

SOLENT SEASCAPE

EXPLORE, DISCOVER, PROTECT



DISCOVERING OUR BLUE PLANET

Geography is all about exploring the world and understanding how people and nature live together. Physical geography looks at natural things like mountains, rivers and the sea - things that would be here if no humans lived on Earth. Human geography is about the things people have made, like houses, roads and cities. Geographers study how nature and people live side by side and how they affect each other. This is called environmental geography. When you spot and ask questions about these features you're being a geographer!

We are going to explore the Solent Seascape to see how physical and human features shape this special place. We'll learn how people affect the environment, discover how the Solent Seascape Project is helping to protect and restore the sea, and find out how we can all make a difference. Our Seascape Champions will lead the way!


THE SEASCAPE CHAMPIONS

Tabari the Seabird Surveyor


Eco Ally: Terri the Tern

Protects: Seabird nesting sites

Skills: Tabari is quick to think of ways to keep nests safe and help seabirds thrive.



Where seabirds land, we lend a hand!



Muddy places are full of magic

Maya the Saltmarsh Explorer

Eco Ally: Muddles the Mud Snail

Protects: Saltmarshes by the sea

Skills: Maya knows every saltmarsh bird call and plant.




Build, filter, protect!

Olivia the Oyster Reef Restorer

Eco Ally: Opal the Native Oyster

Protects: Oyster reefs

Skills: Olivia's mission is to keep the water clean.



Grow the grass, guard the sea!

Seth the Seagrass Guardian

Eco Ally: Snork the Short Snouted Seahorse

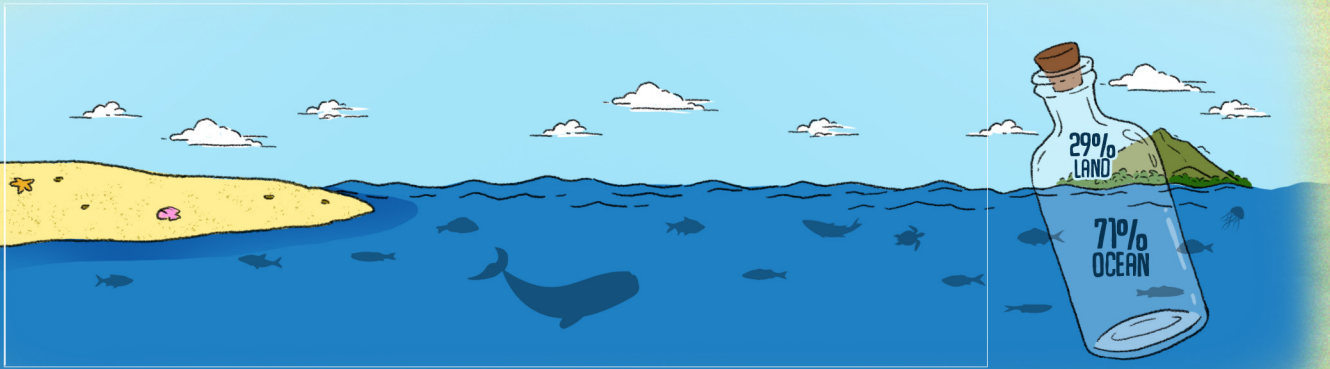
Protects: Underwater seagrass meadows

Skills: Seth understands how seagrass traps carbon and helps fight climate change.

DISCOVERING THE OCEAN

WHAT IS THE OCEAN?

Did you know that most of our planet is covered by ocean? That's right - Earth is a blue planet! The ocean is a giant body of salt water that covers 71% of our planet. The ocean is huge, deep and full of life - from tiny plankton to giant whales, from colourful coral reefs to dark, mysterious deep-sea trenches.



THE FIVE OCEANS

The ocean has five names, but it's really one big splashy system!



WHY WE CAN'T LIVE WITHOUT THE OCEAN COASTAL ENVIRONMENTS

The ocean isn't just somewhere far away or a place to visit for fun - it's part of our everyday lives! It gives us the air we breathe, food to eat and helps to control the weather. Where the land meets the sea, we find the coast. This special area is shaped by waves, tides and wind - part of the physical geography of our planet. Coasts are home to amazing habitats such as seagrass meadows, oyster reefs, mudflats and seabird nesting sites, which provide food and shelter for many living things.



Human geography - how people use coastal areas - also affects these places. Activities like overfishing, port building, coastal development and pollution are changing both the ocean and the coast. Environmental geography helps us understand how human actions and natural processes interact, and how these changes harm ocean life, damage habitats and affect the ocean's ability to support life, including ours. By studying environmental geography, we can learn how to protect the ocean, the coast and all the life they support.

