UK COASTAL HABITATS

Entry Level Units

Mapped to AQA Unit Awards Scheme and National Curriculum (KS3)

Yorkshire Marine Nature Partnership
EAST RIDING OF YORKSHIRE COUNCIL
Environment Agency
LCB Education

UK Coastal Habitats

How you might complete aspects of this unit

Make a model

Draw a picture

Watch a video

Learning Outcomes and Checklist

Number	Outcome	Tick when done
1	Identify your nearest coastline using a map or digital tool (summary sheet and/or student completed work)	
2	Identify at least four species commonly found in rockpools at your chosen coastline (summary sheet and/or student completed work)	
3	Show where each of these species is found using a model, drawing, or digital representation (summary sheet and/or student completed work)	
4	Explain one adaptation that helps each identified species survive in its rockpool habitat (summary sheet and/or student completed work)	
5	Describe, using notes, labels, or a short presentation, one way human activity can harm and one way it can help coastal habitats (for example, pollution, habitat loss, eco-tiles, mussel plates, or enhancement projects) (summary sheet and/or student completed work)	
6	Show the effect of adding an ecological enhancement (such as an eco-tile) (summary sheet and/or student completed work)	
7	Locate and label at least three real UK coastal enhancement sites (for example, Scarborough, Blackpool, Brighton, or a local site) on a map or representation, and describe one key feature or intervention at each (summary sheet and/or student completed work)	

Sending work in for certification? Complete the information below

To be completed by the Learner	
Learner Name	
Candidate Number (if you have one)	
To be completed by the Witness	
Witness Name	
Signature	
I observed that the learner successfully completed the above outcomes **Yes** **No**	

What is a coastline?

And why are they important?

A coastline is the edge where the land meets the sea. It's the boundary between two very different worlds—the solid ground we walk on and the vast ocean beyond. Coastlines are found all around the United Kingdom, and they're some of the most interesting and important places on Earth.

Coastlines are incredibly important for many reasons:

For Wildlife:
Coastlines are home to thousands of different plants and animals. Birds nest on cliff edges, fish swim in shallow waters, and creatures like crabs and starfish live in rockpools. Many animals depend on coastal habitats to survive and raise their young.

For People:
Humans have always lived near coastlines. We fish in coastal waters, build towns and cities by the sea, and enjoy holidays on beaches. Coastlines provide us with food, transport routes, and places to relax and have fun.

For the Planet:
Coastlines protect our land from storms and rough seas. They also help clean our water and produce oxygen. Coastal habitats are like nature's nurseries—many sea creatures are born and grow up in shallow coastal waters before moving out to deeper seas.

Key Terms

A coastline is the area where the land ecosystem meets the marine (sea) ecosystem. It's not just a thin line—it's actually a zone of interaction where freshwater, saltwater, and land all meet and influence each other. Coastal ecosystems are shaped by waves, tides, weather, and the creatures and plants that live there.

A coastline on a map is the line on a map that shows where the land meets the sea. It's the boundary between land (shown in colours like green, brown, or tan) and water (shown in blue)."

What are some coastline features?

And how do we find them on a map?

The United Kingdom has many different types of coastlines, each with its own character. See the key terms to the right for an explanation.

Finding a coastline on a map is easier than you might think!

Step 1: Look for the Blue: On most maps, water is shown in blue. The coastline is where the blue (sea) meets the other colours (land). It's usually shown as a clear line between them.
Step 2: Look for the Shape: Coastlines often have interesting, bumpy shapes rather than straight lines. Look for areas where the land juts out into the sea (called headlands or peninsulas) or where the sea cuts into the land (called bays or inlets).
Step 3: Check the Labels: Maps often label important coastal features with names like "Bay," "Point," "Head," or "Cove." These words tell you that you're looking at a coastline.
Step 4: Find the UK Coastline: The United Kingdom is surrounded by coastline on all sides. You can find it by looking at the edges of maps of England, Scotland, Wales, and Northern Ireland. Some of the most famous coastlines include:

- The Jurassic Coast in Dorset (famous for fossils)
- The Cornish Coast (dramatic cliffs and beaches)
- The Welsh Coast (rugged and wild)
- The Scottish Highlands (dramatic and remote)
- The Lincolnshire Coast (sandy and flat)
- The Yorkshire Coast (rugged cliffs to sandy plains)

Key Terms

Rocky Shores: Steep cliffs and rocky beaches where waves crash against stone. You'll find these along much of the Welsh coast, Scotland, and parts of Yorkshire.

Sandy Beaches: Wide, golden stretches of sand perfect for holidays. These are common in southern England and parts of East Anglia.

