**Thematic Planning for Summer Term
Rolling Rivers
Year 4**

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| **Additional Requirements Prior to the Unit:*** Plan/book educational experience to river (Dovedale) – Week 3
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**Week 1**

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| Focus Subject(s): | Geography |
| Skills  | • Describe key aspects of physical geography (the water cycle). |
| Knowledge:  | * Know about the water cycle and explain its process
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| Teacher guidance  |
| Session outcome: Observational Investigation – Water Cycle in a bag. |
| Lesson exploration | **Big Question lesson – Can you describe the water cycle?*** Vocabulary Starter – Explore the meaning of the words: cycle, condensation, evaporation, precipitation, droplets, water vapour, transpiration – Quiz, Quiz, Trade style game?
* Label diagram of water cycle before making a water cycle in a bag. Observe these water cycles in a bag over the next few days and record their observations.
* <https://www.mobileedproductions.com/blog/how-to-make-a-water-cycle-in-a-bag>
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**Week 2**

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| Focus Subject(s): | Geography |
| Skills  | * Describe key aspects of physical geography.
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| Knowledge:  | * Know where a river starts and ends
* Know the physical features of rivers
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| Teacher guidance  |
| Session outcome: Labelled 3D model of each course.  |
| Lesson exploration | **Big Question Lesson – Can you describe the features of a river?*** Sticky Knowledge: Water cycle song/rap
* Vocabulary starter – explore the meaning of the words: confluence, channel, estuary meander, source, glacier, channel, tributary – vocab game/ mini dictionary to complete for books.
* Explore the upper course, middle course and lower course of a river, looking at their key physical features.
* Children to create a 3D paper mache model of a river in groups. Label with key names of each part and information cards.
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**Week 3 – Educational Experience**

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| Focus Subject(s): | Geography |
| Skills  | * Use fieldwork to observe and record the human and physical features in the local area using a range of methods including sketch maps, plans and graphs and digital technologies
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| Knowledge:  | * Know how rivers fit into the water cycle.
* Understand how rivers shape the landscape
* Know how a river changes as it flows from source to mouth
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| Teacher guidance  |
| Session outcome:  |
| Lesson exploration | River Study – Dovedale <https://www.peakdistrict.gov.uk/learning-about/education/primary-products/a-rivers-tale> <https://www.peakdistrict.gov.uk/__data/assets/pdf_file/0017/75140/New-River-Study-Teachers-Notes.pdf> |

**Week 4 and 5**

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| Focus Subject(s): | Geography |
| Skills  | Name and locate geographical regions in the UK and identify their human and physical characteristics (mountains, rivers and key topographical features)  |
| Knowledge:  | * Know and locate the main oceans and largest rivers.
* Know the main rivers in the UK
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| Teacher guidance  |
| Session outcome: Week 4: Annotated world map Week 5: PicCollage information poster. |
| Lesson exploration | **Big Question Lesson - Can you name significant oceans and the world’s longest rivers?**Sticky Knowledge: ‘Knowledge Dump’ Children to create padlet of everything learned from visit to Dovedale. **Week 4:*** Explore rivers of the UK – find on a map & explore key features of each river.
* Create a PicCollage information poster/poster in their books.

**Week 5*** Vocabulary starter – Taboo game recapping vocabulary already learnt in topic so far.

Recap words: countries, continent, tributary. * Explore Mississippi, Amazon, Danube, Ganges, Huang He, Nile – length, where is their mouth, which countries do they travel through, which continent are they in, how many tributaries, interesting facts.
* Identify each river on a world map and compare location of each. Look at pictures of the land surrounding the rivers and complete a compare and contrast activity.

See PowerPoint on teams as a starting point for lesson. |

**Week 6**

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| Focus Subject(s): | Geography |
| Skills  | * Name and locate geographical regions in the UK and identify their human and physical characteristics (mountains, rivers and key topographical features)
* Use the 8 points of a compass, four figure grid references, symbols and key to communicate knowledge of the United Kingdom.
* Investigate land use patterns
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| Knowledge:  | * Know why most cities are located by water
* Know about uses of water – transportation, farming, energy,
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| Teacher guidance  |
| Session outcome: PowerPoint presentation.  |
| Lesson exploration | **Big Question Lesson - How do we use our rivers?*** Starter activity – Look at a map of the UK. What do the children notice about where all the main cities of the country are? Why do they think that most cities are located near to water?
* Introduce the main uses of rivers – transportation, farming and energy.
* Each group to research one use of the river on ipads and create a power point slide with key information.
* Each group to present their information to the class whilst the other groups take notes on what they learn.
* End the lesson with the question: **What might be the effect of flooding upon people living near to a river?** Children to discuss in class and then complete homework task based on this ready for next Theme lesson to share their findings. Children to complete a short reflection sticker explaining their thoughts/findings.
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**Week 8**

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| Focus Subject(s): | Design Technology |
| Skills  | * Design with purpose by identifying opportunities to design.
* Make products by working efficiently (such as by carefully selecting materials).
* Refine work and techniques as work progresses, continually evaluating the product design.
* Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as winding mechanisms).
* Choose suitable techniques to construct products
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| Knowledge:  | * Know how a water turbine is used to generate energy – Newton’s Third Law of Motion
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| Teacher guidance  |
| Session outcome: Model of water turbine.  |
| Lesson exploration | **Big Question Lesson - How do we use our rivers?*** Vocabulary starter: Explore the meaning of the words:
* Recap learning from previous lesson for the main uses of rivers today.
* Explain that energy can be created from water
* Explain how a water turbine works
* Attach weights onto water turbine to test how much weight their turbine can hold.

<https://www.teachengineering.org/activities/view/cub_environ_lesson09_activity3><https://www.youtube.com/watch?v=x8xow_R0YRI> |

**Week 10**

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| Focus Subject(s): |  |
| Skills  | * Design with purpose by identifying opportunities to design.
* Make products by working efficiently (such as by carefully selecting materials).
* Refine work and techniques as work progresses, continually evaluating the product design.
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| Knowledge:  | * Know how dirty water can be made useable - water filter
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| Teacher guidance  |
| Session outcome: Filtration model  |
| Lesson exploration | **Big Question Lesson - How do we use our rivers?** * Vocabulary starter: Explore meaning of infiltration, filter, pollution.
* Explain how many people in the world use rivers for drinking water – discuss whether they think all water in rivers is clean drinking water. Explain how much of the world’s river water is polluted and so people need to find ways to clean this water to make it safe to drink – Discuss ideas children have for
* Provide children with the challenge to make a water filter.

<https://www.earthrangers.com/take-action/filtered-water-please/> |

**Week 4**

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| Focus Subject(s): | Geography |
| Skills  | * Understand how some of the geographical features have changed over time
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| Knowledge:  | * Know about coastal erosion and its effect.
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| Teacher guidance  |
| Session outcome:  |
| Lesson exploration | * Vocabulary starter - erosion, coast.
* Explain what and where the coast is – identify some of the physical features at the coast (beach, cliffs, rocks, sand, rock pools, rock arches, rock stacks).
* Does the coast look the same everywhere? Show a selection of images from around the UK coasts and discuss what they see that is different. Explore why they think the coasts look different – introduce how the waves crash against the land and erode the rocks.
* Introduce the term bay and headland – looking at a picture of each, how do you think these could be formed?
* Children to explain the process of erosion with images in their books.
* Explore transportation in a river.

See PowerPoint on teams as a starting point for lesson |