Our oceans learning resource

Learning activities and links to organisations to help you explore the importance of protecting our oceans with pupils

Age 9-12

CFE Level Two

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Contents

About this resource

This resource contains cross-curricular activity suggestions on the theme of oceans. The resource was originally created to help you get the most out of our online Authors Live event: World Oceans Day with Lauren St John and Elizabeth Laird. This resource encourages learners to think about how oceans affect each of us, and how we affect oceans. As well as activities, this resource offers some learning contexts and signposting to websites and books with ocean-related materials, stories and information.

Ocean quotes LIT 2-04a, LIT 2-09a, LIT 2-11a, ENG 2-17a, EXA 2-05a

This activity is a good icebreaker and/or introduction to the theme of oceans.

Ask pupils to read the quotes below and pick one to discuss with a partner. Why did they choose that quote? What do they like about it? What are the writers/speakers trying to say about oceans – can the pupils put this into their own words?

Pick a selection of quotes to use as inspiration for individual collages or a classroom display about oceans. Pupils could also source and add their own quotes.

- "The sea, once it casts its spell, holds one in its net of wonder forever." Jacques Yves Cousteau

- "Water is life's matter and matrix, mother and medium. There is no life without water." Albert Szent-Gyorgyi

- "No mercy, no power but its own controls it. Panting and snorting like a mad battle steed that has lost its rider; the masterless ocean overruns the globe." Hermann Melville

- "And I have asked to be
  Where no storms come,
  Where the green swell is in the havens dumb
  And out of the swing of the sea." G. M. Hopkins

- The sea is everything…an immense desert, where man is never lonely, for he feels life stirring on all sides." Jules Verne

- "You must not lose faith in humanity. Humanity is like an ocean; if a few drops of the ocean are dirty, the ocean does not become dirty." Mahatma Gandhi

- "Because there's nothing more beautiful than the way the ocean refuses to stop kissing the shoreline, no matter how many times it's sent away." Sarah Kay

- "What would an ocean be without a monster lurking in the dark? It would be like sleep without dreams." Werner Herzog

- "We must free ourselves of the hope that the sea will ever rest. We must learn to sail in high wind." Aristotle Onassis

- "There's nothing wrong with enjoying looking at the surface of the ocean itself, except that when you finally see what goes on underwater, you realize that you've been missing the whole point of the ocean. Staying on the surface all the time is like going to the circus and staring at the outside of the tent." Dave Barry

- "Coastal languages and dialects like Shetlandic and Gaelic have such richness in the subtlety in describing the seas around us: a word for every twinge and turn on the water so that water was named and known in the same detail as today's city streets." David Gange

- "Hark, now hear the sailors cry,
  Smell the sea, and feel the sky,
  Let your soul & spirit fly, into the mystic." Into the Mystic, Van Morrison

Create a source to sea, or sea to source, story
LIT 2-20a, LIT 2-24a, LIT 2-26a, LIT 2-28a, LIT 2-26a, EXA 2-02a, TCH 2-06a, TCH 2-07a

Write a story about a real or imagined journey going from the source of a river to its mouth at the sea, or from the sea to its source.

