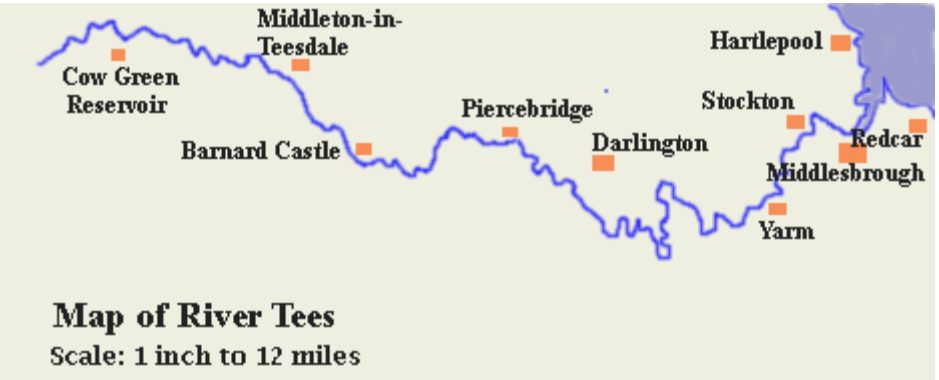

ROSE WOOD ENQUIRY DRIVEN CURRICULUM

ROSE WOOD ACADEMY

From source to sea: Where does water come from?

Year 4 Spring Term 1

Rose Wood Academy: Enquiry Driven Learning Overview

Year Group: 4	**Enquiry: From source to sea: Where does water come from?**	**Term**: Spring 1

Context:
This enquiry will build upon pupils' knowledge of the major rivers of the UK and will focus on the River Tees. It builds upon pupils' knowledge of how towns and cities develop and how rivers are at the heart of this. Through map and atlas work, pupils will learn the key features of a river system. Through fieldwork and investigation, pupils will identify key features of the River Tees such as source, meander, bank, mouth etc. They will learn about the plants and animals that live in a fresh water biome. This enquiry links directly to the Science curriculum through pupils learning about the water cycle.

Prior Learning (Direct Pathway)
Knowledge of the importance of rivers, historically, from Y3 (Nile/Amazon). They will have knowledge of the River Tees, in Middlesbrough and that it was used to transport locally produced goods worldwide (e.g. metal for Sydney Harbour Bridge) In Year 1, they learned that the River Thames runs through London.

Prior Learning (Indirect Pathway)
In Science, pupils have learned about the properties of different types of rocks and understand that some are more porous than others.

Rose Wood Academy: Enquiry Driven Learning Overview

Enquiry Question

FROM SOURCE TO SEA: WHERE DOES WATER COME FROM?

(Content outside of the direct pathway)

*We will learn that rivers usually begin in **upland** areas and begins to flow **downhill** because of gravity. They will understand that they flow across the land - **meandering** - or going around objects such as hills or large rocks and that, over time, rivers create **valleys,** or **gorges** and **canyons** if the river is strong enough to erode rock.*

Content on Direct Pathway

Children will study the River Tees from its source in Cumbria to its estuary in the North Sea.
Using digital and paper maps children will locate the source of the River Tees. They will study the historical importance of rivers for the transportation of goods and services and its subsequent decline. We will also refer back to previous topics in Y3 (The Nile and The Amazon).
Children will learn about States of Matter and the water cycle – recreating their own in a bag. We will study the consequences of excess rainfall on rivers and their surrounding areas.

(English content)

We will use the book, 'A River' by Marc Martin to engage pupils in their learning and to write descriptive poems. Also, will use the book Little Black Fish and follow his journey into the streams, along the river and into the sea where he meets danger and beauty on his adventure. From this, children will:

- *Write narrative pieces*
- *Write explanations (water cycle)*
- *Write and perform poetry on this theme*

Learning Showcase

Children will make a 3D model of the River Tees - using different materials – incorporating key physical and human landmarks along the route. They will be videoed talking through and explaining the key features. These will be shared with parents online

Rose Wood Academy: Enquiry Driven Learning Overview

Knowledge Narrative

Rivers start at their source in mountains or hills. Finally, the river approaches its mouth, or opening into the sea. They are fast and narrow at their source and get steadily slower and wider towards the mouth. They can be powerful enough to carve gorges and valleys into the land. Rivers play an important part in the water cycle. The water cycle is the continuous journey of water on earth.

Rose Wood Academy: Enquiry Driven Learning Overview

Unit Title: From Source to Sea: Where does water come from?

Y4
Spring 1
Geography

End Point - The aim of this unit is for pupils to:

- Know the correct vocabulary to describe a river and understand its different features.
- Know and be able to locate the longest rivers in the UK and the World.
- Describe and understand the water cycle.

End of unit assessment task:

- To make a labelled, 3D model of the River Tees, incorporating key physical and human landmarks along the route

Links:

Text – Little Black Fish by Samad Behrengi
Geography Wise – Rivers by Leon Gray
Geography – Children will understand the importance of rivers as a valuable resource for trade, transport, settlements and crops.
Science – The Water Cycle

Prior Learning:

- Know the four countries of the UK and their capital cities and the surrounding seas.
- Know the 4 compass points.
- Name and locate Middlesbrough on a map.
- Know that humans create settlements, often near natural resources

Key Aspects of the Unit:

	**Map and atlas work/** **Fieldwork and investigation**
	**Location** Where things are
	**Physical Features**: Understand that physical features are natural features in an environment. Understand that physical features can include: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather and volcanoes.
	**Human Features**: Understand that human features are features in an environment that have been made by people. Understand that human features can include: city, town, village, factory, farm, house, office, port, harbour and shop.

