overview 2a:

Ocean diorama



Student Sheet 2a:

Using our ocean

Student Sheet 2b:

Diorama backdrop



Thinglink:

Living reef



Subject Update:

Learn more: What are ecosystem goods and services?

Extension or home learning

In preparation for next lesson students keep a recycling diary, which documents any items they throw away, what the material was and whether it was possible to recycle it.

Lesson overview

In this lesson students are introduced to the concept of ecosystem goods and services, through discovering how we depend on the oceans for food, transport, livelihoods and more. Students work in groups to plan and create a diorama which illustrates some of the goods and services the ocean provides. Students also reflect on how damaging this ecosystem could be detrimental for all of us.

Lesson steps

Learning outcomes

1. How do we depend on the ocean? (5 mins)

Students are asked to reflect on how we rely on the ocean and explore some of the ways we depend on the ocean for food, transport and livelihoods.

- Give examples of how we rely on the oceans

2. Goods and services quiz (10 mins)

Students take a quiz which demonstrates the array of goods and services we use produced by the ocean ecosystem.

- Understand how an ecosystem produces goods and services

3. Planning and preparation (10 mins)

In groups students choose five ways the ocean ecosystem can provide goods and services and begin to plan their diorama.

- Use knowledge and understanding to plan a group project

4. Diorama time (25 mins)

In groups students use plasticine, building blocks, construction materials or any other media to construct a 3D diorama of the ocean which demonstrates its goods and services.

- Work collaboratively in a group

5. Presentation (10 mins)

Groups take turns to display and describe their diorama, explaining each aspect of it and how it relates to the ocean ecosystem.

- Justify and explain choices

Step Guidance

Resources

1
5
mins



Step 1 asks students to reflect on how we rely on the ocean and explores some of the ways we depend on it, such as for food, transport and livelihoods.

- Using slides 3-4 explain that the goods and services an ecosystem like the ocean can provide include food and water. Ocean goods and services also include health and social benefits such as medicine and leisure pursuits as well as having economic benefits such as transport and tourism.
- Ask students in pairs to discuss how humans use the ocean for goods and services and take feedback.
- You may wish to mind-map their answers and then ask students to consider whether their ideas can be grouped into categories.

Slideshow 2:
Slides 1-4

2
10
mins



Step 2 involves students taking a quiz which demonstrates the array of goods and services we use provided by the ocean.

- Group students into teams. Go through slides 5-17. After asking students each question give them time in their groups to discuss and then decide on their answer. Answers can be given by a show of hands or using mini whiteboards.
- Once students have given their answer, reveal the following slide with the correct answer displayed. Allow time for students to discuss and raise any questions. This is also an opportunity to resolve any misconceptions.
- After the quiz use slide 18 and the Thinglink to display some of the different ways we use the oceans. If students have access to tablets or laptops, they can explore this interactive resource in pairs or small groups.

Slideshow 2:
Slides 5-18

Thinglink:
Using our seas interactive

3
10
mins



Step 3 sees students working in groups to choose four ways in which the ocean provides goods and services.

- Divide students into groups of 4-6.
- Hand out Student Sheet 2a, one per group.
- Explain that students should discuss each of the goods or services listed and then consider the type of use, the user and why they use it.
- Students should then make notes on Student Sheet 2a which will help to prepare for the next task.

Student Sheet 2a:
Using our ocean

TEACHER GUIDANCE 2 (page 2 of 2)

Step	Guidance	Resources
4 25 mins	 <p>Step 4 is a design technology task where students create a diorama which illustrates some of the goods and services provided by the ocean.</p> <ul style="list-style-type: none">· Display slide 19 which demonstrates what a diorama looks like.· Explain to students that in their groups they will be constructing their own simple diorama which illustrates some ocean goods and services.· Draw student's attention to the range of materials they can use to create their diorama. This may include plasticine, building blocks, or construction materials.· Use Activity Overview 2a to run the activity.· Give students frequent reminders of how much time they have left to complete their dioramas.	Slideshow 2: Slide 19 Activity Overview 2a: Diorama Student Sheet 2b: Diorama backdrop
5 10 mins	 <p>In step 5 students take turns to display and describe their dioramas.</p> <ul style="list-style-type: none">· Ask each group to present their diorama to the class, pointing out each aspect of goods and services.· Ask each group to consider what the impact on these goods and services would be if ocean health deteriorated.	Slideshow 2: Slides 20-21
+ 15 mins	 <p>Ask students to keep a recycling diary for the next week, which documents any items they throw away, what the material was and whether it was possible to recycle it.</p>	

Ocean diorama



Age 5+
(adult supervision)



30 minutes

Details

What you need

- 1 large cardboard box per group (i.e. shoe box)
- Craft materials such as plasticine, construction paper, junk modelling, old newspapers and magazines for collage
- Alternatively, you could use building blocks or similar construction equipment

Safety and Guidance



Precautions

Care should be taken when using scissors.

