

Geography

Local study: Coasts Year 3

Remember when

- Hull (Year 2)
- Rocks (Year 3)

Sticky knowledge

- Features of coastal areas include beach, farmland, lighthouse, caravan parks
- I know that the wind, sea and changes in temperature cause coastal erosion.
- I know erosion can change the characteristics of the coast creating features such as arches, stacks, stumps and caves.
- I know that sea walls, groynes and rock armour are used to prevent and slow coastal erosion.

Key vocabulary

coasts	shingle
cliffs	rockpool
arch	lighthouse
beach	erosion
pier	tourism
harbour	grid reference
Key	Stumps
Stack	Arches
Cave	Sea walls
Sea	spit
boulder	
barriers	
ordnance	
survey	
map	

National curriculum

Human and physical Geography

- Describe and understand key aspects of:

physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle

Geographical skills and fieldwork

- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world
- Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.

	Title/ focus	Lesson outline
Lesson 1	<p>LO: To use compass directions and maps to identify the features of coastal areas.</p> <p>SK: Features of coastal areas include beach, farmland, lighthouse, caravan parks</p>	<p>Remember when? – 4 countries of the UK and their capital cities – display on IWB. Children discuss with TP and share with class</p> <p>Locate Hull on a map of the UK – TP and discuss</p> <p>Look at maps - how do you know where the coast is? Children find Hull and locate coastal towns near us.</p> <p>Introduce/revisit (if already taught during Maths) compass directions. Use ordnance survey maps with a key to introduce to basic symbols associated with the coast. Which do you think represents the beach/lighthouse/farmland, buildings.</p> <p>Activity 1 -</p> <p>Children complete OS symbols activities in books</p> <p>WTS - matching</p> <p>EXS – name the symbols</p> <p>Introduce the term land use - what the land is used for. What is the land used for in coastal areas near to us? Discuss tourism. Have they ever visited the beach – remember a trip to Hornsea in year 1, what did you see at the coast?</p> <p>Features of coasts e.g. beach, cliffs, towns, villages, wind farms</p> <p>Activity 2 -</p> <p>Children answer questions in books re land use of coastal areas.</p>