DISCOVERING THE SOLENT SEASCAPE

Join our Seascape Champions as we explore the Solent Seascape, a special coastal zone where land meets the sea. This vibrant area is home to remarkable plants and animals, from underwater seagrass meadows to bustling saltmarshes and nesting sites for endangered seabirds.

As you explore, you'll discover why the Solent matters not only for nature, but also for the people who live and work along its coast. Together, we'll learn how people and nature depend on each other - and why protecting our seascape is so important.

WHAT IS THE SOLENT?

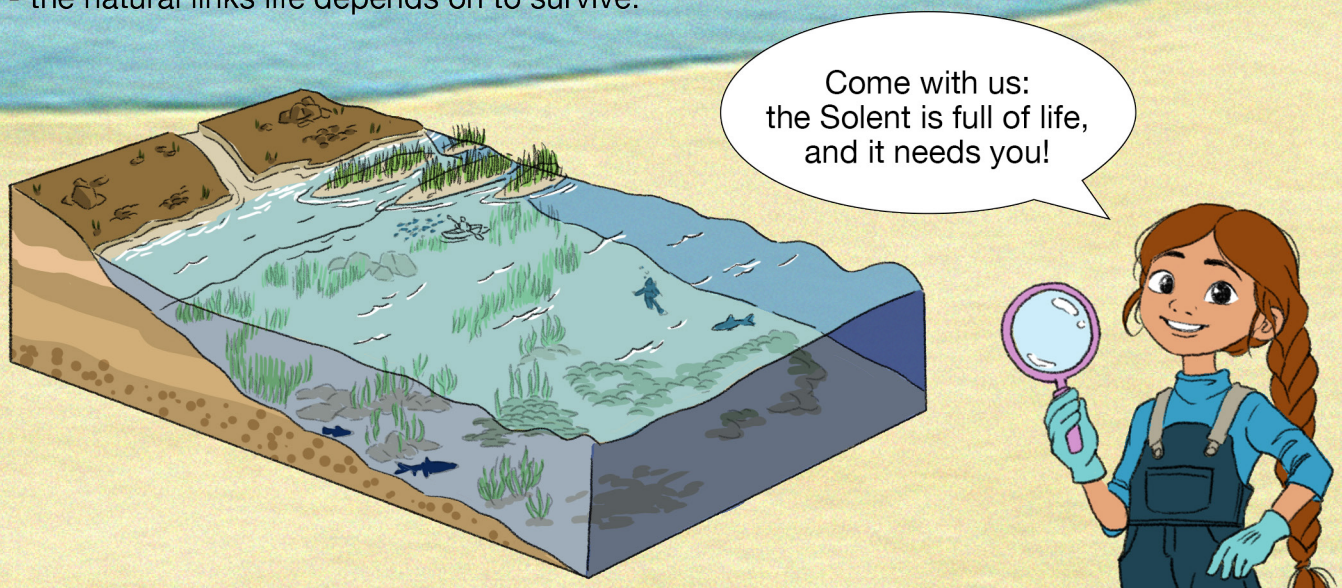
The Solent is part of the Atlantic Ocean and forms a unique coastline between the Isle of Wight and the south coast of England. It is also a channel, which means it is a narrow piece of sea that connects different areas of water. Its coastline is shaped by the tides and waves and is always busy with boats, wildlife and people who enjoy, and work by, the sea.



WHAT IS A SEASCAPE?

The Solent isn't one single space - it's made up of many habitats where plants and animals live and find what they need to survive. These include saltmarshes, seagrass meadows, native oyster reefs and seabird nesting areas. Some habitats stay underwater, while intertidal areas are covered at high tide and exposed at low tide. Together, they form a seascape - a connected network of coastal and marine habitats.

Water constantly moves through this seascape, carrying baby fish, seeds, oxygen, carbon and nutrients. This flow keeps ecosystems healthy and is known as ecological connectivity - the natural links life depends on to survive.



WHY THE SOLENT MATTERS

Why is the Solent Seascape important to us?

The Solent is home to many incredible habitats where plants and animals live and grow. It also helps humans by providing food, protecting the coast from floods, and supporting jobs in cities and towns such as Portsmouth, Southampton, Cowes, Lymington and all along the South Coast.

But the Solent is in trouble. Pollution, rising sea levels and damage to habitats mean nature is struggling and many of the species and habitats here are now endangered or under threat.

The Solent is a unique place - and we're going to learn why it matters to all of us, and why it needs our protection.

