

Manor Primary School

Subject: Geography

Year 6 Autumn Term: Rivers and Coasts

Overview of the Learning:

In this unit children will develop and extend their knowledge and understanding of the location and characteristics of the world's significant human and physical features.

Children will develop their geographical knowledge, understanding and skills to enhance their locational and place knowledge. To further support this learning children will be provided with the opportunity to carry out fieldwork skills within their area discovering and drawing conclusions about rivers and coasts in the locality.

Core Aims

The national curriculum (KSI and KS2) for geography aims to ensure that all pupils:

- develop contextual knowledge of the location of globally significant places both terrestrial and marine — including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- > understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time
- > are competent in the geographical skills needed to:
- > collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes
- 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.

Key Concept:

4 Human and Physical processes

Second Order Concept:

♣ Cause and consequence

Prior Learning:

- Locational knowledge of coastal locations in the British Isles in Year I Seaside Locations
- Exploring physical and human processes in Year 4 Barmouth: A contrasting locality
- ★ Key processes of a land form in Year 5 The Mountain Environment

End Point:

♣ Have a secure understanding of what a river is and the key features of rivers

Disciplinary Knowledge:

- lacktriangle Locate rivers and coasts in the UK using maps, atlases and digital mapping
- Identify landforms created by rivers
- 4 Use fieldwork and observational skills to study the key features of rivers
- Identify coastal management strategies

Substantive Knowledge:

- What is a river?
- ♣ What is a coast?
- ♣ What are the world's longest rivers?
- ♣ What are some of the rivers in England?
- mid What is the longest river in the UK?
- What is our nearest river?
- ♣ What is the start of a river?
- ♣ What is the end of a river?
- What journey does a river take?
- lacktriangle What is the route of a river?
- ♣ What is the flow of a river?
- ♣ Where is Carding Mill Valley?
- 🖶 What shape do rivers take?
- What land forms are created by rivers?
- ♣ What is an Oxbow Lake?
- 🖶 What is a waterfall?
- ♣ What is flooding?
- ♣ What types of rivers flood?
- 🖶 What impact does flooding have on people and places?



- lacktriangle ldentify rivers within the UK
- 🖶 Identify and explain key landforms created by rivers
- 4 Define flooding and the impact of flooding on people and places
- ➡ Identify human and physical features of the coastline.
- ♣ Define erosion and explain how the coastline changes over time

Future Learning:

¥ Year 6 - A study of our capital city: London

- ♣ What can humans do to prevent flooding?
- ♣ What physical features can be seen at the coast?
- What human features can be seen at the coast?
- ♣ What is erosion?
- ♣ What is the pace of change at the coastline?
- ♣ What is the most common depositional land form?
- ♣ What coastal managements strategies are effective?

Procedural Knowledge:

- 🖶 How to locate a river on a map
- How to locate coasts on a map
- 🖶 How to link mountains and rivers together
- How to locate rivers on a map
- How to identify the number of rivers in England
- How to map rivers and create a key
- How to locate rivers in England
- How to identify rivers in the UK
- How to identify the key features of a river
- How to identify landforms created by rivers
- How to link coasts and rivers together
- How to identify how the coastline changes over time
- How to identify coastal management strategies

Children should be taught by the end of UKS2:

Locational knowledge

- use maps to locate the world's countries with a focus on Eastern Europe and North/South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities;
- name and locate counties and cities of the United Kingdom, identifying their physical features, including mountains, and rivers, and land-use patterns; showing change over time;
- identify the position and significance of latitude, longitude, Equator, Northern
 Hemisphere, Southern Hemisphere and use longitude and latitude to find locations on a
 map;



use key vocabulary to demonstrate knowledge and understanding in this strand: atlas, index, coordinates, latitude, longitude, contour, altitude, peaks, slopes, continent, country, city, North America, South America, border, key, Prime/Greenwich Meridian, Topics of Cancer and Capricorn.

