Year: 4 Term: Summer 1

Unit: Rivers

Enquiry Question: How does a river change on its journey from source to mouth?

Substantive Knowledge	See Knowledge Organiser
Vocabulary	channel, upper course, middle course, lower course, source, spring, bog, deposition, erosion, v-shaped valley, sediment, delta, estuary, floodplain, meander, mouth, plunge pool, tributaries, undercutting, watershed, overhang, **Evaporation** **Condensation** **Precipitation** **Surface run off** **Soak/filtration** **Transpiration** **Transportation**
Hook or Visit	Visit to the River Trent
Links to any prior units	water cycle, building on map work from previous unit, OS symbols,

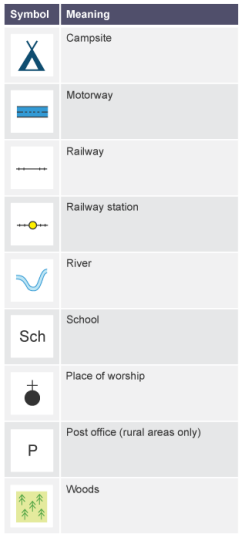
A. Space & Scale	**B. Physical Environment**	**C. Human**	**D. Change & Sustainability**	**E. Map Skills**	**F. Fieldwork**
1. In addition to KS1 name and identify/locate: a) N. & S. hemispheres, b) Tropics Cancer & Capricorn, c) Arctic and Antarctic Circle, d) 8 Compass points, e) 4 figure grid references. f) Key countries studied (Including capitals of these), g) Key European countries (Including capitals of these) h) Regions of Americas, i) Key physical features of countries and regions studied (rivers, lakes, seas,	1. Describe, understand and compare key aspects of: a) climate zones, b) biomes, (aquatic, desert, forest, tundra, grassland) c) vegetation belts, d) rivers, e) mountains, f) volcanoes, g) earthquakes, h) water cycle i) coasts distribution of natural resources:	1. Describe, understand and compare key aspects of: a) types of settlement, b) land use, c) economic activity, d) trade links, e) energy types and usage, food,	1. Suggest ways a location could be changed and/or improved 2. Explain how a location has changed over time (physical and human elements) 3. Explain how people are trying to manage and sustain or improve their environment 4. Identify different viewpoints on a	1. Use world maps, atlases and globes to identify hemispheres, the equator, tropics of Cancer and Capricorn and Arctic and Antarctic regions. 2. Name and locate the capital cities of neighbouring European countries 3. Know and use the eight points of a compass (N, NW, W, SW, SE, E, NE) 4. Begin to use 4 figure grid references 5. Use basic OS map symbols	1. Use fieldwork skills of surveying, interviewing, photography and observations to understand how a locality has changed over time 2. Create sketch maps 3. Begin to measure record and present the human and physical features in the local area

mountains, rainforest, deserts, etc) 2. Key human characteristics of countries and places studied (eg: Eiffel Tower, Egyptian Pyramids, Athens Acropolis, Rome Colosseum, Taj Mahal, Tower Bridge, Sydney Harbour Bridge, etc)			geographical issue or feature	6. Begin to use the scale bar to estimate distances 7. Make a map of a short route with features in the correct order. Begin to use computer mapping	using a range of methods, plans and graphs, and digital technologies
Possible questions					
• **H**emisphere – Which hemisphere is it in? • **O**ther places – where is it in relation to other places we have studied or know about, including countries and continents (using 8 points of a compass)? • **T**ime zone – Which timezone (s) is it in? • **C**limate – Which Climate zone(s) is it in? (Tropical/Dry/Temperate/Continental/Polar) • **U**s – Where is it in relation to our village/town/city/county/country? • **B**odies of water – Which bodies of water are nearby? • How is it similar/different to other places? • How am I linked with people and environments in other places?	• How are earthquakes created? • Why is France a popular holiday destination? • What are the main features of a village? • What are the key differences between cities and villages? • Why do people's lives vary due to the weather? • Why does a locality have certain physical features?	• What types of buildings/housing is in this locality? • What is the infrastructure like e.g. roads, railways, facilities, electricity? • Why does a locality have certain human features? • How do people use the key features of the land? • How are people are trying to manage their environment?	• How has a locality changed over time? • What are the different views about an environmental issue? • How could a locality be changed and improved? • What might it might like in a locality in the future? • Why might people be attracted to live by ….e.g. rivers, coasts? • Why are people attracted to live in cities? Or villages?		

Enquiry question	**Resources**	**Second Order Concepts**	**Key Knowledge**	**Activities**
Where are some of the world's longest rivers located?	Atlases – world and UK	B1 A1 E1	**What is a river?**	What is a river? Brainstorm definition

	Google Earth https://www.google.co.uk/intl/en_uk/earth/		**A large natural stream of water flowing in a channel to a sea a lake or another river** **World Rivers** **The longest rivers in each continent are:** **Africa Nile 6695km** **South America Amazon 6400km** **Asia Yangtze 6380km** **North America Mississippi 3766km** **Europe Volga 3570km** **Australasia Darling 1472km** **Antarctica Onyx 40km (note the Onyx only flows during a few months of the Antarctic summer)** **Rivers in the UK:** **Trent – 3rd longest, closest to us** **Thames – London, deepest** **Severn – longest , 220 miles**	Have pictures of different bodies if water on w/b Which is a river? Address misconceptions and explain which is which Reach the definition about a river How many rivers can you name**?** Take suggestions Activity 1: Children are given names of main rivers in each continent and have to locate them in an atlas. Complete the grid. Use ipads to locate on Google Earth and add a fascinating fact to the worksheet What are the longest rivers in the UK? Activity 2: Use a map of the UK and label the 3 rivers and the facts about them
What is the journey of a river from its source to sea?	Teacher book		Ensure prior knowledge of the water cycle. **Evaporation** **Condensation** **Precipitation** **Surface run off** **Soak/filtration** **Transpiration** **Upper Course –** **High land like mountains. This is where the river starts. It is the source. The water flows quickly.**	How are rivers formed? Think back to what we learnt about the water cycle – ensure prior knowledge How does a river start? Practical – make a river and see the speed of the water flow. Whilst doing this use geographical vocabulary to show when it is going through the upper, middle and lower courses.

