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From coast to ocean

Sustainability Goals:



Subject links:
Geography

Age: 5-7

Curriculum links:
Oceans, Map skills, Coastal features, Environment

Ocean Literacy Principles:

1. The Earth has one big ocean with many features
2. The ocean and life in the ocean shape the features of Earth

Learning Objectives:

- To discover how rivers connect to the ocean
- To explore coastal landscapes in the UK
- To use map work to name the different areas of the ocean

Resources Provided:

- [One Ocean Fact File](#)
- [My school and the ocean worksheet](#)
- [Coastal landscapes worksheet](#)
- [Ocean map worksheet](#)
- [Curriculum links](#)

Step 1

Background

The ocean covers 70% of the earth's surface. The ocean can be split into 5 main areas and many coastal seas, but these are all part of one interconnected ocean. The UK is surrounded by the North East Atlantic Ocean, the Irish sea, the North Sea and the English Channel. Our ocean is vital to all life on Earth. It plays a major role in the water cycle, it provides oxygen, stores carbon, regulates the climate, reduces storm damage to coastal areas, provides food and is important for health and wellbeing. More information can be found in the [One Ocean Fact File](#).

Step 2

Set the Scene

5 minutes

Explain to students that today you'll be learning about how your school is connected to the sea by looking at different landscapes at the seaside, and how the sea in the UK is connected to the rest of the world. Ask students if any of them have ever been to the seaside before, and if so, ask students to share their experience of what it looked like.

Step 3

Activities

Activity 1: 15 minutes – My school and the ocean

Find out how your local area is connected to the ocean. As a class, use [Google Earth](#) to find your school. From your school, find

Step 3

Activities (continued)

the nearest river and follow it on its journey to the sea. Explain to students that all rivers eventually end at the coast. *Top tip* – it might help to practise using [Google Earth](#) first. Once you locate your nearest river, click on 'more info' to find the name of the river's mouth. This will often lead to another river. You will need to repeat this step for the second or even third river until you find the mouth of the estuary.

Students should use the [My school and the sea worksheet](#) to record key information and locate key areas on the map.

Activity 2: 5-15 minutes – Coastal landscapes

Using the [Costal landscapes worksheet](#), students should match the correct photograph with the name of the coastal feature. Students should then use these images as inspiration to draw and annotate a coastline showing all these physical features.

Activity 3: 10 minutes – Naming ocean areas

To understand how the ocean closest to you is connected to the rest of the world, hand out world maps to pairs. Explain that the ocean is connected ('one planet, one ocean'), but we name different sections of the ocean depending on factors like temperature and location.

Ask students to study their maps in pairs, and start by locating the UK and the name of the ocean in this area. Use the [Ocean map worksheet](#) to cut out the names of the different sections of ocean and stick them in the correct location.

Step 4

Extend

10 minutes– Hot or Cold?

Use this [BBC Bitesize](#) video to explain how different areas of the world are hot or cold depending on how close they are to the equator. Show the world maps to students and ask them to guess which parts of the ocean are hotter and colder. Using the notes in the one ocean fact file to add more description to each ocean area.

Step 5

Reflect

5 minutes

How is our school connected to the ocean? Can you name and describe a coastal landscape? Can you name the 5 parts of the ocean? What's the difference between ocean and sea? Is the Arctic Ocean hot or cold?

Step 6

Follow up

There are many more lessons in our [Amazing ocean series](#) to help students delve deeper into the ocean.

Discover marine animals and plants in our [Ocean habitats](#) lesson, explore what makes a plant a plant in [Is seagrass a plant?](#) or study a species in more detail in [Stupendous sharks](#).

One Ocean Fact File



Planet ocean

We're so used to talking about planet Earth, but the ocean covers 70% of Earth's surface, so we actually live on **planet ocean**.