Overview

A diorama is a model representing a scene with three-dimensional figures. In this activity you can construct a 3D model, to illustrate some of the ways we use the sea, known as ecosystem goods and services. You may need to collect recycling and/or materials for junk-modelling before starting.

Preparation

You may need to ask students to bring in recycling and materials for junk-modelling before the session.

Running the activity

1. Explain that the students will use the shoe box to create a 'stage'. This is done by turning the box on its side.
2. Students can use Student Sheet 2a to form the background of their diorama, or you may wish them to draw, paint or collage the background. They will need to create the ocean on the floor of the 'stage'.
3. Using craft (or construction) materials students then make models which illustrate some of the ways we use the sea and the sea helps us. For example, they could make a model of someone fishing, people eating at a restaurant, tourists snorkelling or people out on boats.

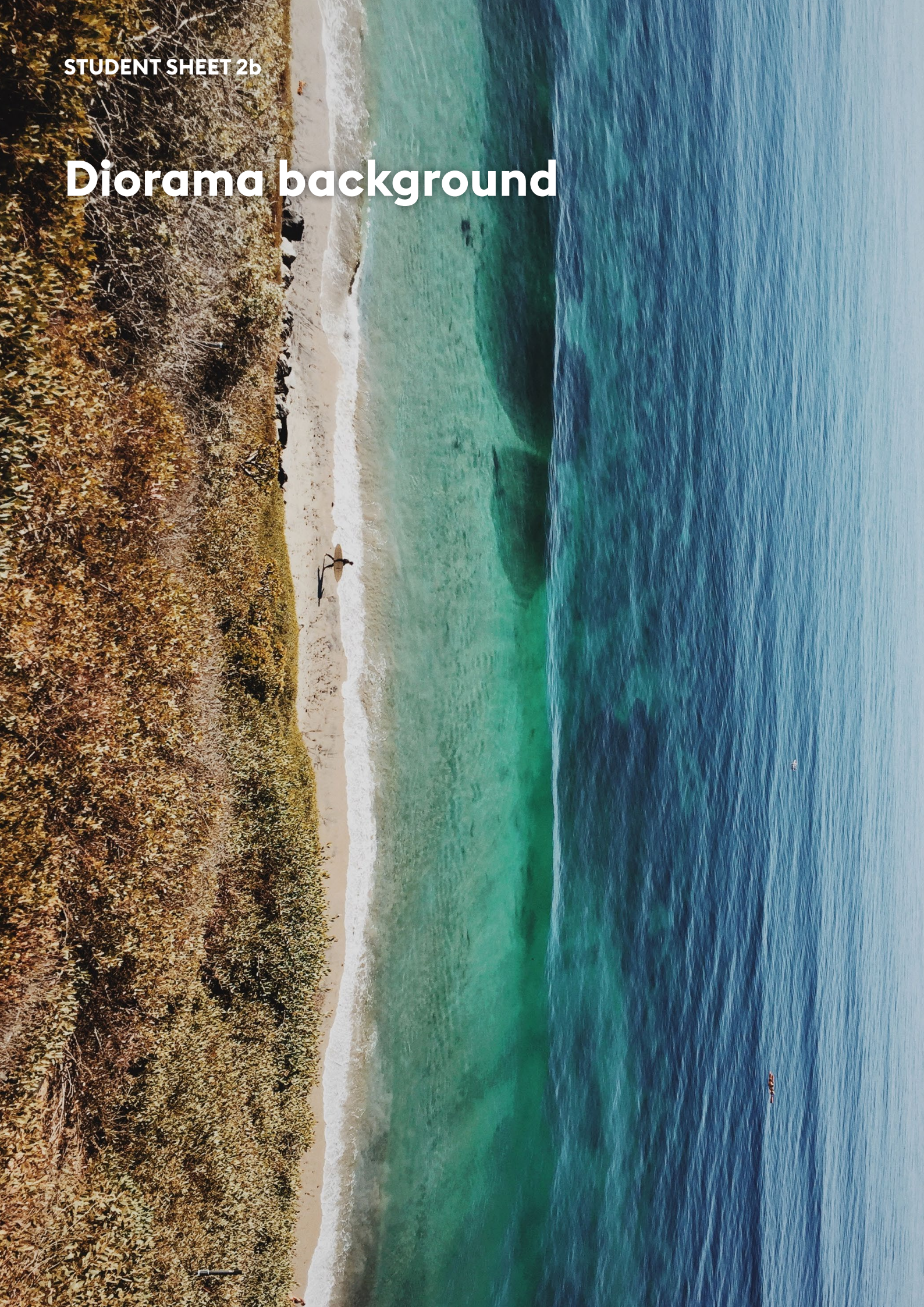


Using our ocean



Type of use	Who uses it this way?	How is it useful to them?
Leisure and Tourism		
Food and Fishing		
Energy		
Shipping		