Place Knowledge

- understand geographical similarities and differences through the study of human geography of a region of the United Kingdom, a region of Eastern Europe and North/South America;
- understand geographical similarities and differences through the study of physical geography of a region of the United Kingdom, a region of Eastern Europe and North/South America:
- use key vocabulary to demonstrate knowledge and understanding in this strand: latitude, Arctic Circle, physical features, climate, human geography, land use, settlement, economy, natural resources, Afghanistan, Iran, Iraq, Saudi Arabia, Yemen, North and South Korea, Hong Kong, Zimbabwe, Sudan, China

Human and Physical Geography

- describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, mountains and the water cycle;
- describe and understand key aspects of human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water;
- use key vocabulary to demonstrate knowledge and understanding in this strand: environmental disaster, settlement, resources, services, goods, electricity, supply, generation, renewable, non-renewable, solar power, wind power, biomass, origin, import, export, trade, efficiency, conservation, carbon footprint, peak, plateau, fold mountain, fault-block mountain, dome mountain, volcanic mountain, plateau mountain, tourism, positive, negative, economic, social, environmental, topography, erosion

Geography Skills and Fieldwork

- use maps, atlases, globes and digital/computer mapping to locate countries and describe features;
- 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 human features using a range of methods, including sketch maps, plans and graphs, and digital technologies;
- use key vocabulary to demonstrate knowledge and understanding in this strand: atlas, index, coordinates, latitude, longitude, key, symbol, Ordnance Survey, Silva compass, legend, borders, fieldwork, measure, observe, record, map, sketch, graph



Curriculum Expectations

- Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities.
- Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time
- Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America
- To be able to describe physical geography, including: rivers and the water cycle and human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.
- 🔸 To use maps, atlases, globes and digital/computer mapping to locate countries and describe features of rivers and coasts they will study in our locality and in the wider world.
- To 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 and develop their knowledge of the United Kingdom and the wider world (when completing first-hand experience / orienteering walking trails educational visit to study a river Carding Mill Valley)
- To 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.

Outcomes

Across the unit the children will:

- use maps to locate the world's countries with a focus on Eastern Europe and North/South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities;
- 🔺 name and locate counties and cities of the United Kingdom, identifying their physical features, including mountains, and rivers, and land-use patterns; showing change over time;
- understand geographical similarities and differences through the study of human geography of a region of the United Kingdom, a region of Eastern Europe and North/South America;
- understand geographical similarities and differences through the study of physical geography of a region of the United Kingdom, a region of Eastern Europe and North/South America;
- describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, mountains and the water cycle;
- describe and understand key aspects of human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water;
- 🖶 use maps, atlases, globes and digital/computer mapping to locate countries and describe features;
- 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 human features using a range of methods, including sketch maps, plans and graphs, and digital technologies;

Cross Curricular links:

History — The Ancient Egyptians — focusing on the river Nile and the impact it had on the Ancient Egyptian people

Science - What happens when water falls on different surfaces? Carry out a scientific experiment to find out. Which areas of ground in the school would absorb rainwater and which hold it at the surface - you could look at how this links to flood management in high risk areas.

Maths - Use string or long strips of paper and a suitable scale (eg lcm = lkm) to create representations of the UK's major rivers.

Maths - Look at videos or photographs of two differing rivers (for example, The Amazon and the River Camel). Compare the features that each one has, identifying ones they both have, ones that only one has and ones that neither river has. Use a Venn diagram and vocabulary cards to show the findings of the comparison.

English - Use a river's life story as the theme for a piece of biographical writing. Share 'River Story' by Meredith Hooper to inspire children's writing — this is a non-fiction text about the course of a river, but presented in a fictional style.



Building Cultural Capital

The children will be given the opportunity to take part in a river field study at a local river — Carding Mill Valley to enhance their understanding of how rivers are formed and the key features. The will record data from the field study looking at the upper, middle and lower course and will find the speed of the river. The children will use their maths learning to support the testing ensuring they look at fair tests and repeat testing to find the average.