There is only one ocean. We might give different parts of it different names, but it's all the same ocean. It is not separated by borders – some marine species migrate huge distances across the world, and currents circulate around the ocean supporting our climate system. The ocean is interconnected and what happens in one area of the ocean will affect other areas. For example, litter washes up on the beaches of uninhabited islands from thousands of miles away.



The five areas of our ocean

➤ The **Arctic Ocean** is the most northerly part of the ocean and is characterised by lots of ice and cold temperatures.

➤ The **Atlantic Ocean** is the second-largest area of the ocean covering $\frac{1}{5}$ of the earth's surface. The Atlantic is an elongated area of the ocean stretching north to south, with temperatures varying from -2° to 28° .

➤ The **Pacific Ocean** is the largest area of the ocean and covers $\frac{1}{3}$ of the earth's surface. The Pacific contains the deepest part of the ocean, the Mariana Trench, which is 11,000 metres deep.

➤ The **Indian Ocean** is the smallest and warmest area of the ocean.

➤ The **Southern Ocean** encircles Antarctica and is home to cold water-loving species of whales, penguins and seals.



Island in the Pacific Ocean
© Pierre Lesage



Adélie penguins
© Gregory Smith

One Ocean Fact File



Ocean or sea?

Seas are the smaller, more enclosed sections of the ocean that are close to land.

The area of the ocean between the east coast of Great Britain and Europe is known as the North Sea. The west coast of the UK is exposed to the North East corner of the Atlantic Ocean. The body of water between the islands of Ireland and Great Britain is known as the Irish Sea, and the area between southern England and France is the English Channel.



From coast to ocean

The UK is an island nation surrounded by the sea. We define the word 'coast' as the area where land meets the sea. The UK has around 7,723 miles of coastline, made up of sandy bays, rugged shores, caves and cliffs. Beneath the waves are varied landscapes of undersea cliffs, caves, plains and dunes.



Why is the ocean important?

- The ocean is a **diverse habitat** and is home to 50–80% of all life on Earth
- It plays a major role in the **water cycle**, and it regulates our **climate** and **weather** systems
- Marine plants and algae produce over 50% of the **oxygen** we breathe
- Marine habitats help to store **carbon**, which is vital in our fight against climate change
- Coastal habitats help to **protect coastal communities** and towns from storms and flooding by reducing wave energy
- **Seafood** provides a source of food and protein for millions of people
- Millions of people have **jobs** in marine industries
- The ocean is important for our **health and wellbeing**



Seagrass habitat
© Benjamin L. Jones

Your school and the ocean

Name:

Our school's
name is:

Our nearest
river is called:

The river enters
the sea near:

The name of the
sea in this area is:

**On the map mark
roughly where
your school is
and where your
nearest river
meets the sea.**



Coastal landscapes

Name:

Can you match the photo with the correct name by drawing a line to the answer?