Diorama background



Our ocean in crisis



Age 7-11



60 minutes

Curriculum links

- Explore the validity of media sources
- Investigate an 'Ocean hero' and understand their impact
- Reflect on their own attitudes and behaviours
- KS2 English: Spoken language
- Listen and respond appropriately to adults and their peers
- Ask relevant questions to extend their understanding and knowledge
- Articulate and justify answers, arguments and opinions
- Give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings
- Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
- Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas
- Participate in discussions, presentations, performances, role play, improvisations and debates
- Consider and evaluate different viewpoints, attending to and building on the contributions of others.

Resources



Slideshow 3:
Our oceans in crisis



Student Sheet 3a:
Ocean hero profiles

Student Sheet 3b:
My ocean hero



Gallery:
Marine Plastic Pollution



Subject Update:
Learn more: Marine plastics

Subject Update:
Learn more: Marine plastics facts and figures

Lesson overview

This lesson asks students to share what they know about ocean plastics pollution and sort ideas into the categories true, false or uncertain, leading to the realisation that there might be different agendas for the information we receive in the media. Student's research and present an 'Ocean hero' and their achievements, then discuss the ways in which they can make a difference by making a pledge to change one thing.

Lesson steps

Learning outcomes

1. Plastics pollution discussion (15 mins)

Students take part in a whole class discussion about ocean plastics pollution and look at pictures demonstrating how dangerous plastics can be in the ocean.

- Discuss ideas and respond to others

2. True, false or uncertain (15 mins)

Students play a game of true, false or uncertain; they are presented with a statement and must discuss with their group which category it falls into. They then consider what the motivation for interested parties might be to promote or embellish ideas.

- Understand facts about plastics pollution
- Explain why it is important to know the validity of a source

3. Ocean heroes (20 mins)

In groups students are allocated an 'Ocean hero' to read about and then report back to the class in a verbal presentation.

- Research and present information

4. Pledges (10 mins)

Students investigate what they can do to make a difference to ocean plastics pollution and write a pledge to share on a classroom display.

- Share knowledge and understanding through making a pledge

Extension or home learning

Students keep a record of how they have managed to fulfil their pledge over the next week i.e. not using straws or encouraging their parents to take reusable bags to the supermarket.

Step Guidance

Resources

1
15
mins



Step 1 introduces students to the concept of ocean plastics pollution and encourages a class discussion around what students have seen or heard in the media about plastics pollution.

- Display slide 3 and ask students to talk in pairs about what they have heard about oceans plastics pollution.
- Students share what they have heard and seen. Mind-map their ideas.
- Look at the Gallery: Marine plastics pollution which demonstrates the dangers of plastic pollution to marine life.

Slideshow 3:
Slides 1-3

Gallery:
Marine plastics pollution

2
15
mins



Step 2 involves playing a game of true, false or uncertain and asks students to reflect on why certain ideas might be promoted or embellished.

- Display slides 4-22, read aloud the popular 'fact' from each slide. Ask students to vote with a show of hands whether they think this 'fact' is true, false or uncertain. You may need to elaborate on what is meant by uncertain, explaining that in some cases we simply don't know the answer, or that there is no evidence to support it.
- After students have voted, reveal the following slide which has the truth of the 'fact' explained in more detail. Allow students time to respond to each point.
- As you go through the slides ask students to think about who might benefit from that 'fact' becoming a mainstream idea.
- Help students understand that the motivation might be benevolent and charitable, or it might be due to an economic interest, but that understanding the source of information is crucial to making informed decisions and that they should use their critical thinking skills whenever they are presented with facts to consider the validity of the source.

Slideshow 3:
Slides 4-22

3
20
mins



Step 3 introduces students to five 'Ocean heroes' who are paving the way to improve our ocean's health and reduce plastic pollution.

- Display slides 23-27 which gives a brief summary of each of the ocean heroes and their work.
- Explain that students should select which 'Ocean hero' they would like to research, or you can allocate groups a specific 'Ocean hero' to ensure equal coverage.
- Explain that students should prepare a short report that they will share with their classmates. They have 15 minutes to conduct their research.

Slideshow 3:
Slides 23-27

Student Sheet 3a:
Ocean hero profiles

Student Sheet 3b:
My ocean hero

Step Guidance

Resources

- You may prefer to skip slides 24-28 and instead allocate a different hero to each group. This will give each group the responsibility to teach the rest of the class about their hero, giving the task greater purpose and meaning.
- Students can use Student Sheet 3a to make notes.
- You may wish to stipulate how many points they should cover in their report or specify how long the presentation should last.
- Once students have completed their research, they should share their reports with their peers, this can be done in groups or in front of the whole class.