Salt Marshes: Flat, muddy areas covered in special salt-loving plants. You'll find these in sheltered bays and river mouths, like along the Norfolk coast.

Sand Dunes: Rolling hills of sand held together by tough grasses. These are found in places like Lincolnshire and Wales.

Estuaries: Where rivers meet the sea and fresh water mixes with salt water. These are incredibly rich habitats full of life.

Matching: Key Terms.

Match the key term to its definition.

Sandy Beaches	Steep cliffs and rocky beaches where waves crash against stone. You'll find these along much of the Welsh coast, Scotland, and parts of Cornwall.
Salt Marshes	Wide, golden stretches of sand perfect for holidays. These are common in southern England and parts of East Anglia.
Sand Dunes	Flat, muddy areas covered in special salt-loving plants. You'll find these in sheltered bays and river mouths, like along the Norfolk coast.
Estuaries	Rolling hills of sand held together by tough grasses. These are found in places like Lincolnshire and Wales.
Rocky Shores	Where rivers meet the sea and fresh water mixes with salt water. These are incredibly rich habitats full of life.

1. Draw it.

Draw a sketch (or share a photo) of your nearest coastline, after looking at a map.

Describe the main features of your chosen coastline.

.....

.....

.....

.....

.....

.....

Rock Pools

Fun Fact

Some UK rock pools have existed in the same spot for thousands of years. The rocks themselves might be millions of years old, and the creatures living in them today are the descendants of creatures that lived there when the Romans invaded Britain!

What is a rock pool?

A rock pool is a shallow pool of seawater that gets trapped between rocks on a rocky beach or shore. When the tide goes out, the water stays behind in these natural hollows, creating a miniature ocean habitat. Rock pools are like tiny aquariums that nature has created for us to explore.

Rock pools form in the rocky areas of the coastline, usually in the mid-tide and low-tide zones. They can be as small as a puddle or as large as a small pond. Some rock pools are only a few centimetres deep, while others can be deeper than your waist!

Rock pools are covered and uncovered by seawater twice a day as the tide rises and falls. When the tide comes in, fresh seawater floods the rock pool, bringing nutrients and new creatures. When the tide goes out, the pool is left behind, isolated from the main ocean.

Why are rock pools important to coastlines?

Rock pools might seem like small, insignificant features, but they're actually incredibly important:

- Rock pools are safe places for young fish, crabs, and other sea creatures to grow.
- When storms arrive or temperatures change dramatically, rock pools provide shelter for creatures that can't survive in the open ocean
- Rock pools are rich in food. Algae (seaweed) grows on the rocks, providing meals for herbivores. Small creatures eat the algae, and larger creatures eat the smaller ones
- Despite their small size, rock pools support an amazing variety of life. In a single rock pool, you might find dozens of different species living together. This makes them incredibly important for coastal biodiversity.

Common Creatures in UK Rock Pools

Sea Anemones

Sea anemones look like small flowers made of tentacles. They stick to rocks and wait for tiny creatures to swim into their tentacles, which sting and capture prey. Common species include the beadlet anemone (bright red or green) and the strawberry anemone (pink with white spots). Anemones can survive out of water for short periods by closing up into tight balls.

Crab

Several crab species live in UK rockpools. The common shore crab is greenish-brown and about the size of your hand. It hides under rocks and hunts small creatures. The hermit crab doesn't have a hard shell of its own—it borrows empty snail shells to protect its soft body. Crabs are scavengers, eating dead creatures and algae.

Starfish

Starfish (also called sea stars) have five arms and move slowly across rocks. The common starfish is orange or purple and feeds on mussels and other molluscs. The cushion starfish is smaller and rounder. Starfish are predators, but they move so slowly that their prey doesn't have much to fear!

Common Creatures in UK Rock Pools

Limpets

Limpets are cone-shaped molluscs that cling tightly to rocks. They have incredibly strong suction, and it's almost impossible to remove them without hurting them. Limpets eat algae by scraping it off rocks with their rough, file-like tongues. They're herbivores and can survive out of water for hours.

Mussels

Mussels are dark blue or black shellfish that attach themselves to rocks using tough threads. They filter feed, pulling tiny food particles from the water. Mussels are prey for starfish and other predators, but their hard shells provide good protection.

Blennies

Blennies are small fish (about 10 centimetres long) with smooth, slimy skin. They're excellent at hiding in crevices and under rocks. The common blenny is greenish-brown and has a crest of spines on its head. Blennies are carnivores that hunt small creatures.