Learning Objectives	Suggested Learning Opportunities	Vocabulary	Resources and hooks for
			learning.
To locate the world's	Substantive Knowledge:	river, coast,	A range of different photographs
major rivers and	What is a river?	mountain, map, key	of rivers and coasts to hook and
coasts.	What is a coast?		engage the children at the start of
	What are the world's longest rivers?		the topic.
To map the world's			
major rivers and	Procedural Knowledge		
coasts accurately	How to locate a river on a map		
using a key.	How to locate coasts on a map		
	How to link mountains and rivers together		
	How to map rivers and create a key		
	Share images of rivers and coasts with the children		
	Locate rivers using maps, atlases and digital mapping		
	♣ Plot world's major rivers on a map using a key		
	♣ Discuss how mountains link to rivers		
	Discuss the similarities and differences of rivers and coasts		
To identify and	Substantive Knowledge:	river, coast,	A range of atlases/maps of rivers
locate key rivers in	What are some of the rivers in England?	mountain, map, key,	in the UK.
the UK.	What is the longest river in the UK?	topographical	Rivers in the UK information page:
	What is our nearest river?		https://central.espresso.co.uk/espres
To map key			so/
topographical and	Procedural Knowledge		primary_uk/subject/module/factfile/
physical features in	How to identify the number of rivers in England		item1212444/grade2/module11960
the UK	How to map rivers and create a key		44/index.html



To investigate rivers using a range of sources.	How to locate rivers in England How to identify rivers in the UK Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? Discuss with children any rivers they already know in the UK using their prior knowledge Use maps, globes and digital mapping to locate key rivers in the UK Plot key rivers in the UK on a map identifying the longest rivers, closest rivers to Wolverhampton, sharing geographical information.		HOOK: locate the river game quiz (could be used as a mini plenary session) https://central.espresso.co.uk/espres so /primary_uk/sub_ject/module/activi ty/ item1210703/grade2/module11960 44/index.html
To be able to describe physical geography of rivers. To use key geographical vocabulary relating to rivers.	Substantive Knowledge: What is the start of a river? What is the end of a river? What journey does a river take? What is the route of a river? Procedural Knowledge How to identify the key features of a river	source, estuary, tributary, reservoir, meander, delta, upper course, middle course, lower course, valley, channel, confluence, flood plain, levee, delta, estuary	Create a classroom 3D display using key vocabulary for the children to use to support their understanding.
	 Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? ➡ Discuss where a river starts (make links to mountains) and where a river ends. ➡ Using books, atlases and internet sources children to investigate and learn about the route taken by a river from the source to its estuary. ➡ Identify key vocabulary related to the route taken from the source to the estuary and create a glossary of terms 		
To use the eight points of a compass, four and six-figure grid references, symbols and key to build and develop knowledge of a place in the United Kingdom.	Substantive Knowledge: Where is Carding Mill Valley? Procedural Knowledge How can we test our expectations about rivers in the study? What should we investigate Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK?	grid references, contour lines, ordnance survey map	https://osmaps.ordnancesurvey.co.uk/52.54-717,-2.82388,16 Carding Mill Valley website is useful to show the children as a hook for learning: https://www.nationaltrust.org.uk/carding-mill-valley-and-the-long-mynd