Use extraordinarily long paper (wallpaper lining, mount paper, or loo roll) and use your words to form the shape of the river, its mouth and the surrounding places.
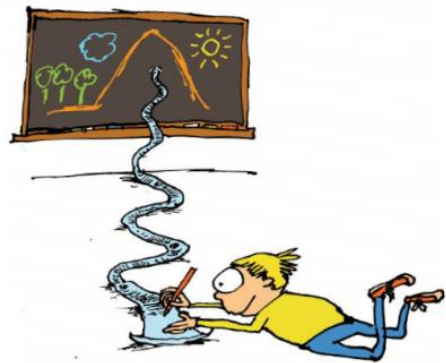
This activity is from the Mission:Explore Water resource which is free to download from the John Muir Trust website.
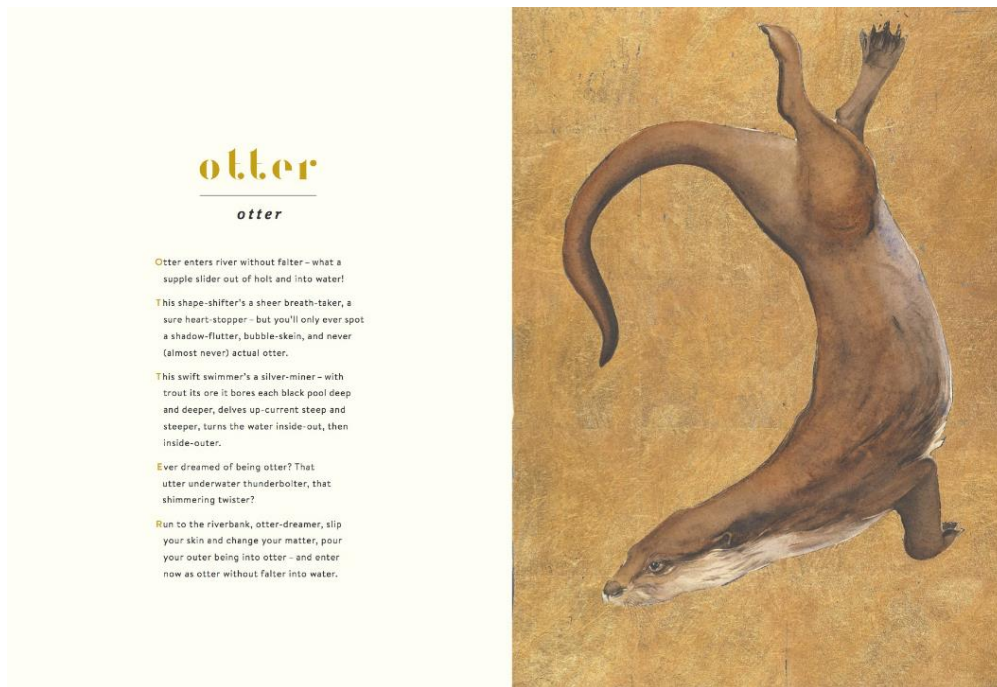
For an extension activity, ask pupils to think about something in the river – a pebble, litter, creature, or something else. What would its journey be? Does its journey end at the sea? Where does it go next? What is your timescale/how long does it last? You could show pupils this mockumentary about the life cycle of a plastic bag for inspiration.

'**Ever dreamed of being …**' LIT 2-14a, LIT 2-16a, LIT 2-20a, LIT 2-22a, ENG 2-27a, ENG 2-31a

Read a poem about a creature that lives in the sea or on the coastline or an island.

Try Otter, Heron or Grey Seal from *The Lost Words (view the downloadable posters to read the poems)*, or a poem from the collection *I am the Seed that Grew the Tree.*

Pick out words relating to movement, and place. Which creature would you like to shape-shift into?

otter

otter

Otter enters river without falter – what a
supple slider out of holt and into water!

This shape-shifter's a sheer breath-taker, a
sure heart-stopper – but you'll only ever spot
a shadow-flutter, bubble-skein, and never
(almost never) actual otter.

This swift swimmer's a silver-miner – with
trout its ore it bores each black pool deep
and deeper, delves up-current steep and
steeper, turns the water inside-out, then
inside-outer.

Ever dreamed of being otter? That
utter underwater thunderbolter, that
shimmering twister?

Run to the riverbank, otter-dreamer, slip
your skin and change your matter, pour
your outer being into otter – and enter
now as otter without falter into water.

The Lost Words otter spell and illustration are reproduced by kind permission of Robert Macfarlane and Jackie Morris.

Make a collection of movement words, verbs and adverbs, similes and metaphors, that you would relate to your chosen animal. Visualise its movement and actions, and describe what happens. Write a description or narrative of this transformation and its movement, either individually or in groups.

For an extension activity, write an acrostic (word initials start each line) or mesostic (word spelled down the middle) poem for something that lives on, in, or near the ocean.

This activity was taken from *The Lost Words Explorer's Guide* by Eva John, p24 – Otter. Use #TheLostWords to share what you do.

"That's where the sea comes in" LIT 2-02a, LIT 2-09a, ENG 2-31a

Watch the film of Nation's Ode to the Coast, a poem by Dr John Cooper Clarke. A 2015 collaboration between the well-known poet and the National Trust to celebrate Britain's coastlines, it draws on people's memories of stormy seas and family seaside picnics. Members of the public contributed by submitting their memories of the coast and what it means to them on Twitter, using the hashtag #lovethecoast.