			Middle Course- **This is where the land is flatter and floods can occur when there has been heavy rainfall. Tributaries join the main river here.** **Lower Course** **The land is very flat. This leads to the mouth of the river. This is where the land meets the sea.**	https://www.bbc.co.uk/teach/class-clips-video/geography-ks1--ks2-rivers/z6qsf4j Activity: Children to use white board and pen to take notes of the rivers journey. Children to draw and label the journey of the river. Upper/Middle/Lower course (p4 CGP?)
How does a river shape the land?	v shaped valley, meander, ox bow lake Waterfall A short clip explaining the formation of High Force waterfall and showing it flowing. (Play the first half of the clip only). http://www.bbc.co.uk/education/clips/z63qxnb		**Erosion**- breaking down and carrying away. **Deposition-** dropping off. When a river is slowed down, it doesn't have the energy to carry its load anymore so it drops it off. Explain the upper course of a river erodes downwards but it doesn't have enough energy to **erode hard bits** of rock. As it flows downhill it will wind around the hard rock. V – shaped valley Waterfalls Meanders Ox bow lake	Follow-Me Loop Card activity based on the teaching and learning from the previous lesson, 'Journey of a River' Practical – sand and water tray different sized rocks to show erosion and deposition. (Maybe use sandpit in EYFS) Use ipads to take photos to label each feature and how it occurs Possible activities – p6 and 7 CGP Explain how each feature is formed.
What are the physical characteristics of the River Trent? **(2 lessons)**	Google Earth Aerial shots of Nottingham		River Trent: Source – Staffordshire Tributaries – Derwent, Leen, Soar, Settlements – Stoke on Trent, Burton on Trent, Nottingham, Newark, Mouth - North Sea	Recap learning from last session. Play loop game - features In this session we are going to look at the journey of the River Trent, and the river characteristics at each stage. Use a UK map to demonstrate the journey of the Trent. Activity: Label the journey of the River Trent

				Use a blank UK map to label Source Mouth Put a cross where we live List tributaries and settlements What is the river like in Nottingham? Use Google Earth Use aerial photos/Google Earth clips and label the key geographical features Meanders Ox bow lake Wider Most likely to flood Homework – Fact file of interesting facts about the River Trent
What does a river look like on a map?	To understand the key features of maps Range of maps about Trent  	**E1** **E5** **E4** **E3** **E6** **C1** **B1**	OS Map Contour lines at source high ground Farmland – not many roads areas of forest and tress Share the key showing symbols we might see on an OS map and what they mean. Show the symbol for a river and then look at examples of rivers shown on the OS map. Locate the River Trent and discuss what they notice about the size and surroundings of the river. Nottingham River is wider Tributaries Built up area – lots of settlements along the river Mouth River very wide Areas of deposition	Maps of the River Trent from source to mouth. Use the OS mapping tool to show the journey of the river. (Children could use an ipad and follow the journey of the river on the OS site) OS maps on ppt Ch identify the features of the river Label key features: Reservoir Tributary MAIN ACTIVITY: Pupils will complete a tasks on 4 and 6 figure grid reference and OS symbols. One map focused on Nottingham and WB.

How did the River Trent help Nottingham to grow?		**B1 C1**	Since the end of the last Ice Age, settlements have occurred all along the River Trent. (recap lesson 4 – Stoke on Trent, Nottingham, Newark) What would be the advantage of living by a river be in Stone Age times? People have come to the area attracted by transport (boats) , food (water crops) , defence and the resources (food) the River Trent had to offer. It was inevitable that sooner or later Nottingham would grow into a town as it is the first point where the Trent can be forded (a shallow part of a river that can be crossed by wading) but the river is also navigable this far inland. Throughout history, the river has been a main route for trade and travel. It has been used as a navigation since Roman Times and in 867 AD, the Danish Vikings came up the Trent to Snottingham in their longships. Almost 200 Bronze Age artefacts have been found in the river or within its flood plains, most of them deliberately deposited in the river as ritual offerings. Archeological finds supporting this fact include swords, shields, axes, general tools and spears. Later, the River Trent provided the links to transport goods, such as coal, in and out of the city and onto the Humber Estuary. After transporting at Hull or Gainsborough, loads could go on to London or overseas.	How does a river change from source to the mouth? Recap the physiclal features of the river in each stage. How does that link to human activity? Upper Course - source – high land – animal grazing/ no settlements Middle course – flatter land – slower water – settlements/ farming – arable (water) – factories/ industry Lower course – very flat - wider river - factories/industry Recap the main settlements along the River Trent What industries is Nottingham known for? Textiles/lace – lace market area Raleigh bikes Boots Power stations Farming How does the river help with each of these industries? What is the River Trent used for today?

			Rivers were used to transport goods around the country. Nottinghamshire was known for coal mining and the river and the canal system was developed to move goods around. Nottingham developed industries in the Industrial Revolution.	