4

10
mins



Step 4 encourages students to find out what they can do to make a difference to ocean plastics pollution and make a pledge to change one thing.



- Display slide 28 which has some suggestions for what we can do to make a difference to oceans plastics pollution.
- Ask students in pairs to discuss what they could do to make a difference.
- Students should choose one and write on a post-it-note what they pledge to do to make a difference.
- These pledges can form part of a classroom display and can be reviewed later in the term for students to reflect on their experiences.

Slideshow 3:
Slides 28-30

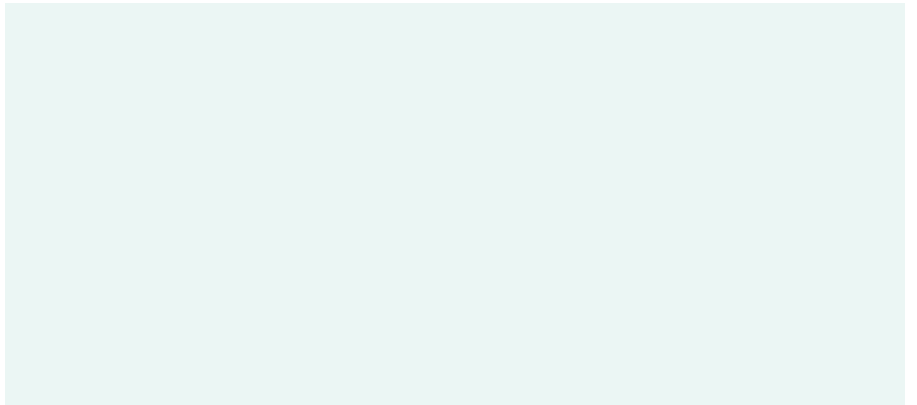
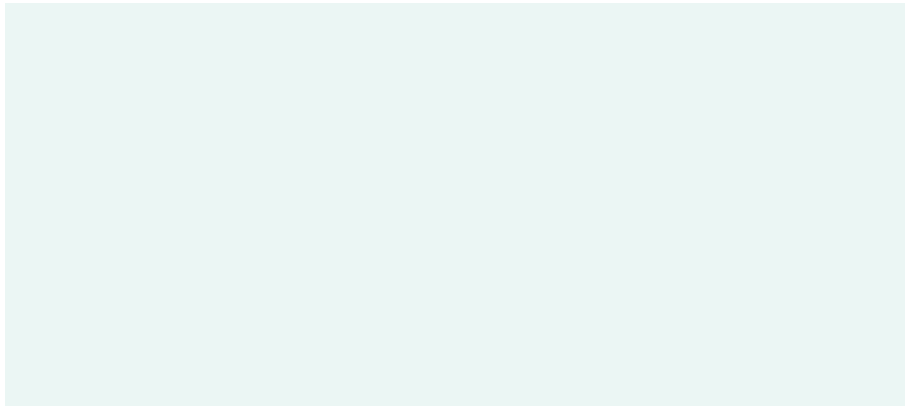
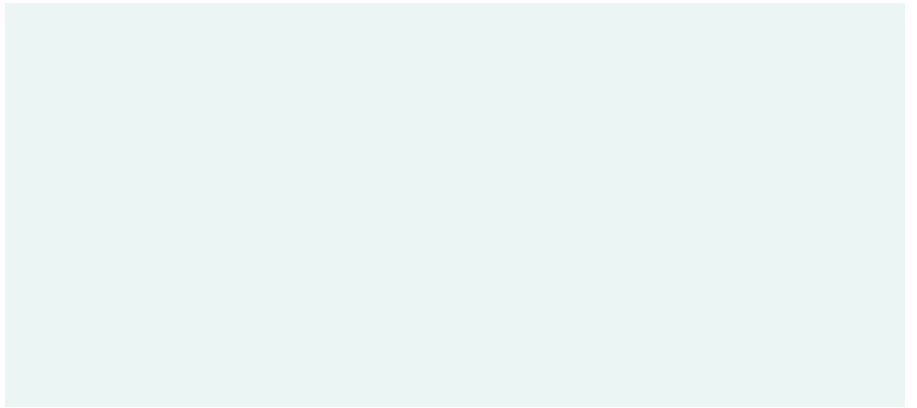
+

15
mins



Students keep a record of how they have managed to fulfil their pledge over the next week i.e. not using straws or encouraging their parents to take reusable bags to the supermarket.

Ocean hero profiles



My ocean hero

Use this sheet to make notes for your presentation.