Common Creatures in UK Rock Pools

Prawns and Shrimp

These small crustaceans hide under rocks and in seaweed. They're transparent or brownish, making them hard to spot. They're scavengers and predators, eating small creatures and dead organic matter.

Snails

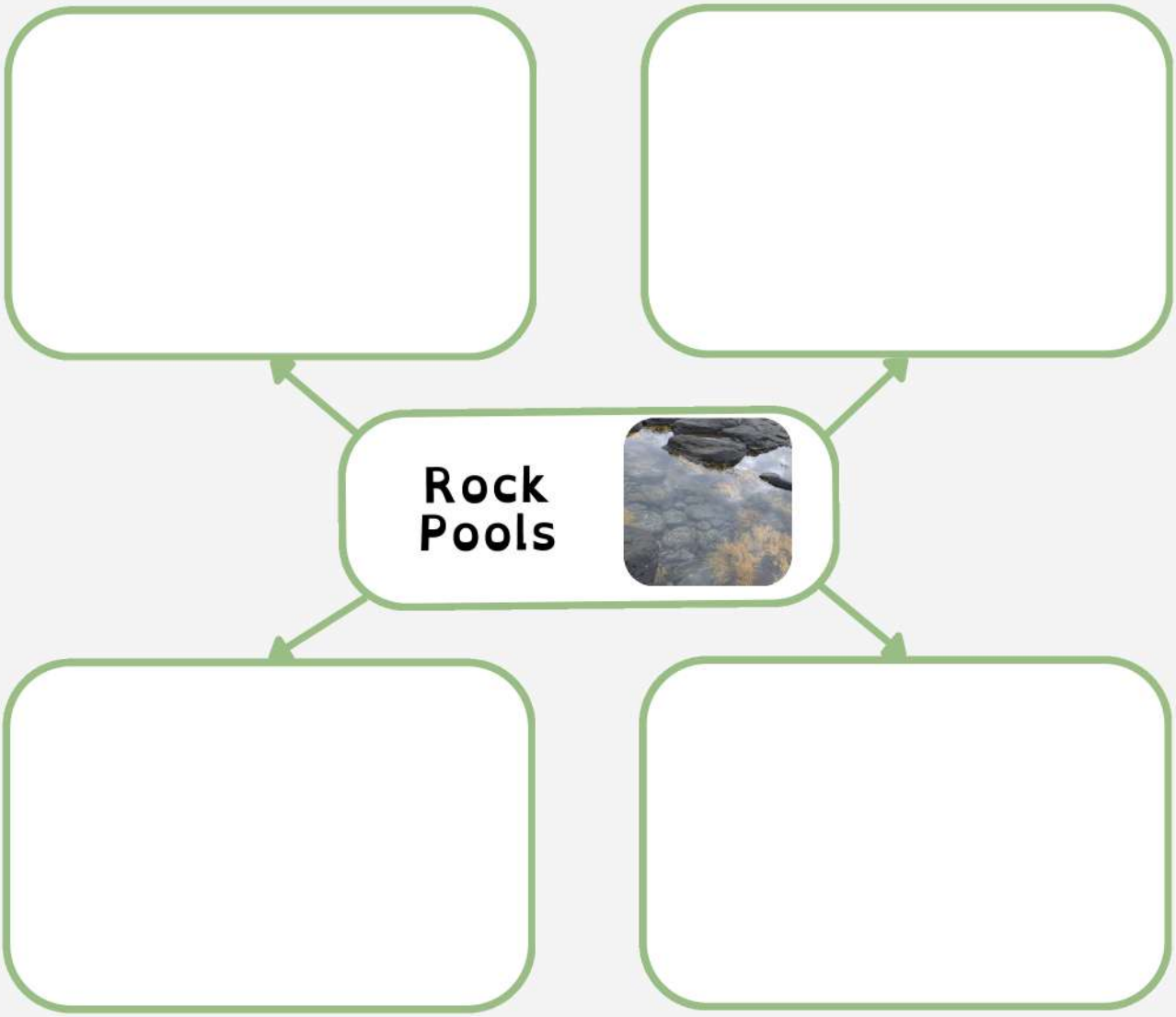
Several snail species live in rockpools. The periwinkle is small and spiral-shelled, and it eats algae. The top shell snail has a cone-shaped shell and is beautifully patterned. Snails are herbivores that graze on algae.

Barnacles

Barnacles look like tiny volcanoes made of shell. They're actually crustaceans (related to crabs) that cement themselves permanently to rocks. They filter feed by opening their shell and sweeping food particles from the water. Barnacles are incredibly tough and can survive out of water for weeks.

