Opening Worlds Progression of knowledge and skills – Geography

Rivers
Disciplinary Skill: Interaction
Disciplinary Outcome: By the end of the unit pupils will be able to explain how rivers, people and the land affect each other.

Learning Intent	Lesson Sequence and Big Question.	Core Knowledge	Core Skills	Core Vocabulary
• Pupils will learn about: • The River Indus - its source, course, human interactions with environment. • How rivers get their water - the source, springs, the water cycle (prepares for relationship between mountains and weather in Autumn 2). • How do rivers shape the land? The river's load. Flooding. • Depth focus: River Severn (prepares for later work on agriculture & Wales) • Wildlife in the River Severn • Fishing, local agriculture, pollution problems. • Geographical skills: Using photographs	Where does the River Indus come from and how does it grow?	**Pupils will learn that the** River Indus: • **starts in Tibet, in the Himalayas (a mountain range).** • **flows through India and mainly through Pakistan** • has only a small part of the river is in India. • **eventually flows into the Arabian Sea.** **They will be taught what a mountain range, a channel, a glacier, a monsoon and a tributary are.** They will learn that **the Indus grows larger from melting ice and snow from glaciers as well as Monsoon rains which swell the river further between June and September. They will learn that as the land becomes flatter, the river flows fast in a smooth, wide, deep channel. And finally that Tributaries add more water to the Indus, making it grow bigger.** The River Indus is 3,200 km long, making it one of the longest rivers in the world. A specific tributary flows into the Indus from near the Afghanistan–Pakistan border. The riverbed of this tributary is very rocky, which makes the water turbulent	**They will use Map skills to** • Locate India and Pakistan on a map of Asia. • Use the four-point compass (North, South, East, West). • Understand the difference between an ocean and a sea. • Draw, label and identify the River Indus; Himalayan mountains; Tibet; India; Pakistan; the Arabian Sea **Geographical skills covered:** • Describe mountains and rivers using observations • Listen to and retell the "story of a river" using key words; - • Label maps accurately and write sentences about the river's journey. Illustrate understanding with drawings and maps.	Mountain range – a chain of mountains close together. Channel – a pathway carrying water. Glacier – a huge stretch of slowly moving ice. Monsoon – the rainy season in some hot countries. Tributary – a smaller river that flows into a larger river. Tibet Himalayas stream Indus India Pakistan Arabian Sea riverbed turbulent - fast-moving and rough.
	How does the River Indus change people's lives?	**Knowledge** • **A river's course is its journey from source to sea.** Seasonal changes affect rivers: • **Flooding can be both helpful (irrigates crops, fertile soil) and harmful (destroys homes, farmland, and livelihoods).** • **Irrigation: spreading water over farmland to grow crops like rice, wheat, cotton, and corn.** • **Dams, canals, and reservoirs are built to store and direct water for farming and human use.** • **Hydro-electric power: electricity generated from fast-flowing river water via turbines.** • **Human intervention changes rivers: dams can provide benefits but also harm ecosystems and communities.** • Environmental and social impacts: Fishermen in Sindh face disappearing palla fish due to blocked river flow. Wildlife (birds, blind river dolphins) depend on the Indus ecosystem.	**Skills** **Observation and** description: looking closely at photographs, identifying features (e.g., dams, canals, floods, reservoirs). Comparative thinking: recognising how the river changes at different times (seasons, floods, droughts). Cause and effect reasoning: explaining how snowmelt/monsoons cause rising river levels, and how dams affect farming, people, and wildlife. Empathy and perspective-taking: considering views of farmers, fishermen, and local communities impacted by river changes. Critical thinking: weighing up positives (irrigation, power, fertile soil) and negatives (floods, disappearing fish, ecological disruption) of human management of rivers. Communication: answering structured questions in full sentences, using geographical terms.	course river levels dams reservoirs canals irrigation irrigate turbine hydro-electric power parched palla province Sindh revive migrate