The Solent



How are humans affecting the Solent?

When one part of the seascape is damaged or missing, it affects the others. But if we **restore** several habitats at once, they can help each other grow stronger as they are all interconnected. For example, oysters clean the water so seagrass can grow. Saltmarshes protect the land and store carbon. Seabird sites bring in life and food from far away.

Each habitat plays a special role in keeping the ocean - and us - healthy.

We're Stronger Together!



That's why the Solent Seascape Project and the Seascape Champions are finding new ways to protect and restore the Solent - the sea channel and all the habitats along this coastline. To **restore** something means to help it get healthy again. Instead of restoring just one habitat, they are working to make the whole Solent area healthier.

This includes coastal habitats like saltmarshes, seabird nesting sites, seagrass meadows and native oyster reefs.

DISCOVERING THE SALTMARSH

What is a saltmarsh?

A saltmarsh is a wet, marshy area near the coast where land meets the sea. Marshy means the ground is soft, squishy and often covered with water. When the tide comes in, salty seawater covers the saltmarsh and makes little channels and pools in between the plants. These are tiny waterways and shelters where young fish and other small creatures can hide, feed and stay protected from bigger animals.

It might look marshy, but this place is bursting with life!

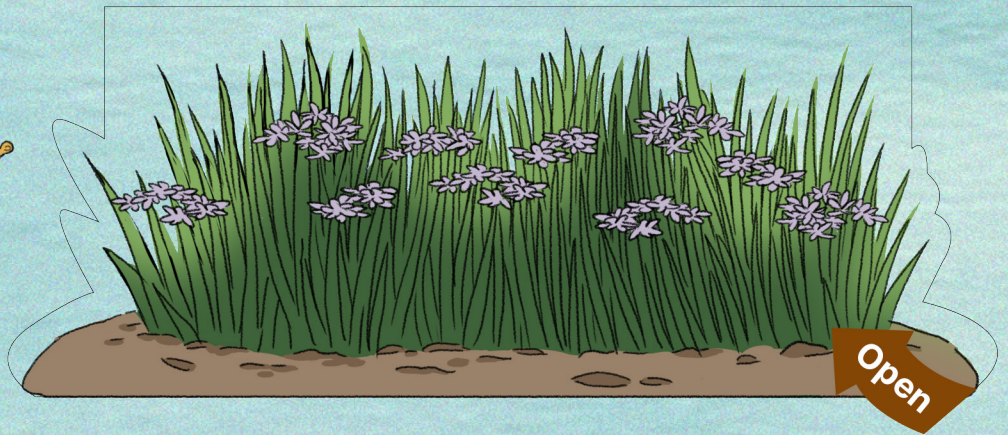


Saltmarsh



Why is it important?

These marshy homes help nature and people!



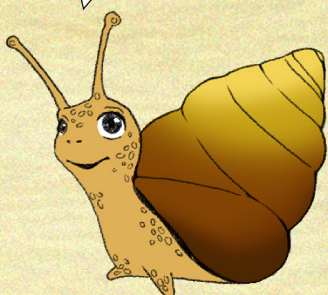
What's the problem?



These marshes are in trouble.



We're helping the saltmarsh recover!



How can we restore the saltmarsh?



Healthy marshes = healthy homes for wildlife!

DISCOVERING THE OYSTER REEF

What is an oyster reef?

Oyster reefs are clusters of oysters growing close together on the sea floor. These clever creatures build reef structures like underwater towns, full of tunnels and spaces where animals can live and hide. Their shells form strong homes for fish, crabs and more.

Oysters = amazing underwater builders!
Reefs = nurseries, shelters, and snack stops!

Oysters create homes for everyone.

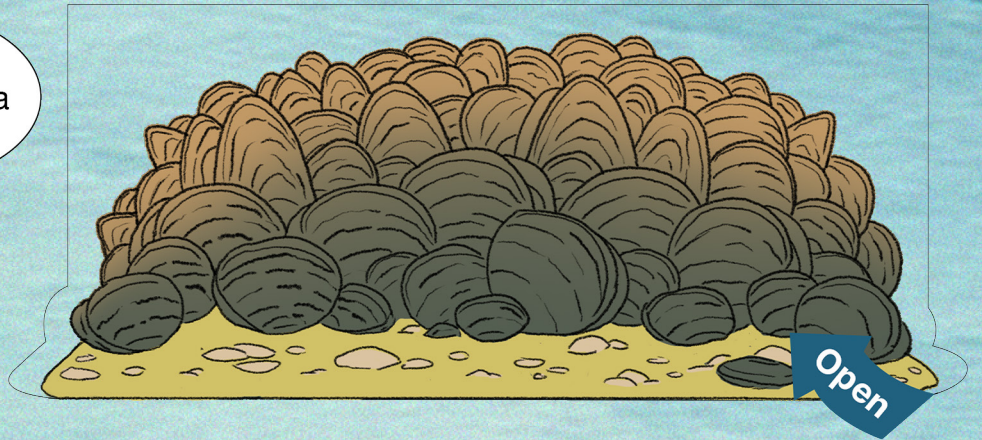


Oyster Reef



Why are oyster reefs important?

