Year 6:

GEOGRAPHICAL CONTEXT: Rivers

KEY VOCABULARY:

Bank	The riverbank is the land at the side of the river.
Bed	The bed is the bottom of a river. A riverbed can be made of sand, rocks or mud depending on the river.
Basin	The land water must cross to reach a river. It collects all available water from tributaries, creeks and streams in its area.
Canal	A man-made waterway that is used so that boats can transport goods across the country
Current	The strength and speed of the river. Water always flows downhill; the steeper the ground is, the stronger the current will be.
Erosion	A fast flowing river can damage the riverbanks and wash bits of them downstream, making the river wider.
Floodplain	The flat area around a river that often gets flooded when the level of water in the river is high.

As Geographers we will...

How are rivers formed?

What causes rivers to flood?

Where are the UK's longest rivers located?

What are the physical characteristics of the River Thames?

In what course are waterfalls a feature?

Describe and understand key aspects of: □ physical geography, including rivers.

Module Plan: Rivers

Lesson one: Journey of a River

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<tr><th>Locational Knowledge</th><th>Place Knowledge</th><th>Key questions and ideas</th><th>Teaching and learning activities</th><th>Resources</th></tr>
<tr><td></td><td>Interpret a range of geographical information

Communicate geographical information in a variety of ways</td><td rowspan="3">To understand how rivers are formed.

To understand that the features a river and the surrounding landscape change from source to mouth.</td><td rowspan="3">STARTER:
Show pupils photographs depicting the River Severn the three stages- the upper, middle and lower course with no contextualisation from the class teacher.
Pupils identify enquiry questions: what, where, when, why? Can they see evidence to help them answer these questions?

MAIN ACTIVITY:
Either, pupils to complete an annotated diagram of a river from source to mouth.
Or, pupils make a 3D model of a river from source to mouth.

PLENARY:
Become a class river.
Using the photographs and labels provided, pupils need to arrange themselves from source to mouth, ensuring that the correct geographical features are depicted in order and the labels situated at correct points along the river's course.

Homework:
Pupils should use an atlas to name and locate the longest rivers in each continent. Also, expect pupils to include countries and/or cities in which the source and mouth of each river is located. Pupils should also name the five oceans.</td><td rowspan="2">Interactive:
To ensure prior knowledge of the water cycle.
http://www.crickweb.co.uk/ks1science.html#watercycle

Google Earth
https://www.google.co.uk/intl/en_uk/earth/

Downloads:
Journey of a River (PPT)
Journey of a River factsheet for teachers PDF | MS Word
Journey of a River plenary activity PDF | MS Word
Journey of a River 3D Model PDF | MS Word
Examples of pupils' work MS Word
World Map PDF | MS Word</td></tr>
<tr><th>Human and Physical Geography</th><th>Geographical Skills and Fieldwork</th></tr>
<tr><td>Describe and understand key aspects of physical geography, including… rivers and the water cycle

Describe and understand key aspects of human geography, including the distribution of natural resources including… water</td><td></td><td>Assessment opportunities

Assess prior learning of the water cycle.

The plenary activity will also assess pupils' understanding of the key features of a river from source to mouth.</td></tr>
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Module Plan: Rivers

Lesson two: Flooding

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including rivers), and land-use patterns; and understand how some of these have changed over time.	Understand geographical similarities and differences through study of human and physical geography of a region of the United Kingdom Understand the processes that give rise to key physical and human geographical features of the world Interpret a range of geographical information Communicate geographical information in a variety of ways	To understand the factors that cause rivers to flood. To understand what happens to the physical environment when flooding occurs. To understand the human impact of a major flood event. To understand how to prepare for flooding.	**STARTER:** The whole class takes part in the *Follow-Me Loop Card* activity based on the teaching and learning from the previous lesson, 'Journey of a River'. **MAIN ACTIVITY:** Pupils will complete a *Flood Flow Chart* detailing the stages of a flood event from heavy precipitation, to overbank flow, through to cleaning up. **PLENARY:** Pupils take part in a *Hot Seat* activity in which they take on the role of a hydrologist, local resident, farmer or business owner affected by flooding. Other pupils pose the questions.	**Interactive:** Google Earth **Downloads:** Flooding (PPT) Flooding factsheet for teachers PDF | MS Word Flooding flowchart PDF | MS Word Examples of pupils' work PDF | MS Word Follow-Me Loop Card activity PDF | MS Word **Web Links:** - To look up whether your area is liable to flooding go to the Environment Agency website http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?topic=floodmap#x=425513&y=333158&scale=3 - For detailed guidance on flooding go to the Environment Agency website https://www.gov.uk/government/organisations/environment-agency - For information on how to prepare your property for flooding go to the UK Government website https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/292943/geho1009brdl-e-e.pdf
Human and Physical Geography	**Geographical Skills and Fieldwork**			**Assessment opportunities**
Describe and understand key aspects of physical geography, including rivers Describe and understand key aspects of human geography, including types of settlement and land use and the distribution of natural resources including water	Use maps, atlases, globes and digital/computer mapping to describe features studied.			Formative assessment of prior learning from the starter activity.