Rose Wood Academy: Enquiry Driven Learning Overview

	**Diversity:** To develop a greater understanding of the diversity within our world including culture, biodiversity and economic diversity.
	**Physical Processes:** Impact of nature on the earth e.g. erosion, plate tectonics, water cycle.
	**Human Processes** understand the processes that humans have developed across the globe including travel trade and economics.

Key Knowledge:

- Know that a river is large natural stream of water flowing in a channel to the sea, lake or other river.
- Know and name the features of a river.
- Know that a river always flows downstream, downhill towards the sea.
- Use arrows on a map of the UK rivers to show the direction of water flow.
- Introduce children to the fresh water aquatic biome.
- For children to be able to answer the following questions on the freshwater biome:

  - What is the biome like?
  - Where is this biome found?
  - What is its climate?
  - Which animals live there?
  - Which plants live there?

The freshwater aquatic biome includes ponds, lakes, streams, wetlands and rivers and they are found all around the world. The climate differs depending on where they occur. They are a vital source of drinking water as the water contains little or no salt. The largest lake in the world is the Caspian Sea and the longest river is the River Nile. Freshwater accounts for only 3% of the world's water. Despite this, they are home to more than 100 000 species of plants and animal. Fish, snails, worms, turtles, frogs, marsh birds, alligators, beavers, otters, snakes and many types of insects are just some of the creatures that live in the freshwater biome. Plants such as algae, cattails, waterlilies and aspen and willow trees help keep the water clean by using their root systems to filter pollution and excess nutrients from the water.

- Know how the land use along the River Tees changes from source to sea
  (eg. Farmland at High Force, industry in Middlesbrough)
- Know the 8 points of the compass
- Understand and use 4-figure grid references

Rose Wood Academy: Enquiry Driven Learning Overview

Geographical Skills:

Mapping:

- Draw a map of a small area with features in the correct places
- Make a simple scale drawing
- Recognise and use some Ordnance Survey symbols
- Use large and medium scale OS maps
- Internet map sites

Fieldwork:

- Engage in guided enquiries and suggest own questions for enquiry - Does the turbidity of the water in the River Tees change from source to sea)
- Evaluate own observations and compare them with others
- Use the eight points of a compass to follow and describe routes and identify locations
- Apply age-appropriate Maths knowledge to understanding of geography (e.g. length, distance, mass, capacity/volume, angles, area and scales)

Vocabulary

Continent	A very large area of land that consists of many countries, such as Europe
Delta	A wide, muddy or sandy area where the river meets the sea. The river slows down and drops all the sediment it was carrying.
Environment	Everything around us - the natural world of land, sea, air, plants and animals
Erosion	Damage to river banks, due to a fast flowing river, parts get washed down stream making the river wider in parts
Estuary	Where a river meets the ocean and freshwater and salt water mix. Estuaries are normally wide and flat.
Flood plain	A flat area around a river that often gets flooded when the level of water in a river is high
Landscape	Everything you can see when you look across an area of land including hills, trees, buildings, rivers and plants
Map	A drawing of a particular area such as a city, country or continent
Meander	A river that flows a winding course
Mountain	A very high area of land with steep sides
Ox-bow lake	A lake formed when a bend in the river has been cut off
River	A large, natural stream of fresh water that flows into the sea or a lake
River mouth	The end of a river where it flows into the sea, another river or lake.
Source	The start of a river, this could be a spring on a hillside, a lake, a bog or a marsh. A river can have more than one source.

Rose Wood Academy: Enquiry Driven Learning Overview

Spring	A place where water naturally flows out of the ground
Terrain	An area of land or a type of land when you are considering its physical features
Tributary	A smaller river or stream that joins a big river
Weather	The condition of the atmosphere in one area at a particular time, for example, if it is hot, raining or cold.

Rose Wood Academy: Enquiry Driven Learning Overview

Year Group: YEAR 4	**Term: SPRING 1**
Title: **FROM SOURCE TO SEA: WHERE DOES WATER COME FROM?**	**Key Focus : Geography**
Project Enhancements: Trip to High Force River Tees trip/study Tees Barrage visit	
How can you help? At home, please could you: • continue to listen to your child read a minimum of three times a week, • help your child to learn to spell the Year 3 and 4 word list • help your child to learn their times tables If you wish to do additonal homework with your child, you could: • Learn the major rivers of the Uk (Thames, Tyne, Tees, Humber, Severn) and locate them on a map of the UK • Learn the major rivers of the world (Nile, Amazon, Mississippi etc) and locate them on a world map.	

Location Map Link

Rose Wood Academy: Enquiry Driven Learning Overview

Spiritual

Through our learning about the water cycle, we will foster a sense of wonder at the natural world.

Social

Pupils will have the opportunity to discuss big questions such as: 'Does everyone in the world have a right to have access to clean water?'

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Be kind and REAP the rewards

Children will learn that as humans we need to be kind to the environment that we live in and the planet that we live on.

Moral

Throughout the topic, we will explore the consequences of human action on the natural world, from diverting the course of rivers and dredging causing damage to sea life. There will be opportunities for pupils to develop their principles and discuss and debate their views

Cultural

They will be able to develop their own artistic talents through abstract art using music as a stimulus.

Rose Wood Academy: Enquiry Driven Learning Overview

British Values through EDC

Democracy	Children to think what impact people's actions have on the environment e.g., the opening of overflow waste pipes into the ocean and the effect this has.
The Rule of Law	Discuss the laws we have in place to protect the environment and animals
Individual Liberty	Discuss how trade has had an impact on our local town of Middlesbrough.
Mutual Respect & Tolerance of those of different faith and beliefs	