2. Find it.

Draw or list some species found in rock pools at your chosen coastline. Can you identify them?



Why are rock pools important to coastal environments?

They are important because

.....

.....

.....

.....

.....

You can also do this as a practical activity at your nearest coastline! What rock pools can you find?

3. Model or Illustrate It.

Make a model or draw an illustration of a rock pool to show where each species would be found.

Reflection- Explain your reasoning for species placement in your model or drawing.

.....

.....

.....

.....

.....

.....

4. Draw it.

Draw an adaptation a species has for a rock pool environment and then explain your image.

Description

The adaptation is .....

.....

.....

.....

Description

The adaptation is .....

.....

.....

.....

Description

The adaptation is .....

.....

.....

.....

Reflection.

What surprised you about the species you found in rock pools?

.....

.....

.....

.....

What did you not find that you expected to? Why do you think they were not there?

.....

.....

.....

.....

Why did the crab refuse to share his rockpool?

Because he was a little shellfish!

Humans Affecting Coastlines

Did you know?

Areas of the Yorkshire coast lose up to 4.5 metres of land every year to coastal erosion, with some places having individual loses of over 20 metres! This means that over a human lifetime, a stretch of coastline could retreat by 360 metres or more.

Humans have lived near coastlines for thousands of years. We depend on the sea for food, transport, energy, and enjoyment. But our activities can both harm and help coastal habitats. Understanding these impacts helps us make better choices about how we treat our coastlines.

Two Ways Human Activity Can Harm Coastal Habitats

Pollution

Pollution happens when harmful substances enter coastal waters and habitats. This can include plastic waste, chemicals from factories and farms, sewage, oil spills, and litter from beaches and boats.

How does it harm coastal habitats? Pollution damages coastal habitats in many ways. Plastic waste can trap and kill sea creatures—birds, fish, and seals can become tangled in fishing nets or mistake plastic for food. Chemicals from farms (like fertilisers) can cause algae to grow out of control, using up all the oxygen in the water and suffocating other life. Oil spills coat rocks, seaweed, and creatures, making it impossible for them to breathe, feed, or move properly.

Coastal Development

Coastal development means building houses, hotels, roads, harbours, and sea defences along the coastline. While these structures are useful for humans, they can destroy or damage natural coastal habitats.

How does it harm coastal habitats? When we build on coastlines, we often remove natural features like sand dunes, salt marshes, and rocky shores. These are replaced with concrete walls, promenades, and buildings. This destroys the homes of countless creatures and plants.

Traditional sea defences (like smooth concrete walls) are particularly harmful. They reflect wave energy back into the sea, which can erode beaches and damage habitats. Smooth concrete provides no shelter or attachment points for creatures like barnacles, mussels, or seaweed. This creates "dead zones" where very little can live.

5a. Draw, Think, Describe.

Draw...	Think...	Describe...
Draw one way humans can **harm** the coastline.	Name the way that humans can **harm** the coastline.	Describe how humans can **harm** the coastline.

What natural ways are coastlines eroded (not through human interaction)?

.....

.....

.....

.....

-Sir David Attenborough

"No one will protect what they don't care about, and no one will care about what they have never experienced. Young people exploring rockpools today become the conservationists of tomorrow."

Humans Affecting Coastlines

Something to think about.

- How could the Concrete Coast Project be used in your local area?
- Have your coastlines been in the news recently?
- Could you visit a beach site in person or virtually to learn more about our coastlines?

But humans don't have to choose between protecting ourselves and protecting nature. Every time we make a decision about our coastlines—whether it's picking up litter on a beach, supporting conservation projects, or designing new sea defences—we have the power to help our coastlines to thrive.

Two Ways Human Activity Can **Help** Coastal Habitats

Coastal Enhancement: The Concrete Coast Project and Eco-Engineering

Coastal enhancement uses clever design and engineering to make human-made coastal structures better for wildlife. Instead of smooth, barren concrete, engineers create textured surfaces with pools, crevices, and attachment points that mimic natural rocky shores.

The Concrete Coast Project is a groundbreaking initiative that has transformed how we think about coastal defences in the UK. The project has shown that by adding simple features to concrete structures, we can create habitats for coastal creatures.

- Textured surfaces that mimic natural rock, giving barnacles, mussels, and seaweed places to attach
- Artificial rockpools built into sea walls, providing shelter for crabs, fish, and anemones
- Crevices and holes where creatures can hide from predators.

Coastal Protection: Marine Protected Areas

Marine Protected Areas (MPAs) are sections of coastline and sea where human activities are carefully managed or restricted to protect wildlife and habitats. Conservation projects work to restore damaged habitats and protect endangered species.