			Creative representation: drawing and annotating diagrams (e.g., a dam showing benefits/problems). Reading for information: using the Rivers booklet to support knowledge building.	
	How does water travel through the water cycle to give rivers their water?	• **Rivers often begin in mountains where rainfall is heavy.** • **The starting point of a river is called the source.** • Water can collect in lakes, bogs, or burst out of springs when it hits hard rock underground. • **The amount of water on Earth stays the same – it moves around in a continuous cycle.** • **Water exists in three states: solid (ice), liquid (water), and gas (vapour/steam).** • **When liquid water warms, it evaporates and rises as water vapour.** • **As water vapour cools high in the atmosphere, it condenses into droplets, forming clouds.** • **When droplets get heavy, they fall as precipitation (rain or snow).** • **Rainwater can flow into rivers as surface runoff or soak into the ground as groundwater.** • **Plants take up water and release it into the air through transpiration.** • **All of these processes together are called the water cycle.**	Reading and vocabulary: learning and using key geographical terms (evaporation, condensation, precipitation, transpiration, source, surface runoff, groundwater). Observation: interpreting pictures, diagrams, and video clips to explain processes. Explanation: describing processes in full sentences (e.g., "Water warms up and evaporates into the atmosphere"). Making connections: linking river sources to rainfall, springs, and the wider water cycle. Critical thinking: considering human impact (e.g., dams for irrigation vs. flooding). Collaboration and discussion: explaining processes to a partner or group. Sequencing: ordering the steps of the water cycle logically.	spring source delicacy Earth atmosphere state solid liquid gas water vapour water cycle evaporates evaporation condenses surface runoff groundwater transpiration Geographic link to Y3 Autumn 2 – Mountains – prepares for explaining the relationship between mountains an rivers.
	How do rivers shape the land?	• **Rivers change the land as they flow from high land to low land.** • **When rivers wear away rock and soil, this process is called erosion.** • **When rivers drop the material they carry, this is called deposition.** • **The material that rivers carry (rocks, stones, gravel, particles) is called the river's load**. • The start of a river is called its source, and **the early stage is called the upper course.** • Young rivers have lots of energy, cutting narrow channels through mountains or hills. • A young river carves out steep-sided V-shaped valleys. • **Rivers wind around harder rock, leaving ridges called spurs.** • Waterfalls form when rivers flow over hard rock onto softer rock, eroding the soft rock and making the waterfall move backwards over time.	Use and apply key geographical vocabulary: erosion, deposition, load, source, upper course, V-shaped valley, spurs, waterfall. Observation skills: identifying features like spurs, V-shaped valleys, and waterfalls in photos, videos, or models. Explaining processes: describing how rivers erode, carry, and deposit material. Modelling: creating clay or drawn models of the upper course of a river, adding labels. Sequencing: explaining the order in which features like valleys and waterfalls are formed. Discussion and reasoning: working with partners to explain changes in landforms caused by rivers.	erosion erodes particles load deposits deposition upper course V-shaped valley spurs
	How does a mature river shape the land and what happens when it reaches the sea?	• **As rivers move away from the mountains, they widen and deepen to form a mature river**. • **Other streams and rivers join them; these are called tributaries.** • **Mature rivers often form large curves called meanders.** • Erosion happens on the outside of bends, where the water flows faster. • Deposition happens on the inside of bends, where the water flows slower.	Vocabulary application: tributary, mature river, meander, erosion, deposition, sediment, mouth, estuary, delta, mangrove. Explaining processes: describing how erosion and deposition create meanders.	mature meanders sediment mouth estuary reeds delta