Collect a vivid memory from each person in your class or group and knit it together to create a collective poem.

Read it aloud, individually or together.

For an extension activity, you could film and share your poem(s) as part of an assembly, with parents and carers, or your local community. Hold a sharing and celebration event to showcase pupils' writing, art, poetry and film-making. This could be a contribution to 2020 Year of Coasts and Waters.

Life below water TCH 2-06a, TCH 2-07a, TCH 2-10a

This activity is taken from [17 activities for Primary Schools](), a Scotdec Global Education Resource by Explore the Global Goals which can be used to "introduce your pupils to the UN Sustainable Development Goals and inspire them to take action for a more just and sustainable world."

Plan a trip to a local burn, river, pond or beach. Visit your chosen site and organise a litter pick with pupils. Working in small groups, keep a record of all the litter that is gathered. Make sure to take rubber gloves, pickers, bin bags, clipboards, paper and pens.

Review the number and types of materials which have been collected.

How many items did they collect? What material is it made of?

Which is the most common waste material? Help pupils to understand what is polluting our water and how it gets there. There is a clear path from land to sea, with litter dropped on our street and beaches ending up in waterways and the ocean.

Plastic litter has a particularly bad effect on marine life. Sea birds, turtles and many other marine animals and fish eat or get caught up in plastic litter which can kill them. Challenge pupils to think about what they can do themselves that will make a difference. Ideas might include: using less plastic, recycling more and not dropping litter, more beach cleans and litter collections with other organisations.

Wider learning contexts

"When we try to pick out anything by itself, we find it hitched to everything else in the Universe." John Muir

Just as oceans themselves are a fundamental, integrated part of our living universe, thinking and learning about them doesn't have to sit in isolation. Studying oceans can link to significant contexts and themes in the Scottish learning landscape. Some are outlined below.

Learning for Sustainability

[Learning for Sustainability]() is a cross-curricular approach to creating coherent, rewarding and transformative learning experiences. It's an important theme embedded across all areas of Curriculum for Excellence, it's an entitlement for all learners, and a core part of teachers' professional standards. It supports an effective whole-school and community approach by weaving together global citizenship, sustainable development education, and outdoor learning. Information and resources are collated on an Education Scotland [National Improvement Hub web page]().

Oceans, coastlines, beaches and estuaries are widely used as locations and settings for projects and as rich sources of inspiration for learning.

UN Sustainable Development Goals

The [Sustainable Development Goals](#) (SDGs, or Global Goals) were agreed by United Nations member states, with the aim of eradicating extreme poverty, reducing inequality and combatting climate change. There are 17 Goals to be met by 2030. Goal 14, Life Below Water, highlights how essential healthy oceans and seas are for our existence.

[Explore the Global Goals](#) with Scotdec resources.

For clear, evidence based, personal actions for each, see this Good Life Goals [film](#) (3 mins) and [explanation](#) by Futerra.

2020 Year of Coasts and Waters

2020 is Scotland's [Year of Coasts and Waters](#), celebrating its 10,000 km of coastline, 30,000 lochs and lochans, and miles of rivers.

Make what you do part of the celebration!

STEM - sciences, technologies, engineering and mathematics

The [sciences curriculum area](#) includes the study of planet Earth. Its pedagogical principles include innovation, invention, creativity, teamwork, enterprise, perseverance and responsibility. It is increasingly exploring cross-curricular approaches and interdisciplinary approaches to learning, particularly in relation to [STEM](#).

- 'STEM by Nature' is promoting the use of natural settings and outdoor learning approaches.
- [STEAM](#) is "sharing and promoting all things to do with Science, Technology, Engineering, the Arts and Maths in Fife".
- *The Lost Words* has been included in [Literacy & Nature workshops](#) hosted by Highland Council's RAiSE (Raising Aspirations in Science Education) programme.

All illustrate how the environment and creativity – including oceans and stories - can be intertwined with STEM learning.

Resources and links

Some current sources of information, ideas and inspiration to shore up your ocean studies planning and help tide over a lesson.

BBC Earth – British Wildlife

The [BBC Earth British Wildlife web pages](#) have lots of pages relating to the ocean, from [record breaking bird migration](#) to rare finds from [coastal surveys](#). See the [beauty of marine wildlife through art](#) and how the [sea is celebrated through poetry](#).