MPAs give coastal habitats a chance to recover from damage. Fishing might be limited or banned, allowing fish populations to grow. Pollution is monitored and controlled. Over time, these areas become havens for wildlife, and creatures can spread from these protected zones to repopulate other areas.

Conservation projects actively restore habitats by replanting seagrass, creating artificial reefs, cleaning up pollution, and reintroducing native species. Volunteers and scientists work together to monitor coastal health and take action when problems arise.

5b. Draw, Think, Describe.

Draw...	Think...	Describe...
Draw one way humans can **help** the coastline.	Name the way that humans can **help** the coastline.	Describe how humans can **help** the coastline.

How can YOU help coastal environments personally?

.....

.....

.....

.....

Dr. Larissa Naylor, Ecologiist

"We've shown that we don't have to choose between protecting people and protecting nature. With creative thinking, we can design coastal defences that do both—and that's incredibly exciting."

Further Study.

Using local news stories, what coastal erosion is present at your nearest coastline?

.....

.....

.....

.....

Do the news stories present the stories as positive or negative? Why?

.....

.....

.....

.....

What are coastal defences?

How do they work?

Coastal defences are structures and strategies designed to protect the coastline from erosion and flooding. They're built to safeguard homes, businesses, farmland, and infrastructure from the power of the sea.

The sea is constantly trying to reshape our coastlines. Waves crash against cliffs and beaches, wearing them away bit by bit. Storms can flood low-lying areas. Without protection, coastal communities would gradually disappear into the ocean - as has happened to many villages throughout history.

Coastal defences work by either:

- Absorbing or deflecting wave energy so it doesn't damage the land
- Trapping sediment (sand and pebbles) to build up beaches
- Creating barriers between the sea and the land
- Working with nature to strengthen natural coastal features

Hard Engineering Defences

These are solid structures built from materials like concrete, steel, wood, or rock. They create physical barriers against the sea. Some examples are

- **Sea Walls**: Tall walls built along the coastline to reflect wave energy back into the sea.
- **Groynes:** Wooden or concrete barriers built out into the sea at right angles to the beach to trap sand and build up the beach.
- **Rock Armour (Rip Rap):** Large boulders piled up along the coast to absorb wave energy.
- **Breakwaters:** Barriers built offshore to reduce wave energy before it reaches the coast.
- **Gabions:** Wire cages filled with rocks, stacked to create walls or barriers.

Key Terms

Coastal defence: A structure or strategy to protect coastlines from erosion and flooding

Erosion: The wearing away of land by waves, wind, and weather

Hard engineering: Solid structures that create physical barriers

Soft engineering: Working with natural processes to protect coastlines

Eco-engineering: Defences that protect both people and wildlife

Sediment: Sand, pebbles, and other materials that make up beaches

Coastal transition - when an area of coastline gradually changes from one type of environment to another. This happens naturally over time as waves, tides, and weather reshape the land and sea.

Matching: Key Terms

Match the key term to its definition.

Hard engineering	A structure or strategy to protect coastlines from erosion and flooding
Soft engineering	The wearing away of land by waves, wind, and weather
Eco-engineering	Solid structures that create physical barriers
Sediment	Working with natural processes to protect coastlines
Coastal defence	Defences that protect both people and wildlife
Erosion	When an area of coastline gradually changes from one type of environment to another.
Coastal transition	Sand, pebbles, and other materials that make up beaches

What are coastal defences?

How do they work?

Soft Engineering Defences
These work with natural processes rather than fighting against them. They're often more environmentally friendly and sustainable.

- **Beach Nourishment:** Adding sand or pebbles to beaches to replace material lost to erosion.
- **Dune Regeneration:** Planting grasses and fencing off sand dunes to help them grow and stabilise.
- **Managed Retreat:** Allowing the sea to flood certain low-value areas naturally, creating salt marshes and wetlands that absorb wave energy.
- **Cliff Regrading:** Reducing the angle of cliffs to make them more stable and less likely to collapse.

Eco-Engineering Defences (Nature-Based Solutions)
These are the newest type of coastal defence, combining engineering with ecological benefits.

- **Living Seawalls:** Sea walls designed with textures and features that support marine life.
- **Artificial Reefs:** Structures placed underwater to reduce wave energy while creating habitats for fish and other creatures.
- **Oyster Restoration:** Encouraging oyster beds to grow, which naturally filter water and reduce wave energy.
- **Saltmarsh Creation:** Restoring or creating salt marshes that absorb wave energy and provide wildlife habitats.

