

Explorers Under the Sea

Powerful Knowledge

Glossary

Term	Definition
Sea	Seas are smaller and less deep than an Ocean. They are mostly connected to oceans.
Ocean	The Ocean is a large space in the sea. There are 5 oceans on Earth; Atlantic, Pacific, Indian, Arctic and Southern.
Coastline	Part of a country where the land meets the sea.
Beach	An area of the coast typically covered in sand or stones.
Pollution	When harmful liquids or objects are put into the sea.
Wave	Usually caused by wind creating a disturbance in the water.
Tide	The rise and fall of the sea level.
Sea Creatures	Any animals inhabiting the sea.
Sunlight Zone	The top layer of the ocean where most sea animals live, such as dolphins, turtles and seals.
Twilight Zone	Here there are very low levels of sunlight. No plants can grow here but animals such as shrimps and swordfish live here.
Midnight Zone	No sunlight here, it is pitch black. Very few animals live here as they would need to adapt to living with no light.
Habitat	The place or type of place where a plant or animals normally lives or grows.







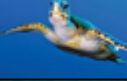



What is the difference between the sea and the ocean?

What are the different oceans called?

How is coral formed?

What are the layers of the Ocean?

Who lives Under the Sea?

Jellyfish		They have no brain, blood or heart. They have a soft body that floats and they feed through a hole in their body. They can sting even when they are dead.
Crabs		Live near the seashore
Coral		Coral looks like a plant but are actually animals although they do not move like one.
Fish		Thousands of fish species live under the sea.
Whales		These are the biggest creatures in the water. A blue whale can grow up to 100 feet and is the biggest animal on earth. Whales can hold their breath for a very long time. The call of a whale is the loudest sound made by an animal on the planet.
Seals		They live both in water and on the shore although they do not move as well on land as they do in the water.
Turtles		They lay their eggs on the shore but spend most of their time in the water. They swim hundreds and hundreds of miles each year.
Dolphins		Dolphins are part of the whale family. They are intelligent and are carnivores. Dolphins sleep with one eye open to watch out for predators.
Octopus		Lives under the sea and if not swimming will be found resting on the sea floor. They have three hearts and their blood is blue.
Seahorse		Not a horse...these are actually a type of fish! They swim upright and rest by holding plants with its tail. They are carnivores and very good at camouflage.

Did you know?

1. The fish living 3000 meters below the ocean have their own lights! Well, it is very dark down there.
2. The Dead Sea in the Indian Ocean is the saltiest. It's so salty that nothing can live in its waters.
3. Coral Reefs are made by billions of small sea animals. When they die, they leave their skeletons behind and this forms the coral reefs very very slowly.
4. The largest coral reef is located in Australia –The Great Barrier Reef.
5. The deepest on Earth can be found in the Pacific Ocean.
6. Over half of our oxygen comes from the sea.
7. The Ocean tides rise and fall twice a day.
8. Jelly fish were around before dinosaurs.
9. A bunch of fish is called a school!

Which seas surround the UK?

How do animals breathe underwater?

Can you name 5 sea creatures?

Oceans and Continents

Key Texts

How can we travel across the sea/ocean?

Explorers

The Arts

Goldsworthy—shells

David Miller

Monet—Waves breaking

Artifacts

- Shells
- Starfish
- Crablines
- Buoys
- Seaweed

What Causes It?

- Oil tankers spill oil.
- Boats sink.
- People dump sewage and garbage from boats and on beaches.
- Litter washes down into rivers and storm drains and ends up in the ocean.

How Does It Affect Us?

- Plastic debris is eaten by ocean animals – turtles, whales, seals.
- Old nets can tangle and drown sea animals and people.
- Sewage and spilled oil make ocean animals sick.
- Medical supplies carry sharp points that can stab and dangerous chemicals that can poison sea life.
- Medical supplies also wash up on beaches and endanger humans.
- Fish and shellfish can become toxic from eating pollutants.

What is Being Done?

- Oil Pollution Act (1990) with stricter rules for oil tankers.
- Water Quality Act (1987) was amended to stop polluted storm water and sewage.
- Beach Act (2000) the EPA helped states test and monitor coastal water pollution to protect swimmers.