Module Plan: Rivers

Lesson three: Mapping the River Thames

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including rivers), and land-use patterns; and understand how some of these have changed over time.	Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom Interpret a range of geographical information including maps Communicate geographical information through maps	To name and locate the five longest rivers in the UK. To understand the key features of an OS map including: • Compass directions • The key • Four and six-figure grid references • Grid squares • Scale • Contour lines To interpret an OS map to answer questions about a locality: the River Thames.	**STARTER:** The whole class takes part in *an 'Around the world'* challenge- see the *Mapping the River Thames* Lesson Plan for details. **MAIN ACTIVITY:** Pupils will complete a *Mapping the River* worksheet. Pupils will investigate OS map extracts of the river at different points, answering questions that utilize key mapping skills. **PLENARY:** Pupils look at three photographs, displayed on the PowerPoint. Using their knowledge of the characteristics of river in the upper, middle and lower course and their knowledge of the River Thames from the mapping activity, can they decide which photograph belongs with which of the three map extracts. **Homework:** Pupils should use an atlas to name and locate the longest rivers in the UK. Expect pupils to include principle towns and cities, high peaks and seas. to use an outline map of the UK	**Interactive:** Google Earth **Downloads:** Mapping the River Thames (PPT) Mapping the River Thames factsheet for teachers PDF | MS Word Mapping the River Thames Worksheet PDF | MS Word Mapping the River Thames Answersheet PDF | MS Word UK Outline Map PDF | MS Word Ordnance Survey Key PDF | MS Word Mapping the River Thames Map Extracts x3 (JPEG) **Web links:** - OS Digimap for Schools package: http://digimapforschools.edina.ac.uk/cosmo/home - To view the RGS-IBG Map Skills subject knowledge animation, go to the RGS-IBG website http://www.rgs.org/OurWork/Schools/Teaching+resources/Key+Stage+1-2+resources/Subject+knowledge+animation+Map+skills.htm - The complete key for the OS Landranger 1:50 000 series: http://www.ordnancesurvey.co.uk/docs/legends/50k-raster-legend.pdf **Additional resources** String or thick cotton (optional; paper can also be used)
Human and Physical Geography	**Geographical Skills and Fieldwork**			**Assessment opportunities**
Describe and understand key aspects of physical geography, including rivers Describe and understand key aspects of human geography, Including: types of settlement and land use, economic activity including trade links	Use maps and digital mapping to 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 UK			The starter activity assesses prior learning. The main activity will test pupils' ability to use maps and interpret data from them. The plenary will assess whether pupils can use their knowledge about the characteristics of a river from source to mouth (from Lesson 1) and combine this with mapping skills.