Hill

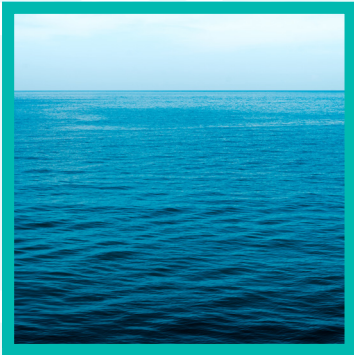
Forest



River



Beach



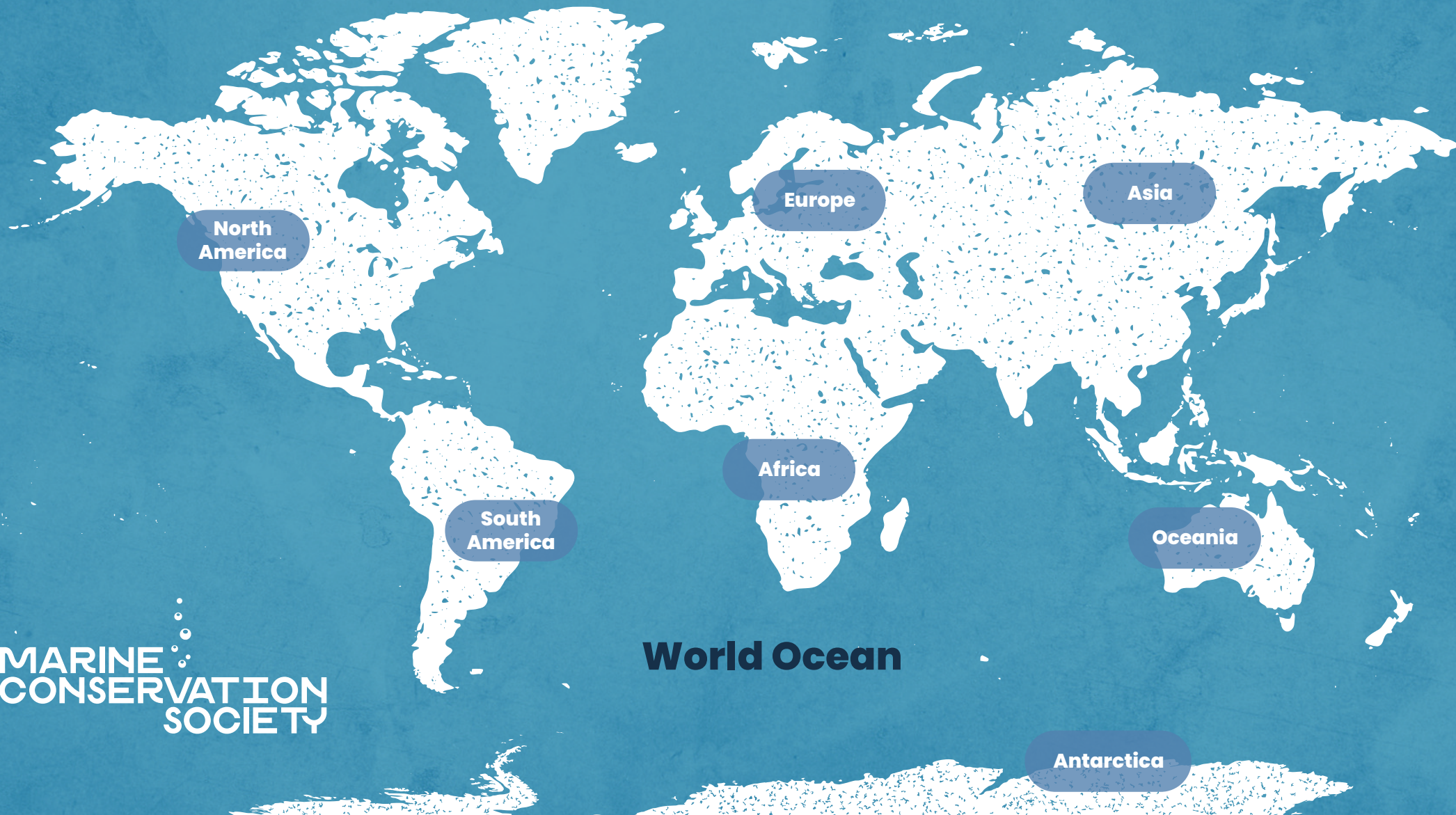
Cliff



Sea



Ocean



World Ocean

Atlantic Ocean

Indian Ocean

Pacific Ocean

Arctic Ocean

Southern Ocean

Curriculum links

England

Geography

- Name and locate the world's seven continents and five oceans.
- Key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather.
- Identify the location of hot and cold areas of the world in relation to the Equator and the North and South Poles.

Wales

Humanities

- I can recognise the distinct physical features of places, environments and landscapes in my locality and in Wales, as well as in the wider world.

Scotland

Social sciences

- I can describe and recreate the characteristics of my local environment by exploring the features of the landscape.