We're small, but we make a big impact!



Open

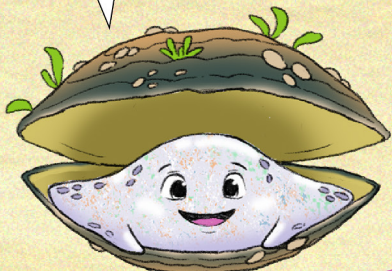
What's happening to oyster reefs?



These rich habitats are in serious danger.



We don't just live here, we build the habitat!



How are people helping?



Open

Teamwork, science and care are bringing back the oysters, and rebuilding the reefs!

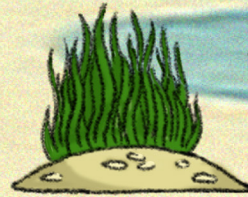
DISCOVERING THE SEAGRASS MEADOWS

What is seagrass?

Seagrass is a flowering plant, and it is the only type of flowering plant in the world that can live completely under salty seawater. It grows in shallow, sunlit parts of the sea, where it uses sunlight to make its own food through photosynthesis. Its long, green blades form underwater meadows, creating one of the most important habitats in the ocean. Seagrass meadows grow in soft, sandy or muddy sea floors.

These underwater grasslands are full of life, providing shelter, feeding grounds and nursery areas where young sea creatures can grow safely – like seahorses, fish and crabs. Seagrass meadows are like busy underwater cities.

It's not seaweed - it's real underwater grass!



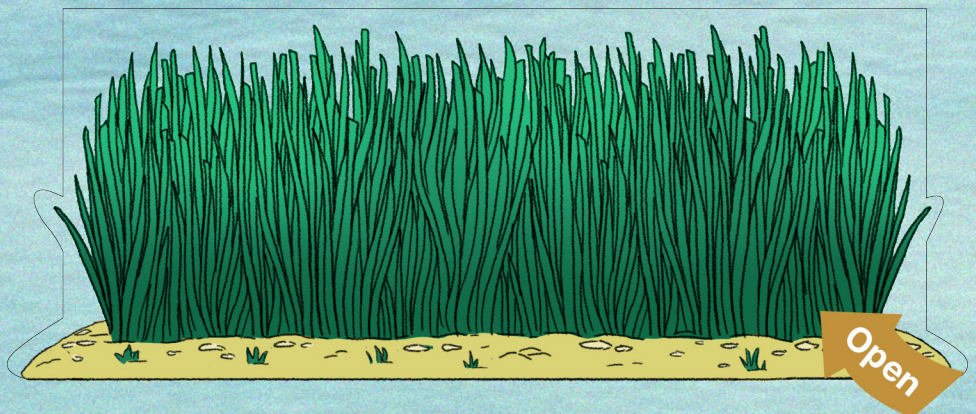
Seagrass



Why is it important?



Seagrass is small but powerful.



Open

What's the problem?



Open

We've lost too much - and that puts nature at risk.



We're planting the sea's secret superheroes!

How are people helping?



Open

DISCOVERING SEABIRD NESTING SITES

What is a seabird nesting site?