		• **The deposited material is called sediment.** • **Where a river meets the sea is called the mouth**. • **An estuary is where fresh river water mixes with salty sea water**. • In large estuaries, rivers can form deltas from deposited sediment. • The Indus River has one of the largest deltas, with huge mangrove forests.	Observation: interpreting diagrams and photos of meanders, estuaries, and deltas. Drawing and labelling: sketching meanders and identifying erosion/deposition zones. Making connections: linking river features (source, upper course, mature stage, mouth) in a sequence. Discussion and reasoning: explaining why rivers meander and how land is shaped.	mangroves
	What makes the River Severn special and why is it important to protect it?"	• **The River Severn is the longest river in the United Kingdom.** • **Its source is high in the Welsh mountains, in swampy ground.** • The River Severn flows from Wales into England, passing through towns such as Shrewsbury and Gloucester. • **The flat land around the Severn is fertile; when it floods, it enriches the soil for farming.** • **Cattle and crops (such as corn and potatoes) are farmed along its banks.** • The River Severn is famous for salmon, which are born in the upper course, travel to the sea, and return to spawn. • The Severn bore is a huge wave caused by the tide in the estuary, which can travel as far as Gloucester. • The Severn estuary is very wide, with sandy banks of sediment called mudflats. • Birds such as curlews and sandpipers live in the estuary, feeding on worms and insects in the mudflats. • The Severn estuary is a special area of conservation, meaning plants and animals are protected from pollution.	Map skills: locating the source, mouth, estuary, and key towns (Wales, England, Shrewsbury, Gloucester). Observation: describing features such as salmon, the bore, estuary birds, and farmland. Scientific vocabulary: source, estuary, bore, conservation, pollution. Explaining processes: describing the salmon's life cycle and migration, and how the bore forms. Reasoning and discussion: considering the effects of flooding, farming, and pollution on rivers. Environmental awareness: understanding why rivers and estuaries must be protected.	Welsh River Severn Wales cattle salmon streamlined bore Gloucester tide curlews sandpipers mud flats conservation pollute pollution
	Synoptic Task:	By the end of the unit pupils will be able to answer the question: **How do rivers, people and land affect each other?** This will include explaining how rivers affect the land, how the land affects a river, how people affect rivers and how rivers affect people.		

Mountains
Disciplinary Skill: Disciplinary focus: interaction
Disciplinary Outcome: By the end of the unit pupils will be able to answer the question, 'How do mountains and people affect each other?'

Learning Intent	Lesson Sequence and Big Question.	Core Knowledge	Core Skills	Suggested activities (with resource links)	Core Vocabulary
Pupils will learn the: • Highest mountain in each of the four countries of the UK. • Mountain ranges and mountainous regions: Brecon Beacons, Highlands, Lake District, Snowdonia, Pennines, Yorkshire Dales. • Why do people live on mountains? • Depth focus: i) Andes and terraced farming; ii) Snowdonia (prepares for Wales…see Cardiff in Spring 1)	**What is a mountain?**	• A mountain is higher and steeper than a hill; a hill that is more than 600m is called a mountain. Mountains are colder at the top. • The highest mountains in the UK are Ben Nevis, Snowdon, Scafell Pike and Slieve Donard. Maps show height using colour shading.	• Using geographical vocabulary; identifying and comparing geographical features; map reading.	• Identify differences between hills and mountains. • Use UK map to locate highest mountains. • Draw and label hill vs mountain diagram.	hill, mountain, Ben Nevis
	What is a mountain range?	• Mountains often form ranges. • A mountain range is a chain of mountains close together. Examples: Tien Shan, Himalayas. Mount Everest is the world's highest mountain. Features include peak, slope and terraces.	• Using maps to identify mountainous regions; defining and labelling geographical features.	• Identify mountain ranges on world map. • Label peak and slope. • Add terraces to mountain sketch.	mountainous regions, mountain range, Himalayas, Mount Everest, peak, slopes, terraces