What can we do to reduce pollution?

How does the sea get polluted?

Can you name an artist who used the sea as inspiration?

Why don't sea creatures live in the midnight zone?

Are all sea creatures Carnivores?

WHAT CAN WE
DO TO HELP?

USE LESS
PLASTIC

8 OF THE TOP 10 ITEMS FOUND ON BEACHES DURING
LAST YEAR'S INTERNATIONAL COASTAL CLEAN-UP DAY
WERE PLASTICS RELATED TO EATING & DRINKING.



PLASTIC BAGS > REUSABLE BAGS, NO BAG

STRAWS > NO NEED

UTENSILS > USE NON-PLASTIC

TO GO CUPS > REUSABLE MUGS & CUPS

ELECTRONICS > REPAIR OR UPGRADE. RECYCLE THE OLD ITEM WHEN YOU NEED SOMETHING NEW.

BOTTLED WATER > REUSABLE WATER BOTTLE

PACKAGING > BUY ITEMS WITH MINIMAL PACKAGING

CLOTHING > BUY NATURAL MATERIALS. SYNTHETIC FIBERS END UP IN THE OCEAN



Prior learning

- Assess prior knowledge
- Have children ever been to the seaside?
- Can they name any sea creatures?

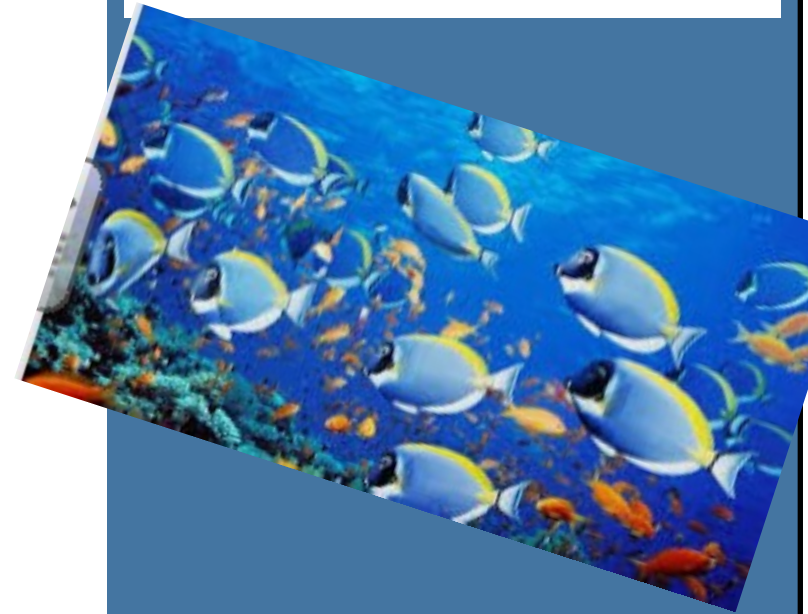


Current learning

- ♦ What is the difference between a sea and an ocean?
- ♦ What are the different oceans called?
- ♦ What are the names of the seas that surround the UK?
- ♦ How is coral formed?
- ♦ What are the layers of the ocean?
- ♦ Can you name 5 creatures that live in the sea?
- ♦ How do animals breath underwater?
- ♦ How can we travel across the ocean?
- ♦ How does the sea get polluted?
- ♦ What can we do to stop pollution?
- ♦ Why don't sea creatures live in the mid-night zone?

Future learning

- Weather
- The water cycle
- Rocks and soils
- Erosion
- Physical and manmade features



Curricular links:

Geography – Coral Reef—skeletons, location of oceans and seas. Looking after our world, melting ice caps.

Science – Phases of the moon and tides.

Art - See suggested Artists—consider using recycled materials

PSHCE—sun safety and staying safe at the beach

Use of this document

Reach2 would like to acknowledge that the pictures and information contained in this knowledge organiser have been sourced from a variety of websites and did not produce the original content but did in fact put it together to form a topic overview and support for teachers.

Websites used include (although, this is not an extensive list):

- Google images
- TES
- Twinkl