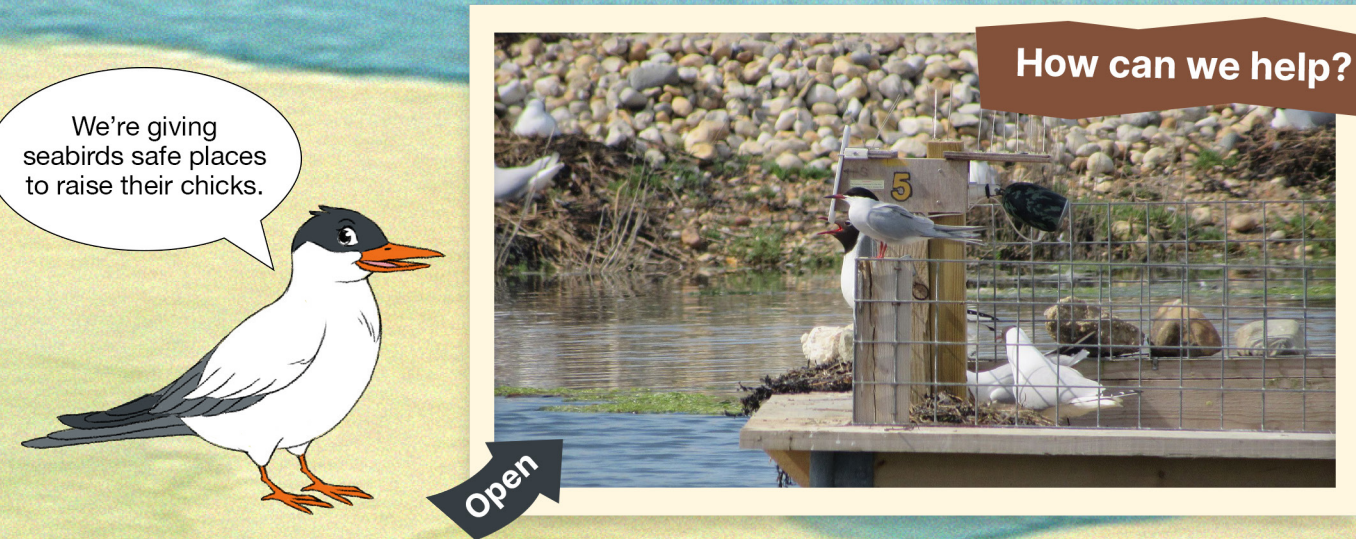
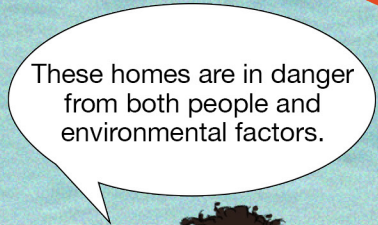
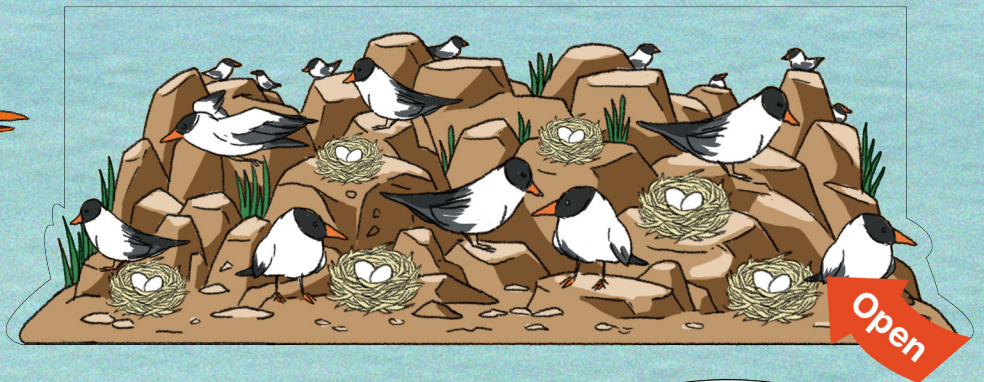
Seabird nesting sites are special places where birds like terns, gulls and oystercatchers lay their eggs and care for their young. In the Solent, these nests are often on shingle beaches, saltmarshes or small islands.

Seabirds need space, shelter and safety to nest and grow.