Module Plan: Rivers

Lesson four: The River Thames

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including rivers), and land-use patterns; and understand how some of these have changed over time	Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom Interpret a range of geographical information including maps	What are the physical characteristics of the River Thames? How does the River Thames shape the surrounding landscape? How does the River Thames change throughout its course? How do people interact with the River Thames and surrounding landscape? Why is the River Thames liable to flooding? What is the role of the Thames Flood Barrier in preventing flooding? How does the Thames Flood Barrier work?	**STARTER:** In the last lesson, *Mapping the River Thames*, pupils were asked to devise two enquiry questions of their own. Ask the class a selection of these pupil-generated questions. Use the copy of Map Extract 3 on the accompanying PowerPoint, or allow pupils to refer to their own copy of the extract. **MAIN ACTIVITY:** Pupils will complete a diagram of the long profile of the River Thames from source to mouth. Pupils should label the key locations the river passes through. Then, using arrows, and information boxes at different points, pupils can include extra diagrams and facts. Higher ability pupils could draw their long profile onto graph paper- devising a scale on the y axis for height of land, showing how the river flows from an elevation of 110m at its source to approximately 4 metres at Teddington Lock to 0 metres at the estuary. **PLENARY:** **Peer assessment:** Allow pupils to show their partners their work. Scan in copies of pupils' work if a scanner is available. Ask for peer assessment- what worked well, what could be improved upon. Ensure pupils comment on the geographical content of the work- not just the neatness of the presentation.	**Interactive:** Google Earth **Downloads:** The River Thames (PPT) The River Thames Lesson Plan PDF | MS Word The River Thames Factsheet PDF | MS Word **Links:** For an animated guide to how the Thames Barrier works follow the link: https://www.youtube.com/watch?v=GricS4iCgtc To look up whether an area is liable to flooding. http://watermaps.environment-agency.gov.uk/wiyby/wiyby.aspx?topic=floodmap#x=425513&y=333158&scale=3
Human and Physical Geography	**Geographical Skills and Fieldwork**			**Assessment opportunities**
Describe and understand key aspects of physical geography, including: rivers Describe and understand key aspects of human geography, Including: types of settlement and land use, economic activity including trade links	Use maps and digital mapping to 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 UK			Formative assessment of prior learning from the starter activity. Can pupils remember the 8 points of the compass? Using an OS map, can they interpret symbols on a key? During the main teaching, can pupils remember significant information for example the location and elevation of the source and mouth? Can they remember the significance of the drainage basin in flooding?

Module Plan: Rivers

Lesson five: Waterfalls

Locational Knowledge	Place Knowledge	Key questions and ideas	Teaching and learning activities	Resources
Locate the world's countries, using maps to focus on North and South America, concentrating on their key physical and human characteristics Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including rivers), and land-use patterns; and understand how some of these have changed over time	Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom Develop contextual knowledge of the globally significant places including their defining physical 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	In what course are waterfalls a feature? How are waterfalls formed? What physical processes are involved in their formation? What features are characteristic of waterfalls? How do humans use waterfalls? (With an emphasis on tourism and hydro-electric power). Which waterfalls have global significance? (Angel Falls in South America- the highest waterfall in the world, Niagara Falls in North America- which attracts 12 million tourists every year). Which waterfalls are significant in the UK? (Gaping Gill the highest in England and High Force- with significant gorge development).	**STARTER:** Share with pupils Annie Edson Taylor's remarks: "Nobody ought ever to try that again." Ask pupils who could have said this and what feat should nobody ever try again? **MAIN ACTIVITY:** Pupils should complete either: A waterfall flip-book: The waterfall can be drawn in cross section and show the stages of waterfall formation. This activity could also be tailored to the production waterfall stop-go animation. A waterfall model: Pupils can make a model of the cross section of a waterfall in plasticine. Use several different colours of plasticine to represent the different rock strata, the river banks, the plunge pool and the water itself. High ability pupils could write labels for each feature, securing them with cocktail sticks. **PLENARY:** Pupils can play the game 'Just a Minute'. Can they speak for one minute without hesitation, repetition or deviation (and using factual information and correct vocabulary) about Rivers?	**Interactive:** Google Earth **Downloads:** Waterfalls (PPT) Waterfalls Lesson Plan PDF | MS Word Waterfalls Factsheet PDF | MS Word Examples of pupils' work PDF | MS Word **Links:** A short report on Will Gadd's tightrope walk across Niagara Falls also been seen at: http://www.bbc.co.uk/newsround/31060065 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
Human and Physical Geography	**Geographical Skills and Fieldwork**			**Assessment opportunities**
Describe and understand key aspects of physical geography, including rivers Describe and understand key aspects of human geography, including types of settlement and land use, economic activity and the distribution of natural resources including energy and water	Use maps, atlases, globes and digital/computer mapping to describe features studied.			The plenary activity assesses their understanding and knowledge from the Waterfalls unit.