Different coastlines need different types of defences. For instance, much of the East Riding Yorkshire Coast is under a Shoreline Management Plan, which is a policy of no active intervention, meaning natural processes continue. This is good for nature; instead of defences of any sort, communities are supported to transition away from the erosion risk.

Did You Know?

Coastal defences are also important for maintaining our links to history! Many historic buildings, archaeological sites, and culturally important places are located on the coast. Coastal defences help preserve our heritage for future generations.

Portchester Castle is one of the most complete Roman forts in Northern Europe, built nearly 2,000 years ago on the shores of Portsmouth Harbour. Without modern sea defences including rock armour and revetments installed in the 1990s, coastal erosion would have destroyed the southern walls and caused parts of this irreplaceable historic monument to collapse into the sea. The defences have successfully protected this ancient site, alowing millions of visitors to experience Roman and medieval history that would otherwise have been lost forever.

Key Terms: Coastal Defences

Sea Walls

Tall, solid barriers built along the coastline, usually made from concrete or stone. They're designed to reflect wave energy back into the sea, preventing waves from reaching the land behind.

Groynes

Barriers (usually wooden or concrete) built out into the sea at right angles to the beach. They trap sand and pebbles that are being moved along the coast by waves and currents - called longshore drift.

Rock Armour

Large boulders (often weighing several tonnes each) piled up along the coast. The gaps between the rocks absorb wave energy, reducing the force that reaches the land behind.

Living Sea Walls

Instead of smooth concrete, these sea walls have textured surfaces, artificial rockpools, crevices, and water-retaining features designed to support marine life.

Something to think about.

Your generation will be the engineers, scientists, and decision-makers who shape how we protect our coastlines in the future.

What kind of coastal defences would you design?

6. Model or Illustrate It.

Make a model or draw an illustration showing the effect of an ecological enhancement to coastline defences.

Reflection- Describe how the enhancement benefits coastal defences.

.....

.....

.....

.....

.....

.....

Reflection.

Look at your model, and complete the following sentences:

I am most proud of...

.....

.....

.....

I would like to improve...

.....

.....

.....

Why are mussels the best at coastal defence?

Because they really know how to stick together when things get rough!

7. Draw it.

Share a photograph or illustration of part of a map showing the location of an ecological enhancement site and then describe one key feature.

Description

A key feature is .....

.....

.....

.....

Description

A key feature is .....

.....

.....

.....

Description

A key feature is .....

.....

.....

.....

EXTENDED LEARNING OPPORTUNITIES

SITE VISITS

Site Visits: Location

Name the site that you are visiting. Find a scenic view at the site and do a timed drawing of what you see.

Name of site:.....

Something to think about.

"The best way to understand the ocean is to get your feet wet. When you visit a real coastline and see the creatures living there, you realise why protecting these habitats matters so much."

- Dr. Sylvia Earle, Marine Biologist

Site Visits: A Rock Pool

Share a sketch (or photograph) of a rock pool that you observed.

Reflection- Using your senses, describe your experience. (What did you see? What did you smell?)

.....

.....

.....

.....

.....

.....

.....

Site Visits: A Rock Pool

What species did you recognise at your rock pool? Tick the species that you found and record the numbers of each.

Sea Anemones

Blennies

Crab

Prawns and Shrimp

Starfish

Snails

Limpets

Barnacles

Mussels

Site Visits: Coastal Defences

Share a sketch (or a photograph) of a coastal defence that you observed at your site.

Reflection- Using your senses, describe your experience. (How did it feel? What did you see?)

.....

.....

.....

.....

.....

.....

.....

Site Visits: Coastal Defences

Does your site have an ecological enhancement? If so, make a tally chart of the different species you saw making a habitat of the enhancement.

Species (draw or name)	How many?

National Curriculum Mapping

This Unit is also a part of AQA Unit Award Scheme:
UK coastal habitats

Use any AQA Approved centre to get a unit award certificate for this unit.

If you need a centre to do this for you, you can email a digital copy of the finished unit worksheets to
education@littlecraftersboxes.co.uk