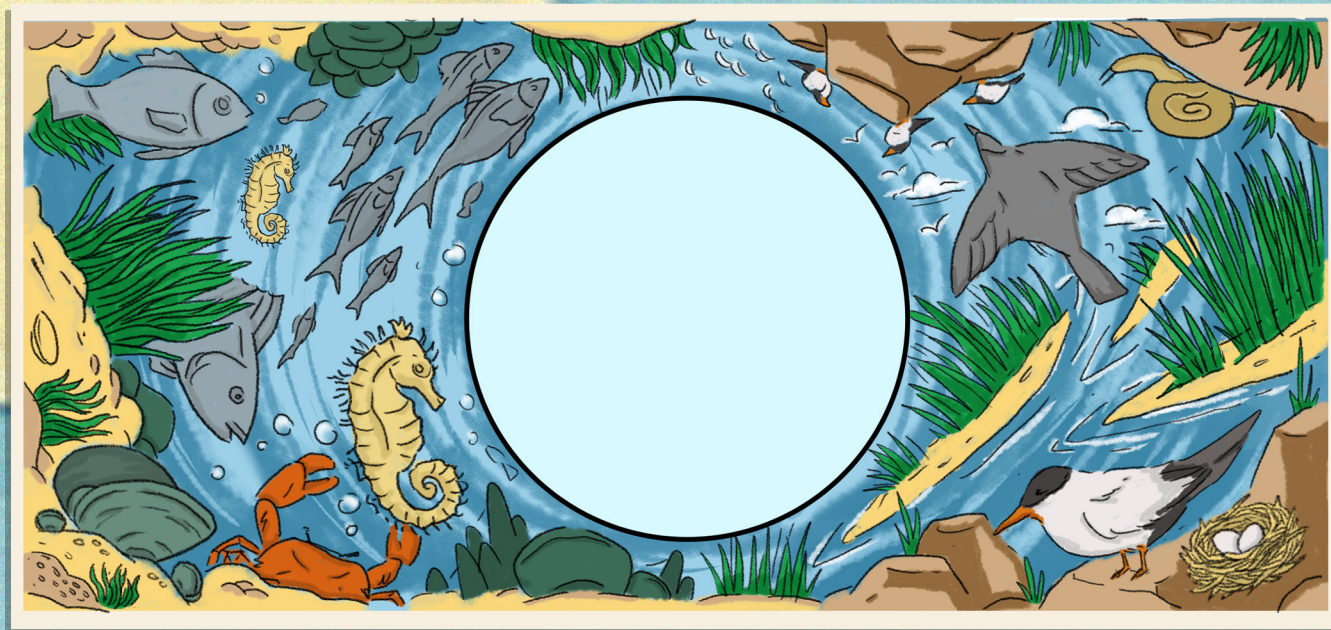
Many of the seabird species that nest in the Solent are migratory. That means they travel here from thousands of miles away to build nests, raise their chicks and feed on the fish that live amongst the oyster reefs, seagrass meadows and saltmarsh. Terns spend the UK winter in Africa, while different gull species migrate across Europe and Africa. The seabirds that live here each summer are part of the ecosystem of the Solent, where each species and habitat need each other to survive.

Seabirds connect all the Solent habitats because they feed in the sea and return to land to nest, moving nutrients and energy between different habitats.

Why is it important?



YOU'RE PART OF THE PICTURE!



You're a Seascape Champion - the Solent needs your help

Every action matters, and the choices we make can help protect our amazing seascape. You've explored the Solent's habitats with our Seascape Champions - now it's your turn to take the next step.

Keep exploring - Use the QR codes below to keep discovering.

Learn more about the Solent Seascape Project.

Learn more about how you can get involved.

Follow Terri the Tern on her journey across the Solent's coastal habitats.



Take action - You're never too small to make a big splash.

Write a letter to your MP asking them to protect the Solent Seascape.

Run a fundraiser or a sponsored walk to support Solent wildlife.

Make a campaign poster about saving coastal habitats.

Join a local volunteering day to help monitor wildlife. Be careful around beaches and avoid disturbing seabird nesting sites.



Together, we can protect the Solent Seascape - now and for the future!



SEAGRASS MEADOWS

SEABIRD NESTING SITE

OYSTER REEFS

SALTMARSHES

START

FINISH

ALLY CARD

GOOD NEWS

GOOD NEWS

ALLY CARD

GOOD NEWS

TROUBLE!

TROUBLE!

TROUBLE!

GOOD NEWS

ALLY CARD

GOOD NEWS

ALLY CARD

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GOOD NEWS

GOOD NEWS

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GOOD NEWS

TROUBLE!

TROUBLE!

