Geography	What are rivers and mountains?	Year 5 Unit 1

Intent:

In this unit the children develop a greater understanding of key concepts of physical geography such as some key physical processes which shape the Earth and the physical and human importance of a biome that covers one-fifth of the world's land surface. Children will learn about the location and formation of the world's most significant ranges of fold mountains and begin to understand that all landscapes and environments offfer opportunities, constraints and, sometimes, risks and hazards to the people who co-exist with them.

Pupils should be taught to:

Locational knowledge:

locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities;

name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time.

Place knowledge:

understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America.

Human and physical geography:

describe and understand key aspects of: physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.

Geographical skills and fieldwork:

use maps, atlases, globes and digital/computer mapping to locate countries and 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 United Kingdom and the wider world.

Prior learning:

ELG	Year 1	Year 2	Year 3	Year 4	
People, culture and communities	Why do we love living by the seaside?	How does the geography of Kampong Ayer compare with where I live?	Why do so many people live in megacities?	How and why is my local area changing?	

Key Vocabulary:			
Tier 2 - Multiple meanings or high frequency			
landscape	constraints	hazards	range
opportunity		rock	
Tier 3 - Subject specific			
meander	mountain	biome	erosion
Plate tectonics		Fold mountains	deposition

Etymology and morphology		
Prefix / Suffix / Root	Meaning	Examples
geography	the study of the physical features of the earth and its	From geographia (Greek) - geographie (French) - geography (English 15th Century).

	atmosphere, and of human activity as it affects and is affected by these, including the distribution of populations and resources and political and economic activities.	
biome	A biome is a large community of vegetation and wildlife adapted to a specific climate. The five major types of biomes are aquatic, grassland, forest, desert, and tundra.	**ORIGIN OF BIOME** 1915–20; bi-[2] + *-ome*-oma
Fold mountains	Fold mountains are created where two or more of Earth's tectonic plates are pushed together. At these colliding, compressing boundaries, rocks and debris are warped and folded into rocky outcrops, hills, mountains, and entire mountain ranges.	

Misconceptions	
Not true	Teach this
All mountains are snow-capped. The UK doesn't have mountains.	Using the Cumbrian Mountains as an example, not all mountains are snow-capped. There are mountain ranges across the UK.

Lesson number	Key enquiry question & learning objective	Suggested learning activities	Cumulative questions
1	**How does the course of the River Axe change from source to mouth?** L.O. Tbat identify and describe how physical features of rivers change from source to mouth.	• Connected Geography – What is a river? Ancillary Question 1. • Picture sort photographs of the course of the River Axe into the correct order – source to mouth. Listen for subject specific vocabulary (rivers). Children justify and explain their reasons for the order they have chosen. • Look at images of the correct order – discuss how the course and channel of the river changes as it progresses from source to mouth. Speculate on reasons why these changes have happened. • Within the images, identify other features that they can see that are created by people (human geographical features) e.g. farms, boats, houses, village, town.	1-3
2	**How does the course of the River Axe change from source to mouth?**	• Watch video of the course of the River Axe – children can identify the features which they have been looking at so far. • https://video.link/w/2CBhd • http://www.primaryhomeworkhelp.co.uk/rivers/stages.html • Label diagram of a river. • OS map work – grid references for features along the River Axe. Accurate representations of map with human and physical features drawn and labelled. • Create a class map of the river. • Research rivers around the world and label maps showing major rivers of the world.	1-6

	L.O. Tbat offer reasons to explain why the course of a river changes as it flows from higher to lower ground.		
3	**Why are the three mountains of Olympus, Mauna Kea and Everest so famous? How were the world's greatest mountain ranges formed?** L.O. Tbat recognise, identify and explain what geographe	• 'Brain dump' what the children already know about the 3 mountains. Why are they so famous? Look at pictures of the mountains and discuss what the children notice about them – annotate pictures. • Discuss how the heights of the mountains are measured – sea level to summit or base to summit? • Map work – using atlases or online maps, find and label mountain ranges across the world e.g. Himalaya, Andes, Rockies, Alps, Urals and Atlas. Include measurements of the highest peaks. Identify the countries and continents of the ranges. • Look at images of the ranges – what can the children see? How similar are they? They are all called *fold mountains* after the way in which they were formed. • https://www.nationalgeographic.org/encyclopedia/fold-mountain/#:~:text=12th%20Grade-,Fold%20mountains%20are%20created%20where%20two%20or%20more%20of%20Earth's,through%20a%20process%20called%20orogeny. • Watch clips which demonstrate and explain how fold mountains are formed. (Link to Y3 earthquakes) • https://www.nationalgeographic.org/encyclopedia/fold-mountain/#:~:text=12th%20Grade-,Fold%20mountains%20are%20created%20where%20two%20or%20more%20of%20Earth's,through%20a%20process%20called%20orogeny. • https://www.bbc.co.uk/bitesize/guides/zyfxdmn/revision/1 • Create a poster or PowerPoint presentation or storyboard / strip to explain how fold mountains are formed.	7-8

	rs define as mountains. L.O. Tbat identify, locate and describe the location of the largest ranges of mountains in the world.		
4	**How were the world's greatest mountain ranges formed?** L.O. Tbat identify, describe, compare and contrast and explain the differences between two different mountain ranges.	• Explore relief maps of the United Kingdom. Identify areas of higher ground and mountains. Where are they located? Make comparisons between the four nations of the UK. Use compass directions and vocabulary to explain which areas have the greatest proportion of high ground and mountains. Identify highest peak and names of ranges in each nation. • Look more closely at the Cambrian Mountains and compare to pictures of the Himalaya, Andes, Rockies, Atlas, Alps and Ural ranges. British ranges are much older than the other ranges and erosion by rain, wind an ice have had a longer amount of time to wear down the rocks. • Labelled diagrams and explanations of learning.	7-11

5	**How do geographers describe the Westman Islands?** L.O. Tbat recognise, describe and explain key geographical features of Iceland.	• Map of Iceland divided into eight geographical regions. Use the official tourism information website of Iceland www.visiticeland.com/discovericeland/regions • Annotate map with key features e.g. geysers, fishing ports, glaciers, geothermal power stations, puffin colonies, fjords etc. (human and physical features).	12-14
6	**Why are there volcanoes on Hiemaey? (Hay-my)** L.O. Tbat explain how a volcano is formed, observe the global	• Get the children's ideas on what a volcano is, what it does and how it's formed. • Watch video clips which explain how volcanoes form (BBC, National Geographic) • Children draw and annotate diagrams to explain how volcanoes are formed; what happens to cause a volcanic eruption and what happens during an eruption. • Use maps to compare places where volcanoes and earthquakes occur. What do the children notice? Plot the location of these. Discuss – Pacific Ring of Fire. Make the connection between tectonic plates and location of volcanoes and volcanic eruptions. Link back to Iceland through discussion.	12-17

	pattern of volcanoes and suggest plausible geographical reasons for this distribution.		