	Unit Outcome	NC Links
1	Identify your nearest coastline using a map or digital tool (summary sheet and/or student completed work)	Geography KS3 - Geographical Skills and Fieldwork • "Build on their knowledge of globes, maps and atlases and apply and develop this knowledge routinely in the classroom and in the field" • "Interpret Ordnance Survey maps in the classroom and the field, including using grid references and scale, topographical and other thematic mapping" Geography KS3 - Locational Knowledge • "Extend their locational knowledge and deepen their spatial awareness of the world's countries" (UK context) Age Appropriateness: • Year 7 (11-12): Perfect introductory activity for map skills • Year 8-9 (12-14): Can extend to using digital mapping tools (GIS, Google Earth) Skills Developed: • Map reading • Use of digital tools • Spatial awareess • Locational knowledge
2	Identify at least four species commonly found in rockpools at your chosen coastline (summary sheet and/or student completed work)	Science KS3 - Working Scientifically • "Make and record observations and measurements using a range of methods for different investigations" • "Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work" Science KS3 - Biology: Relationships in an Ecosystem • "The interdependence of organisms in an ecosystem, including food webs and insect pollinated crops" Geography KS3 - Geographical Skills and Fieldwork • "Collect, analyse and communicate with a range of data gathered through experiences of fieldwork" Age Appropriateness: • Year 7 (11-12): Identifying and naming species (observational skills) • Year 8-9 (12-14): Understanding species roles within ecosystems Skills Developed: • Observational skills • Species identification • Scientific recording • Fieldwork techniques
3	Show where each of these species is found using a model, drawing, or digital representation (summary sheet and/or student completed work)	Science KS3 - Working Scientifically • "Present observations and data using appropriate methods, including tables and graphs" • "Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions" Geography KS3 - Geographical Skills and Fieldwork • "Interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)" • "Communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length" Art & Design KS3 • "Use a range of techniques to record their observations in sketchbooks, journals and other media as a basis for exploring their ideas" Age Appropriateness: • Year 7 (11-12): Simple drawings and labels • Year 8 (12-13): More detailed models or diagrams showing zonation • Year 9 (13-14): Digital representations, 3D models, or interactive presentations Skills Developed: • Data presentation • Visual communication • Scientific illustration • Use of digital tools

National Curriculum Mapping

This Unit is also a part of AQA Unit Award Scheme:
UK coastal habitats

Use any AQA Approved centre to get a unit award certificate for this unit.

If you need a centre to do this for you, you can email a digital copy of the finished unit worksheets to
education@littlecraftersboxes.co.uk

	Unit Outcome	NC Links
4	Explain one adaptation that helps each identified species survive in its rockpool habitat (summary sheet and/or student completed work)	**Science KS3 - Biology: Relationships in an Ecosystem** • "How organisms are adapted to survive in their environment, including microorganisms" **Science KS3 - Working Scientifically** • "Apply mathematical concepts and calculate results" • "Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions" **Science KS3 - Biology: Genetics and Evolution** • "Heredity as the process by which genetic information is transmitted from one generation to the next" • "Changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction" **Age Appropriateness:** • **Year 7 (11-12)**: Simple adaptations (e.g., "limpets have strong suction to stay attached") • **Year 8 (12-13)**: More detailed explanations linking structure to function • **Year 9 (13-14)**: Understanding adaptations in context of environmental pressures and evolution **Skills Developed:** • Scientific explanation • Linking structure to function • Understanding cause and effect • Biological reasoning
5	Describe, using notes, labels, or a short presentation, one way human activity can harm and one way it can help coastal habitats (for example, pollution, habitat loss, eco-tiles, mussel plates, or enhancement projects) (summary sheet and/or student completed work)	**Geography KS3 - Human and Physical Geography** • "Understand, through the use of detailed place-based exemplars at a variety of scales, the key processes in: physical geography relating to... coasts" • "Understand how human and physical processes interact to influence, and change landscapes, environments and the climate" **Science KS3 - Biology: Relationships in an Ecosystem** • "The importance of plant reproduction through insect pollination in human food security" (broader context: human impact on ecosystems) • "How organisms are adapted to survive in their environment" **Science KS3 - Working Scientifically** • "Present reasoned explanations, including explaining data in relation to predictions and hypotheses" • "Evaluate data, showing awareness of potential sources of random and systematic error" **Geography KS3 - Geographical Skills and Fieldwork** • "Communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length" **Age Appropriateness:** • **Year 7 (11-12)**: Simple descriptions of harm (pollution) and help (beach cleans) • **Year 8 (12-13)**: More detailed analysis of impacts and solutions • **Year 9 (13-14)**: Evaluation of different approaches, understanding trade-offs **Skills Developed:** • Analytical thinking • Balanced argument • Communication skills • Understanding human-environment interactions

National Curriculum Mapping

This Unit is also a part of AQA Unit Award Scheme:
UK coastal habitats

Use any AQA Approved centre to get a unit award certificate for this unit.