• Sustained geographical themes: • Relationship between mountains and weather • Relationship between mountains and people • Geographical	**Why do people live on mountains?**	• People live on mountains for farming, tourism and natural resources. • Terraces allow farming on steep slopes. Settlements can be found in mountains like the Alps and in the Philippines. • The summit is the highest point; valleys lie between mountains.	• Explaining human–physical interaction; annotated diagrams; use of key vocabulary.	• Write about human uses of mountains (tourism, farming). • Label summit/valley on diagrams.	summit, Alps, adapted
	What is life like in the Andes?	• The Andes is the longest mountain range in the world, in South America. Climate varies: warm and rainy in north, dry in centre, cool in south. • People farm on terraces and mine minerals. • Roads use mountain passes.	• Use of maps and atlases; describing climate; comparing geographical regions.	• Label Andes on South America map. • Add Equator/Tropic of Capricorn. • Write paragraph about climate in Andes.	Andes, terraced farming, mountain pass
	Where are mountainous regions in the UK?	• UK mountainous regions include: Highlands and Cairngorms (Scotland), Lake District, Pennines and Yorkshire Dales (England), Brecon Beacons (Wales). Tourism affects mountain regions.	• Map skills; describing relative location; human impact on physical environment.	• Label UK mountains on blank map. • Write sentences using north/south/east/west. • Discuss tourism impacts.	Cairngorms, Highlands, trek, valleys, Lake District, Pennines, Yorkshire Dales, Brecon Beacons
	Snowdonia	• Snowdon is 1085m above sea level. Conditions change with height: temperature drops, visibility changes, weather becomes harsher. • People must prepare carefully for mountain climbing.	• Interpret data; sequence events; explain cause and effect.	• Track Bethan's climb up Snowdon using booklet. Record temperature changes. • Write sentences about changes.	Snowdonia, above sea level, temperature
	Synoptic Task:	By the end of the unit pupils will be able to answer the question: How do mountains and people affect each other?			

Settlements
Spring 1
Disciplinary focus: diversity

Disciplinary Outcome: By the end of the unit pupils will be able to explain how settlements are similar and different

Learning Intent	Lesson Sequence and Big Question.	Core Knowledge	Core Skills	Suggested activities (with resource links)	Core Vocabulary
Pupils will learn: • Settlement types, hamlet, village, town, city etc; • land use, settlements by rivers. • Major cities in the UK – locational overview • London as a conurbation and London boroughs • Two cities: Cardiff and London, including economy & transport. How do people move about in Cardiff? How do people move about in London? • Patterns of settlement in Cardiff and London.	What makes a place a settlement?	• A settlement is anywhere people live. • Settlements vary in size from very small to very large. • Types include farmstead, hamlet, village, town and city. • Hamlets usually have only houses and people.	• Classifying places, using definitions, comparing settlement size and features.	• Study photographs from different continents, • identify settlements, • sort examples, • draw settlement hierarchy triangle.	settlements settlement hamlet farmstead
	How is a village different from a hamlet?	• Villages are rural settlements found in the countryside. • They have more facilities than hamlets including a church, shops, primary school, pub, village hall and village green. • People are called inhabitants.	• Comparing settlements, identifying rural features, using aerial photographs.	• Label village features, • count inhabitants from aerial photos, • compare village and hamlet.	village rural inhabitants church village green post office small shops primary school pub village hall connect
	Why do towns need more facilities than villages?	• Towns are larger urban settlements with more people. • They have more facilities such as secondary schools, railway stations, hospitals and supermarkets. • Towns adapt as populations grow.	• Identifying urban features, map reading, understanding adaptation.	• Annotate town maps, compare facilities, • update settlement triangle.	secondary school facilities railway station urban settlement adapt coastal town

					market town
	What makes a city different from a town?	• Cities are the largest settlements with many people and facilities including universities, large hospitals and airports. • Historically UK cities had cathedrals.	• Comparing settlements, reasoning about population needs.	• Identify cities on maps, • compare towns and cities, • extend hierarchy diagram.	city university large hospitals cathedral airport
	How has London grown and adapted over time?	• London is the largest city in the UK. • It grew from a small riverside settlement into a sprawling conurbation made up of boroughs. • Transport systems include the Underground and cycle lanes.	• Understanding urban growth, map skills, cause and effect reasoning.	• Study London maps, • identify boroughs, • create adaptation spider diagrams.	sprawling urban sprawl boroughs Londoners Tube Underground Cycle lanes conurbation flats
	How is Cardiff similar to and different from London?	• Cardiff is the capital city of Wales, built on the River Taff. • It has city facilities plus government buildings and a clear city centre. • It adapts differently from London.	• Comparative thinking, identifying capital city features.	• Compare Cardiff and London, • label facilities, • create comparison charts.	Cardiff capital city Taff businesses
	Synoptic Task:	By the end of the unit pupils will be able to answer the question: How are settlements the same and different?			