		<p>*Land at the coast is used for... an example is...*</p> <p>GDS – How would these examples of land use benefit tourism?</p>
Lesson 2	<p>LO: To know why coasts erode</p> <p>SK: I know that the wind, sea and changes in temperature cause coastal erosion.</p>	<p>Remember when? Discuss rocks and soil topic (science) Remind children about the types of rocks and soils and which were hard and soft. E.g Granite/Marble are hard rocks and chalk is a soft rock.</p> <p>Discuss that Coastal erosion is the wearing away of land from the coast line – through the sea, wind and changes in temperature. Also, human impact E.g farming and housing developments.</p> <p>Children to write definition of coastal erosion in books to refer back to during topic.</p> <p>Show children video clip of coastal erosion along the Holderness coast. Discuss video and ask children to discuss with partners why they think the Coast erodes so quickly?</p> <p>Children complete cookie erosion experiment. (Wind causes the least amount of damage but small rocks will be moved/disturbed. Rocks and abrasion cause more damage but water – rough waves/stormy weather will cause the most damage)</p> <p>Explain that the Holderness coast consists of a lot of boulder clay and chalk cliffs which erode easily as these are examples of soft rocks.</p> <p>Discuss the names of different types of erosion focusing on hydraulic action, abrasion, attrition and solution.</p> <p>Activity –</p> <p>Children to write definition of each type of erosion.</p> <p>WTS – Complete the sentences using key words to fill in the gaps.</p> <p>EXS – Write own sentences to explain each type of erosion</p> <p>GDS – Write own sentences and explain which type would cause the most damage to the coast and why.</p>
Lesson 3	<p>LO: To know the features of coastal erosion</p> <p>SK: I know erosion can change the characteristics of the coast creating features such as arches, stacks, stumps and caves.</p>	<p>Recap previous lesson – What is the coast? What is land used for at the coast? What human and physical features would we see at the coast? Discuss why coastlines will look different in different places E.g types of rock, weather in those locations...</p> <p>Show the children images of caves, arches, stacks and stumps. Children in partners/small groups to predict how they are formed using mixed up picture cards with explanation. Discuss children's reasoning. Show correct formation on IWB explaining each step and how each feature is formed.</p> <p>Activity -</p> <p>All: Label each feature of coastal erosion on a picture and write a simple explanation of how each one is formed. EXS/GDS to describe in detail.</p> <p>Challenge – Where would the original headland be? Draw on a sticker and explain their reasoning.</p> <p>*If trip to Bempton cliffs has taken place recap what features they saw – arch, cave, crack*</p> <p>Plenary - Show how coastal erosion can also deposit land in other areas such as Spurn point - https://www.internetgeography.net/topics/spurn-point/</p>
Lesson 4	<p>LO: To know how coastal erosion can be prevented or slowed down</p> <p>SK: I know that sea walls, groyne and rock armour are used to prevent and slow coastal erosion.</p>	<p>Recap how coastlines erode – Hydraulic action, abrasion, attrition and solution.</p> <p>Explain that today's lesson will focus on: How to prevent coastal erosion.</p> <p>Discuss 3 different ways to protect the coast – sea walls, groyne and rock armour. Discuss advantages and disadvantages of each. For example rock armour is easy to maintain and can encourage people to come fishing but is expensive to have the rocks transported into the area.</p> <p>Show examples of them being used along the Holderness coast – e.g. at Withernsea https://www.internetgeography.net/new-sea-defences-at-withernsea/ (and others such as Skipsea: https://www.internetgeography.net/coastal-erosion-at-skipsea)</p>

		<p>*Class discussion - Refer to trip to Bempton cliffs, if trip has already taken place. Did they see any coastal protection techniques implemented at Bempton? Does human impact change what the coast looks like at Bempton? E.g bird watchers and littering*</p> <p>Activity-</p> <p>Children to have photographs of each type of coastal erosion prevention in their books.</p> <p>All – Children name the prevention technique</p> <p>WTS – Simple sentences explaining what each technique is.</p> <p>EXS – Explain what each technique is and how it works.</p> <p>GDS – As above and include advantages and disadvantages for each technique.</p> <p>Challenge: Which, if any, would work well along the Holderness Coast? And why?</p>
Lesson 5	<p>LO: To use fieldwork and research to improve a coastal location</p> <p>SK: I know that sea walls, groynes, boulder barriers are used to prevent and slow coastal erosion.</p>	<p>Design a system to prevent coastal erosion on the Holderness coast. Recap every thing we have learnt so far about the coast and coastal erosion. Children to use this knowledge to work in partners/small groups to design their own technique to prevent coastal erosion.</p> <p>Show children a range of videos about Flamborough to support learning and ideas. https://www.internetgeography.net/videos/coastal-videos/flamborough-videos/</p> <p>Activity -</p> <p>Children create a poster showing their ideas. Including a name, materials needed and an explanation to describe how it would work.</p>

Fieldwork – Trip to Bempton Cliffs with Hull Children’s University (Investigating coasts)

LO: To use fieldwork to map a coastal area

SK: I can include human and physical features on my own map

Children will explore the magnificent cliffs at Bempton.

Discussion to be had prior to trip referring to learning in Lesson 3 - what features might we expect to see on the coastline e.g crack, cave, arch, stack and stump. What do they see when they are there?

The children will study the local coast formations by working in small groups led by staff at Bempton Cliff to identify the features of the coastline and consider how it was created, considering the natural processes such as erosion, wave energy and weather.

Children to create a field sketch map of the coastline. In groups, the children will identify any wildlife they can see e.g. different birds that live on the cliffs.