If you need a centre to do this for you, you can email a digital copy of the finished unit worksheets to
education@littlecraftersboxes.co.uk

	Unit Outcome	NC Links
6	Show the effect of adding an ecological enhancement (such as an eco-tile) (summary sheet and/or student completed work)	**Science KS3 - Working Scientifically** • "Understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas" • "Evaluate risks" **Science KS3 - Biology: Relationships in an Ecosystem** • "The interdependence of organisms in an ecosystem" • "How organisms are adapted to survive in their environment" **Geography KS3 - Human and Physical Geography** • "Understand how human and physical processes interact to influence, and change landscapes, environments and the climate" **Design & Technology KS3** • "Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work" • "Understand how more advanced mechanical systems used in their products enable changes in movement and force" (broader context: understanding engineered solutions) **Age Appropriateness:** • **Year 7 (11-12)**: Simple before/after comparisons • **Year 8 (12-13)**: Understanding how design features support biodiversity • **Year 9 (13-14)**: Evaluating effectiveness, suggesting improvements **Skills Developed:** • Cause and effect reasoning • Evaluation skills • Understanding conservation solutions • Design thinking
7	Locate and label at least three real UK coastal enhancement sites (for example, Scarborough, Blackpool, Brighton, or a local site) on a map or representation, and describe one key feature or intervention at each (summary sheet and/or student completed work)	**Geography KS3 - Locational Knowledge** • "Extend their locational knowledge and deepen their spatial awareness of the world's countries" (UK focus) **Geography KS3 - Place Knowledge** • "Understand geographical similarities, differences and links between places through the study of human and physical geography of a region within the UK" **Geography KS3 - Human and Physical Geography** • "Understand, through the use of detailed place-based exemplars at a variety of scales, the key processes in: physical geography relating to... coasts" **Geography KS3 - Geographical Skills and Fieldwork** • "Build on their knowledge of globes, maps and atlases and apply and develop this knowledge routinely in the classroom and in the field" • "Interpret Ordnance Survey maps in the classroom and the field, including using grid references and scale" • "Communicate geographical information in a variety of ways, including through maps" **Age Appropriateness:** • **Year 7 (11-12)**: Locating and labelling sites on a map • **Year 8 (12-13)**: Describing features with more detail • **Year 9 (13-14)**: Comparing sites, analysing effectiveness of different interventions **Skills Developed:** • Case study analysis • Map skills • Comparative analysis • Understanding real-world applications

The content in this unit is mapped to AQA Unit Award Scheme: Unit NUMBER
Scan the QR Code to see a lesson on this topic →

LCB Education

ABOUT LCB WORKBOOKS

At LCB Education and Little Crafters Boxes, we're passionate about making learning accessible, inclusive, and engaging for everyone. Our workbooks are designed by experienced teachers and standardised by qualified professionals to support learners in school and home education settings, as well as all kinds of flexible and alternative learning environments.

What Makes Our Workbooks Different?

- Creative & Topic-Based: Each workbook takes a topic-based approach, encouraging curiosity, creativity, and hands-on learning across subjects.
- Mapped to National Curriculum & AQA: All units are clearly mapped to the National Curriculum and the AQA Unit Award Scheme. Workbooks can be used independently to complete outcomes, and are suitable as evidence of progress in both home education and school settings.
- Accessible by Design: We use dyslexia-friendly fonts, gentle colour contrasts, and print on recycled paper—which is both eco-conscious and easier on the eyes than standard white.
- Flexible & Inclusive: Activities are structured for easy navigation, with plenty of space for creativity and reflection. Our content reflects a wide range of experiences and abilities, so everyone feels represented.
- Eco-Conscious & British Made: Proudly designed and manufactured in the UK, using sustainable materials and supporting British manufacturing.
- Continuous Improvement: We listen to feedback and regularly update our resources to make them even more inclusive and effective.

Whether you're learning in school, at home, or anywhere in the world, our mission is to make high-quality education accessible for all.

What do the Different Levels Mean?

Level	Typical Key Stage(s)	Typical Age Range	Equivalent/Notes
Pre-Entry	EYFS, KS1, KS2	4–11	Working below Entry Level 1; highly supported; often used in SEND/alternative provision
Entry Level 1	KS1, KS2	5–11+	Early primary, emerging skills
Entry Level 2	KS2	7–12+	Primary, developing basic skills
Entry Level 3	KS2, KS3	9–14+	Upper primary/lower secondary, consolidating basics
Functional Skills Level 1	KS3, KS4	13–16+	Comparable to GCSE grades 1–3 (D–G)
Functional Skills Level 2	KS4, Post-16	15–adult	Comparable to GCSE grades 4–9 (A*–C); suitable for older learners and adults

Find out more:

www.lcbeducation.co.uk

education@littlecraftersboxes.co.uk