

KESTEVEN AND SLEAFORD HIGH SCHOOL

Geography Scheme of Learning Year 8 – Term 4/Unit 4/Rivers and Flood Management

Intent – Rationale

The intent of this topic is to develop knowledge and understanding of river processes and landforms. Students learn about the features of drainage basins and river profiles. They develop further their understanding of processes of erosion, transportation and deposition and understand how such processes are responsible for fluvial landforms. Students develop an understanding of the causes and impacts of floods and a range of flood management strategies are evaluated and justified. Finally using the named example of the Belo Monte dam in Brazil, students take on the role of stakeholders in debating the issue of whether the dam construction should be justified.

Sequencing – what prior learning does this topic build upon?	Sequencing – what subsequent learning does this topic feed into?
<ul style="list-style-type: none">• KS2 – key aspects and topological features of rivers• Y7 T3 – hydrological Cycle• Y7 T6 – coastal processes (erosion)	<ul style="list-style-type: none">• KS4 (GCSE) – River Landscapes (processes, factors affecting flood risk and flood management)• KS5 – Water Cycle and water insecurity
What are the links with other subjects in the curriculum?	What are the links to SMSC, British Values and Careers?
<ul style="list-style-type: none">• Science – Water Cycle	<p>Spiritual development 2 - a sense of enjoyment and fascination in learning about themselves, others, and the world around them</p> <p>Moral development 3: An interest in investigating and offering reasoned views about moral and ethical issues and ability to understand and appreciate the viewpoints of others on these issues; debating whether the Belo Monte Dam should be built.</p> <p>Careers – Gatsby Benchmark 4: communication – discussion of Belo Monte Dam, g) teamwork</p> <p>Careers opportunities: working for the Environment Agency or Emergency Services (Flood management), scientists, geologists,</p>

KESTEVEN AND SLEAFORD HIGH SCHOOL

	meteorologists, weather forecasters, hydrologists, environment officers, planners, digital technologists
What are the opportunities for developing literacy skills and developing learner confidence and enjoyment in reading?	What are the opportunities for developing mathematical skills?
<p>From the Library: <i>Water, Landform and people</i>; Cambers,G - 304.25 <i>Green Alert: Threatened Habitat</i>; Sachiahanaanadam,U-574.5 <i>Habitats, Rivers and Lakes</i>; Cummins, D-551.48 <i>KS3 Geography Dictionary</i>-910.3 <i>Landforms</i>; Knapp,B- 551 <i>Raging Rivers</i>; Ganera,A-551.483 WideWorld Magazine articles</p> <p>Students will read as a class relevant newspaper articles. Eg. BBC Belo Monte dam where they will discuss and define new vocabulary.</p>	<ul style="list-style-type: none"> Flood management strategy table – allocating scores and adding figures to rank the data

Geography Scheme of Learning Year 8 – Term 4: Rivers and Flood Management

Intent – Concepts

What knowledge will students gain and what skills will they develop as a consequence of this topic?

KESTEVEN AND SLEAFORD HIGH SCHOOL

Know

The features of a drainage basin
 The river processes of erosion, transportation and deposition
 Types of landforms found along a river
 Causes and impacts of river flooding
 Short-term and long-term flood management strategies to reduce flood risk
 What a dam is and how it can be multipurpose
 Reasons why the Belo Monte dam in Brazil was built.

Apply

Knowledge of a drainage basin to explain what happens to the height of the land and the river depth and width as it nears the sea
 Knowledge of river processes to explain where they occur along a river
 Knowledge of the types of landform found along a river to support description of a river's journey from source to mouth with key vocabulary
 Knowledge of flooding to categorise causes into physical and human categories
 Knowledge of dams to explain their advantages and disadvantages
 Knowledge of the need for the Belo Monte dam to explain the impacts of its construction on people, the economy and society

Extend

Knowledge of the benefits/disbenefits of flood management strategies to help justify a decision on which strategy is most effective and sustainable in the long-term?
 To justify ideas on whether the Belo Monte Dam should be built with reference to economic, social and environmental impacts.

What subject specific language will be used and developed in this topic?	What opportunities are available for assessing the progress of students?
river basin, watershed, tributary, source, mouth, confluence, flood plain, evaporation, condensation, precipitation, surface runoff, precipitation, water table, impermeable, infiltration, transpiration, infiltration, hydrological cycle, erosion, transportation, deposition,	Assessment will take 3 main forms: <ul style="list-style-type: none"> • In starters, retrieval practice tasks, plenaries and during the lessons – formative assessment to reinforce prior knowledge

KESTEVEN AND SLEAFORD HIGH SCHOOL

hydraulic action, attrition, abrasion, solution, suspension, sediment, long profile, cross profile, meander, oxbow lake, valley, waterfall, gorge, flash flood, embankments, land use zoning, bastions, water storage basins, conflict issue	<p>e.g. word searches, bingo, memory recall, definition matches etc.</p> <ul style="list-style-type: none"> • For homeworks -tasks that require students to research new knowledge. For example, the Belo Monte Dam. What? Where? Why? When? • Summative assessments: multiple-choice, one-mark answers, extended answers in test or exam conditions or as end-of-unit tests. • Key word meaning and spelling tests are included as part of the focus on building a knowledge bank of geographical vocabulary
--	--