World Oceans Day

[World Oceans Day](#) is a global day of ocean celebration. Its website offers free resources (including lesson plans and videos) and ideas to help expand the reach and impact of World Oceans Day on 8 June and year-round. Visit the dedicated [World Ocean Day for Schools website](#) with further links including [Ocean-themed creative writing prompts](#).

BBC Authors Live: World Oceans Day

For World Oceans Day 2019, authors [Lauren St John and Elizabeth Laird joined us on #BBCAuthorsLive](#) to explore the challenges facing our planet and what can be done to protect our oceans. BBC Scotland also provide shorter clips from the event, for example [three pointers for writers](#) and [favourite ocean animals](#).

Authors4Oceans

[Authors4Oceans](#) is a campaign to raise awareness of the plight of our oceans and to prevent the pollution of them, particularly with plastic. The campaign brings together booksellers, publishers, literary festivals and young readers to find alternatives to the bags, straws, bottles and single use cutlery destroying our seas.

[Books and stories](#) by the authors campaigning for oceans are ideal for any child or young person with a passion for ecology and the environment.

Marine Conservation Society

The [Marine Conservation Society](#) is the UK's leading marine charity, working to ensure our seas are healthy, pollution free and protected. "Our seas are under immense pressure: too many fish are being taken out, too much rubbish is being thrown in and too little is being done to protect our precious wildlife."

Find out more about [Scotland's magnificent seas](#) and [Beachwatch](#), the UK's biggest beach clean-up and survey where people all around the UK can care for their coastline.

Marine Conservation Society Cool Seas Explorers – For pupils aged 5-11. Resources, games, quizzes and teaching guidance relating to marine and coastal topics, including marine litter, food webs, coastal wildlife and water quality.

Marine Conservation Society Cools Seas Investigators – For students aged 10-16. Projects are problem-based and designed to engage learners in key marine conservation issues.

Hebridean Whale and Dolphin Trust

Hebridean Whale and Dolphin Trust is a marine conservation charity that takes action through a unique programme of community-based research and education. Its website includes information on a marine mammal atlas, education programmes and species identification. Its Hebridean Whale Trail encourages accessible, low-impact whale-watching from land. A handy guide helps identify the common species of whale, dolphin, porpoise & shark found in west Scotland with their Gaelic names, a whale and dolphin species index and links to identify grey or common seals and Scottish seabirds.

The Island Review: A haven in the vast and stormy online ocean

"Bringing together great writing and visual art from islands all over the world, we provide a second home for island lovers everywhere."

Features on The Island Review blog include 13 Brilliant Island Books, and Birdland by Anna Iltnere:

"Sea birds are 'at home on the sea, in the sea, in the air and on land' writes Adam Nicolson in The Seabird's Cry. No other creatures are that free. Or, because of us, that endangered. Their paradise is already being lost...

I decided to ask a handful of writers, a photographer, an artist and a marine biologist to choose an island of birds and tell me something about it, and to name their favorite bird."

V&A world beach project

The World Beach Project ran from 2007 to 2012, with over 1,400 entries from all age groups and every continent sharing photographs of their own patterns made on a beach with stones - no seashells, seaweed, driftwood or other flotsam and jetsam commonly found on beaches, or drawing in – or shaping of – sand; just stones and nothing else.

Combining the simplicity of making patterns with stones with the complexities of shape, size, colour, tone, composition, similarity, and difference each was added to an online, searchable, map of the world. Although no longer accepting entries, the project map is still live and offers a beautiful global record.

Action information:

Nurdle Hunt – help track and reduce plastic pollution in our oceans

Mini Beach Clean - Guidance from Surfers Against Sewage

#2minutebeachclean – Help remove plastic from the marine environment

Take 3 for the Sea - Marine litter campaign

The Big Seaweed Search – Record the living seaweeds you find to help the Natural History Museum monitor the effects of climate change and invasive species on the seashore

The Shore Thing - Monitor rocky shores for climate change indicators and non-native species

Marine Conservation Society Sea Champions - Take part in marine animal surveys, beach cleans and litter surveys and various campaigns to help save our seas, shores and wildlife. Become part of a volunteer network that promotes MCS campaigns and messages at a local level.