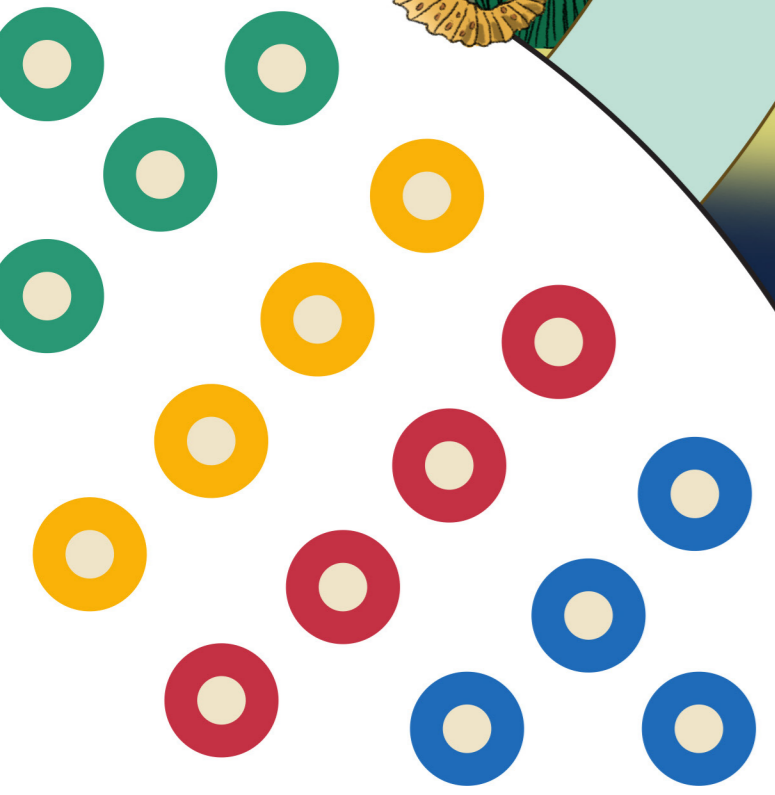
ALLY CARD

ALLY CARD

TROUBLE!

ALLY CARD

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INSTRUCTIONS

Race to restore the Solent We're stronger together!

The aim

Work together to restore the Solent habitats.

Get all your animals and your Eco Ally back home.

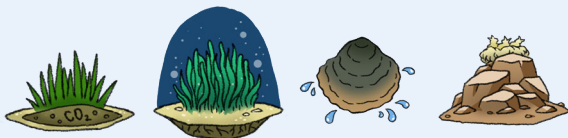
Remember: In a healthy ocean, nobody wins alone - we all win together!

Set up

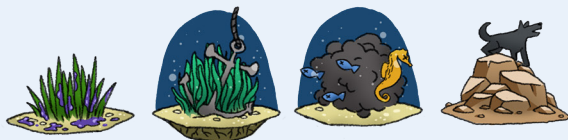
1. Choose a habitat (Saltmarsh, Seagrass, Oyster Reef, Seabird Nesting Site).
2. Each player or team takes 4 counters (1 Character, 1 Eco Ally + 2 Animals).
3. Place them in your "Start" area.

How to play

1. Roll the dice. You need to roll a 5 to move out of Start.
2. Take turns moving your counters along the path.
3. Follow the rules for special squares:



Good News! Check the icon to find what the good news is and move forward 2.



Trouble! Check the icon to find out what the trouble is and if you have to move back 2 or return to Start.



We're Stronger Together! Pick up an Ally Card and answer the question:

Correct answer = move forward 1, and help another player move forward 1.

Wrong answer = stay where you are.

4. Bumping: If you land on someone else's counter that is on a Trouble! square, you both must go back to Start... unless you can save yourselves with an Ally Card! Correct answer, stay on the square, wrong answer go back.

The finish

Counters must go all the way round and into the big Restored Solent square.

When a counter finishes, take an Ally Card:

Correct answer = choose another player who needs help and move them forward 1 square.

Race against time

Set a timer before you start (teacher will decide the time, a longer time for a lower difficulty level.)

You must get everyone home before time runs out.

Winning

Everyone wins together when all counters are safe in the Restored Solent.

If time runs out... you might like to talk about what slowed everyone down.

GOOD NEWS! SQUARES

Saltmarshes



Native grasses planted
- roots hold mud and reduce flooding.
Move forward 2.



Saltmarsh mud locks away carbon for centuries
- climate change slowed!
Move forward 2.

Seagrass Meadows



Seahorses and young fish find safe shelter
in the seagrass.
Move forward 2.



Seagrass roots stop erosion,
protecting the coast.
Move forward 2.

Oyster Reefs



Oysters filter water,
making it cleaner
for other life.
Move forward 2.



Reef restored
- seahorses, crabs
and fish return.
Move forward 2.

Seabird Nesting Sites



Raised gravel islands built
- chicks safe from flooding.
Move forward 2.



More small fish in the sea
- tern chicks grow strong.
Move forward 2.

TROUBLE! SQUARES

Saltmarshes



Saltmarsh polluted by chemicals
- wildlife harmed.
Return to start.



Sea level rise drowns young plants
- marsh shrinks.
Move back 2.

Seagrass Meadows



Anchors rip up seagrass roots
- habitat lost.
Move back 2.



Without seagrass, oxygen drops in the water.
Return to start.

Oyster Reefs



Overfishing removes too many oysters
- reef collapses.
Return to start..



Pollution smothers the reef
- animals leave.
Move back 2.

Seabird Nesting Sites



High tide floods the nesting beach
- eggs lost.
Return to start.