Intent – Concepts

Lesson title	Learning challenge	Higher level challenge	Suggested activities and resources
1.Drainage basin	To be able to describe the features of a drainage basin	To be able to explain what happens to the height of the land and the river depth and width as it nears the sea	<p>Powerpoint 1</p> <p>Starter – recap Water (Hydrological Cycle) from Y7 using mini whiteboards and dominoes</p> <p>Clip http://www.bbc.co.uk/news/uk-england-london-14878646 and slide showing David Walliam’s charity swim down the River Thames.</p> <p>Geog. 1 Page 84-85 Answer questions 1-6</p> <p>Plenary – key word match</p>
2.River processes – erosion,	To know the river processes of erosion,	To be able to explain where these	<p>Powerpoint 2</p> <p>Starter: Show images of places along a river and students state whether they are found in the upper, middle or lower course</p>

KESTEVEN AND SLEAFORD HIGH SCHOOL

transportation and deposition	transportation and deposition	processes take place on a river.	Through clips, worksheet and Geog. 1 4 th edition pages 88-89, students make notes on processes of erosion, transportation Wordsearch – students design these providing clues for key words to consolidate learning of many new key terms
3. Features of a river	To be able to identify landforms along a river	To be able to write a paragraph to describe the journey of a river from the source to the sea using key vocabulary	Powerpoint 3: Starter – key word Bingo! Video with worksheet questions to answer Geog. 1 4 th edition pages 88-89 to support understanding Homework - Carry out some independent research on a river of your choice. If possible find out: <ul style="list-style-type: none"> • The location of the source • The location of the river's mouth • Countries the river flows through • How people are using the river? • Any interesting landforms or places along the river? Slide to be presented and river labelled on a world map
4.Flooding	To be able to describe causes and impacts of flooding	To be able to explain how and way the causes of flooding may be due to physical or human causes	Powerpoint 4 Starter: Images of flooding with questions such as 'how do people feel about it? And 'Do you think it is anyone's fault?' Show clips/images of Lincolnshire floods in 2019. Causes of floods brainstorm and students to annotate image to show the physical/human causes of flooding using page 95 in Geog.1 4 th edition OS map skills recap (from Y7 and questions on worksheet using page 97 of Geog. 1 4 th Edition textbook. Plenary – write a quote for an image of flooding Homework – research Belo Monte dam - What? Where? Why? When?
5. Flood management strategies	To be able to describe a range of short-term and long-term flood	To be able to evaluate the flood management strategies by	Powerpoint 5 Starter: Anagrams of who helps in a flooding crisis Slides presented showing images of management strategies.

KESTEVEN AND SLEAFORD HIGH SCHOOL

	management strategies	considering cost, practicality and effectiveness and to justify a decision on which strategy is most effective and sustainable in the long-term?	<p>After discussion students complete a table showing advantages and disadvantages of the strategies and consider whether they are short-term or long-term.</p> <p>Geog.1 4th edition pages 98-99 to support ideas</p> <p>Task – students give scores in a table to assess cost, practical use, effectiveness and sustainability to support their decision of which strategy is the most suitable and which is the least? They justify their ideas.</p>
6. Flood management: dams	To be able to describe what a dam is its purpose	To be able to explain how and why dam construction has advantages and disadvantages	<p>Powerpoint 6</p> <p>Think – Pair – Share: Show image of a dam.</p> <p>Key questions:</p> <ol style="list-style-type: none"> 1) What is the purpose of a dam? What can it provide? 2) In which part of a river should a dam be built and why? <p>Feedback from students.</p> <p>Clip and images of Ladybower Reservoir in the Peak District https://www.bbc.co.uk/programmes/p0114809</p> <p>Gap fill task answering questions above</p> <p>What is a risk with dam building? Clip of dam which was damaged at Whaley Bridge in Peak District in 2019. https://www.youtube.com/watch?v=F7Q_4qvtxYU</p> <p>Brainstorm homework research on Belo Monte Dam.</p> <p>Show clip and give out handout https://www.youtube.com/watch?v=K-seAAIsJLQ</p> <p>Homework:</p> <p>Read through the Guardian newspaper article about the Belo Monte Dam in Brazil.</p> <p>Highlight and define key words</p> <p>Look up the meaning of any words you do not understand</p> <p>Answer the questions in full sentences and stick the sheet in.</p>

KESTEVEN AND SLEAFORD HIGH SCHOOL

7 and 8. Belo Monte Dam	To be able to describe the Belo Monte and know the impacts of its construction on people, the economy and society	To be able to present in role as a stakeholder the viewpoint about the construction of the Belo Monte Dam	<p>Powerpoint 7/8 (2-3 lessons)</p> <p>Starter: What is going on here? Image of a human banner on the site of the Belo Monte dam</p> <p>Homework check from last lesson – newspaper article questions</p> <p>Teach me tell me more Belo Monte discussion (see SL for resource)</p> <p>Introduce the dam debate and the stakeholder roles and start preparing/researching role. All resources in T drive.</p> <p>Role:</p> <ul style="list-style-type: none"> Indigenous Juruna people Government Officials Mining Company Representatives Conservation Group Unemployed people in Sao Paulo Directors of global steel company <p>Clip – what is the message? https://www.youtube.com/watch?v=oij0Pha3_m0</p> <p>Debate - Your group of five/six will represent one of the stakeholder groups above and will be participating in a live TV news debate. At the debate you will be stating your opinion about the Belo Monte dam building project and justifying your reasons for or against its construction.</p> <p>Students present in their groups and are then asked questions.</p> <p>Out of role at the end there is a vote – should the dam be built?</p>
End of topic assessment	Students will answer a 9 mark evaluative question in timed conditions. They will also complete a knowledge test assessing knowledge and understanding of key terminology.		