To use fieldwork to observe, measure and record the human and physical features in the local area using a range of methods, including sketch maps.	What is the start of a river? What is the end of a river? What journey does a river take? Discuss with children what they might expect to see at Carding Mill Valley. Introduce the children to the Long Mynd using photographs and OS maps. Discuss contour lines and what they show Locate Carding Mill Valley on a map of the UK using a compass and grid references Field Study — A visit to Carding Mill Valley Substantive Knowledge: Where is Carding Mill Valley? What are the key features of a river? Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? What is the start of a river? What is the end of a river? What journey does a river take? Where is Carding Mill Valley? Complete sketches of the waterfall and tributaries at different points. Children to draw field sketches facing different directions (using a compass) Identify the tributaries at different points. Discuss what the children notice about the course of a river Carry out measurements of the width, depth and speed of the river at three different points.	source, estuary, tributary, reservoir, meander, gorge, delta, upper course, middle course, lower course, valley, channel, waterfall, rapids, confluence, flood plain, levee, delta, estuary.	Small maps of Carding Mill Valley Compasses Information booklet for children to sketch and make notes ready for class learning.
To present the human and physical features of a river using a range of methods, including sketch maps, plans and graphs, and digital technologies.	Follow up Field Study — A visit to Carding Mill Valley Substantive Knowledge: Where is Carding Mill Valley? What are the key features of a river? Lateral Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? What is the start of a river? What is the end of a river? What journey does a river take? Where is Carding Mill Valley?	source, estuary, tributary, reservoir, meander, gorge, delta, upper course, middle course, lower course, valley, channel, waterfall, rapids, confluence, flood plain, levee, delta, estuary.	Small maps of Carding Mill Valley Children to use their information booklet they used during the fieldwork to sketch and make notes ready for class learning.



	Children to present a river study sharing their findings in a case study using evidence, recordings, photographs, charts and graphs and a detailed written analysis.		
To use key geographical vocabulary relating to rivers. To investigate the human and physical geographical aspects of rivers.	Substantive Knowledge: What shape do rivers take? What land forms are created by rivers? What is an Oxbow Lake? What is a waterfall? Procedural Knowledge How to identify land forms created by rivers How does a river travel? \$\frac{\text{Sticky Knowledge}}{\text{What}}\$ is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? What is the start of a river? What is the end of a river? What journey does a river take? Where is Carding Mill Valley? What are the key features of rivers? \$\frac{\text{Discuss landscape}}{\text{ features}}\$ features of rivers? \$\frac{\text{Lind industry}}{\text{ lind stardy}}\$ of Carding Mill Valley. \$\frac{\text{Lind industry}}{\text{ lind stardy}}\$ of Carding Mill Valley. \$\frac{\text{Lind industry}}{\text{ lind stardy}}\$ of Carding Mill Valley. \$\frac{\text{Lind ind investigate}}{\text{ how the landscape}}\$ features. \$\frac{\text{Children to investigate}}{\text{ how the landscape}}\$ features are formed and how they affect the course of a river. Discuss problems associated with each, affecting people and places. \$\frac{\text{ Produce a section for an encyclopaedia/information leaflet explaining erosion, transportation and deposition. \$\frac{\text{ Create}}{\text{ create}}\$ an explanation text about the landscape features associated with a river}	erosion, transportation, deposition, meander, oxbow lake, waterfall, overhang, load.	A range of visual sources of rivers and how they can affect the landscape. http://www.bbc.co.uk/schools/rivers andcoasts/http://primaryhomeworkhelp.co.uk/rivers.html Practical hook: In the school hall or playground, show children the larger meanders and demonstrate the direction of flow. Ask children to stand in lines across the start of the river and carefully walk around the river, trying to remain in their lines. At the meanders, ask the children at the edges what happened — those on the inside of the curve should have found they were left behind a little bit, and those on the outside of the curve had to move faster to keep up. Repeat this with children picking up and/or dropping bean bags to show where erosion and deposition occur. If time allows, children could also demonstrate how oxbow lakes form by allowing the child on the outside.
To investigate land uses and understand how some of these aspects have changed over time.	Substantive Knowledge: What is flooding? What types of rivers flood? What impact does flooding have on people and places? What can humans do to prevent flooding?	flood, restrict, prevent, topographical features	A range of images where rivers have been flooded. http://primaryhomeworkhelp.co.uk/
To identify key physical characteristics and key	Disciplinary Knowledge:		rivers.html http://www.bbc.co.uk/learningzone/ clips/