A dog disturbs the colony
- chicks scatter.
Move back 2.

ALLY CARD ANSWER KEY



Saltmarshes

- Q: What do saltmarshes store that helps fight climate change?
A: **Carbon.**
- Q: What tiny animals in the saltmarsh do seabirds like to eat?
A: **Worms, crabs and snails.**
- Q: Why do fish like to live in saltmarshes when they are young?
A: **They are safe places to grow, and find food.**



Seagrass Meadows

- Q: What gas do seagrass plants release during photosynthesis?
A: **Oxygen.**
- Q: Which animals use seagrass as a nursery?
A: **Seahorses and young fish.**
- Q: Give one way seagrass helps to protect the coast.
A: **Its roots hold the seabed in place. / Its leaves trap sand.**



Oyster Reefs

- Q: How do oysters clean the water?
A: **By filtering it.**
- Q: Name one animal that shelters in an oyster reef.
A: **Crab, seahorse, sea bass, or eel.**
- Q: Name a way people are helping oysters to rebuild their reefs.
A: **Placing gravel and shells where oysters like to live onto the seabed.**



Seabird Nesting Sites

- Q: Why do little terns build nests on gravel?
A: **Because it's near fish-rich waters.**
- Q: What helps protect chicks from flooding?
A: **Raised gravel islands.**
- Q: Where do Terns spend the UK winter?
A: **Africa.**

GLOSSARY

Absorb

To take something in.
Solent plants absorb sunlight and nutrients to grow.

Biodiversity

The variety of different plants and animals in a place.
The Solent has biodiversity such as fish, birds and seagrass.

Carbon capture

The process of taking carbon dioxide out of the air and storing it.
Seagrass in the Solent helps with carbon capture.

Channel

A path where water flows.
Solent channels help tides, boats and fish move through the water.

Climate

The usual weather of a place over a long time.
The Solent has a mild, coastal climate.

Climate change

Long-term changes in weather and sea conditions.
In the Solent, climate change can raise sea levels and affect wildlife.

Coast

The place where land meets the sea.
The Solent coast has beaches, cliffs and harbours.

Ecological connectivity

The way habitats and living things are linked together.
Fish move between Solent oyster reefs, channels and open water.

Environmental geography

The study of how people and nature affect each other.
In the Solent, environmental geography looks at how people affect the coast and sea.

Flowering plant

A plant that makes flowers and seeds.
Seagrass in the Solent is a flowering plant that grows underwater.

Food chain

The way energy moves from one living thing to another when animals eat plants or other animals.
In the Solent, seagrass is eaten by small animals, which are eaten by fish.

Habitat

A place where plants and animals live and grow.
Oyster reefs in the Solent are a habitat for fish and crabs.

Human geography

The study of how people live and use places.
In the Solent, human geography includes ports, marinas, towns and ferries.

Intertidal habitats

Coastal areas that are sometimes underwater and sometimes dry.
Saltmarshes and rocky shores in the Solent are intertidal habitats.

Ocean

A very large body of salty water that covers much of the Earth.
The Solent is part of the ocean around the UK.

Photosynthesis

The process plants use to make food using sunlight, water and air.
Seagrass in the Solent uses photosynthesis to grow.

Physical geography

The study of natural features of the Earth.
In the Solent, physical geography includes the sea, beaches, cliffs and weather.

Pollution

Harmful waste that damages land, sea or air.
Plastic pollution can wash into the Solent.

Protect

To keep something safe from harm or damage.
People protect Solent habitats to help plants and animals survive.

Restore

To help nature return to a healthy state.
People restore seagrass in the Solent to help wildlife.

Seascape

Everything that makes up the coast and sea.
The Solent seascape includes water, land, wildlife, boats and people.

Tide

The regular rise and fall of the sea.

**WHERE IS THE SOLENT? WHAT IS A SEASCAPE?
HOW DO SALTMARSHES, OYSTER REEFS,
SEAGRASS MEADOWS AND SEABIRD NESTING
SITES WORK TOGETHER TO MAKE ONE OF THE
MOST MAGICAL PLACES ON EARTH ?**

**FOLD OUT THIS GIANT FRIEZE TO EXPLORE THIS
INCREDIBLE ECOSYSTEM. LIFT THE FLAPS TO
DISCOVER HOW IT HELPS TO KEEP OUR PLANET
HEALTHY, WHY IT IS THREATENED AND HOW WE
CAN HELP MAKE SURE IT THRIVES FOREVER!**



PLANETARI



**BLUE MARINE
MAX STENBECK
LEGACY PROGRAMME**