Great British Beach Clean – a UK-wide annual event taking place in September

#BinTheButt - Keep Britain Tidy's national campaign to bring an end to cigarette litter which causes significant damage to marine life

Ocean Books

Here are some suggested titles to help you and your class find out more about the ocean and sea life.

Guidebooks & information

RSPB Seabirds by Marianne Taylor

'Whales, Dolphins and Seals: A Field Guide to the Marine Mammals of the World' by Hadoram Shirihai

How to Read Water: Clues & Patterns from Puddles to the Sea by Tristan Gooley

Field Studies Council Publications include fold out charts cover seabirds, seashells and seaweed. A Rocky Shore Name Trail features the most common limpets, mussels, periwinkles, topshells, starfish, crabs, shore fishes and other animals you are likely to see, as well as seaweeds, lichens and encrusting sponges. Simple yes/no questions guide you to the colour illustrations for each group.

Rocky shore name trail
FULLY WATERPROOF VERSION

FSC PUBLICATIONS
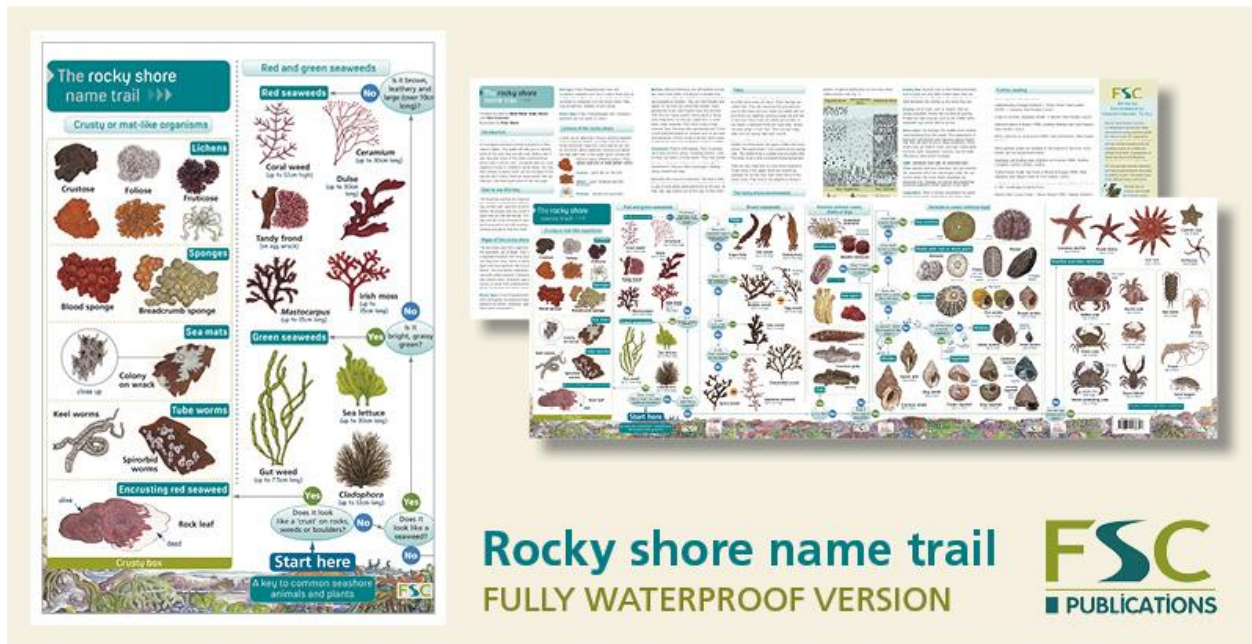
Fiction

Song of Dolphin Boy by Elizabeth Laird

Swimming Against the Storm by Jess Butterworth

The End of the Wild by Nicole Helget

Floodland by Marcus Sedgwick

The River Singers by Tom Moorhouse

Non-fiction

A Dip in the Ocean by Sarah Outen

Kids Fight Plastic by Martin Dorey

Life in the Ocean: The Story of Oceanographer Sylvia Earle by Claire A Nivola

A Planet Full of Plastic: How you can help by Neal Layton

The Frayed Atlantic Edge by David Gange

Heroes of the Environment: True Stories of People Who Are Helping to Protect Our Planet by Harriet Rohmer and Julie McLaughlin