topographical features	How to identify how flooding is managed		Primary/Geography/Rivers/page-
of rivers,			1.html?pagesize=12&format=list
	 ♣ Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? What is the start of a river? What is the end of a river? What journey does a river take? Where is Carding Mill Valley? What are the key features of rivers? What shape do rivers take? What landforms are created by rivers? ♣ Display and discuss images/news articles/video clips of flooding in the River Severn (our local river). ♣ Discuss how flooding is prevented by humans. For example: Thames Barrier. ♣ Children to investigate the consequences of a river flooding in a local area. ♣ Children could create a newspaper report, news broadcast or first person account. ♣ Create a graph to show the amount of rainfall between two river locations and draw conclusions. 		
To identify human	Substantive Knowledge:	coast, bay, headland,	Range of different coastal
and physical features	What physical features can be seen at the coast?	beach, dune, cave,	photographs to explore.
of the coastline.	What human features can be seen at the coast?	cliff, arch, stack,	
		stump, spit, erosion,	Use of technology would enhance
To ask and respond to	Procedural Knowledge	deposition	this lesson for children being able
geographical questions.	How to link coasts and rivers together		to experience what coastal areas are like.
	 Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? What is the start of a river? What is the end of a river? What journey does a river take? Where is Carding Mill Valley? What are the key features of rivers? What shape do rivers take? What landforms are created by rivers? What is flooding? What impact does flooding have on people and places? ↓ Discuss the meaning of 'coast' and how coasts link to rivers. ↓ Discuss what the coast is like (link to learning of Seasides in Year I). ↓ Discuss where the coast is found. ↓ Use a blank map of the UK to locate key coastal regions, identifying the river estuaries that feed into the sea. ↓ Children to investigate the features of a coastline using diagrams to support. ↓ Draw a diagram of a coastline, identifying the key features found at the coast. 		



	Children could investigate and create a case study for one specific coastline, identifying the key geographical features found there.		
To investigate how land changes over time. To use key geographical vocabulary.	Substantive Knowledge: What is erosion? What is the pace of change at the coastline? What is the most common depositional landform?	physical weathering, chemical weathering, biological weathering, erosion.	Use a variety of photographs and videos to engage the children with how coastlines change:
To use maps, atlases, globes and digital/computer mapping to locate countries and describe features of rivers and coasts.	Procedural Knowledge How to identify how the coastline changes over time How to identify coastal management strategies Sticky Knowledge — What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? What is the start of a river? What is the end of a river? What journey does a river take? Where is Carding Mill Valley? What are the key features of rivers? What shape do rivers take? What landforms are created by rivers? What is flooding? What impact does flooding have on people and places? What physical features can be seen at the coast? Recap and discuss the meaning of erosion and deposition. Discuss whether pace of change is quick or slow over time. Show images or a video to show how one area of coastline has changed over time. Children to infer and investigate what processes have taken place for the coastline to change. Children to investigate different rock types and the impact of erosion on the coast Children to investigate how different aspects of a coastline has been formed. For example: bays, headlands, beaches, dunes, arches, stacks, stumps, spits. Children create an explanation text about one of the landforms seen at the coast and how they are formed using diagrams and key vocabulary Children to use the internet and aerial photographs and computer mapping to locate places in the UK where each of the landforms can be seen.		
To investigate the impact of humans on the coastline.	Substantive Knowledge: What coastal managements strategies are effective? Procedural Knowledge	cliff-face armouring, groynes, artificial harbours, sea walls	



To investigate a range of geographical sources.

To 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 and develop their knowledge of the United Kingdom

How to identify how the coastline changes over time How to identify coastal management strategies

- Sticky Knowledge What is a river? What is a coast? What are the world's major rivers? What are some of the rivers in England? What is the longest river in the UK? What is the start of a river? What is the end of a river? What journey does a river take? Where is Carding Mill Valley? What are the key features of rivers? What shape do rivers take? What land forms are created by rivers? What is flooding? What impact does flooding have on people and places? What physical features can be seen at the coast? What human features can be seen at the coast? What is erosion?
- 📥 Investigate the different strategies used at the coastline to manage change.
- ♣ Discuss why coasts need to be managed
- Children to create a case study of a coastline with a variety of coastal management strategies in place identifying why the strategy was needed, how it was implemented and the outcome for local residents.