Opening Worlds Progression of knowledge and skills – Geography – Y3/4 – Year A

Year 3 Autumn 1: 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	Suggested activities (with resource links)	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.	Label a map of the River Indus, including: Tibet, Himalayas, India, Pakistan and the Arabian Sea Draw the River Indus with a thick blue line and the Himalayan mountains with triangles Write a sentence describing the journey of the River Indus from source to where it flows Orally retell the story of the River Indus using key vocabulary	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.	Write one or two sentences explaining what dams are used for, using key vocabulary (dam, canal, reservoir, irrigation, hydro-electric power) Answer structured questions explaining how the River Indus changes during the monsoon Draw and label a diagram showing how dams help farmers and how they can cause problems Discuss whether rising river levels are helpful or harmful and explain why	course river levels dams reservoirs canals irrigation irrigate turbine hydro-electric power parched palla province Sindh revive migrate

			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. 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.	Label a diagram of the water cycle using correct vocabulary Write explanations for evaporation and condensation using full sentences Orally explain where river water comes from, using the water cycle Complete a sequencing task showing the stages of the water cycle	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.**	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.	Create a model, drawing or painting of the upper course of a river Label key features such as source, V-shaped valley, load and erosion Write short explanations describing how erosion shapes the land	erosion erodes particles load deposits deposition upper course V-shaped valley spurs	

		• 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.	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.	Draw and explain how a waterfall is formed		
	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. • **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.	Vocabulary application: tributary, mature river, meander, erosion, deposition, sediment, mouth, estuary, delta, mangrove. Explaining processes: describing how erosion and deposition create meanders. 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.	Draw and label a meander, showing erosion on the outside bend and deposition on the inside Write a short explanation answering the question: Why do rivers meander? Label a diagram showing mouth, estuary and delta Write a paragraph explaining what happens where a river meets the sea	mature meanders sediment mouth estuary reeds delta 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.	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.	Label a map of the River Severn, including source, mouth, estuary, Wales, England, Shrewsbury and Gloucester Compare the River Severn with the River Indus using a table or sentences Draw symbols on a map to show farming, wildlife and conservation areas Write an explanation of why the Severn estuary is protected	Welsh River Severn Wales cattle salmon streamlined bore Gloucester tide curlews sandpipers mud flats conservation pollute pollution	

		• 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.	Reasoning and discussion: considering the effects of flooding, farming, and pollution on rivers. Environmental awareness: understanding why rivers and estuaries must be protected.		
	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.			

Year 3 Autumn 2: 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) • Sustained geographical themes: • Relationship between mountains and weather • Relationship between mountains and people • Geographical	**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
	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?			

Year 3: 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?			

Year 3 Spring 2: Agriculture
Disciplinary Skill: Interaction

Disciplinary Outcome: By the end of the unit pupils will be able to answer the question, How are we connected to farmers?

Learning Intent	Lesson Sequence and Big Question.	Core Knowledge	Core Skills	Suggested activities (with resource links)	Core Vocabulary
Pupils will learn: • Arable farming, pastoral farming, mixed farming, how farming changes the landscape. • How the food we eat affects farming (seasonal food, local food, pesticides, organic food, vegetarian and plant-based diets that do not use animals; link to fish farming, builds on fish farming in Indus River Y3 Autumn 1). • Sheep farming in Wales – Snowdonia. Locational knowledge revisited: Wales, Snowdonia, Gloucestershire. • New locational knowledge: Sussex Geographical theme: links between food consumption patterns and farming; issues arising e.g. local sourcing. • Geographical skills: Optional local fieldwork on local shops – their sourcing, economic and ethical considerations.	What is agriculture and how do farmers produce our food?	• Agriculture is the way farmers grow crops and raise animals to produce food. • Farmers grow crops in fields or on trees and raise animals for meat and milk. • Food from farms is usually processed and then distributed to shops.	• Explain a process in sequence; • Use geographical vocabulary accurately; • Identify examples of agriculture.	• Listen to Story 1 from the narrative. • Class discussion using images of food sources. • Write a short explanation including the words 'food' and 'land'.	agriculture, farmer, crops, animals, processed, distributed
	What is arable farming and what do crops need to grow well?	• Arable farming involves growing crops such as wheat and barley. • Crops need fertile soil, suitable climate, and flat or gently sloping land. • Farmers plough fields, plant seeds, and harvest crops during the growing season.	• Describe land use; • Sequence stages of crop growth; • Apply knowledge to images and diagrams.	• Story 2 discussion. • Diagram showing ploughing, planting, growing season, and harvesting.	arable, crops, soil, ploughing, planting, harvesting, growing season
	What is pastoral farming and why is some land better for animals than crops?	• Pastoral farming involves raising animals for meat and milk. • Animals can graze on land that is too steep or poor for crops. • Some pastoral farms are dairy farms that focus on milk production.	• Compare types of farming; • Explain suitability of land; • Use examples to justify answers.	• Story 3 about Wilfred the farmer. • Photo analysis of different farms.	pastoral, grazing, livestock, dairy, milk, meat
	How does farming change the landscape?	• Farming can change landscapes by draining marshlands, clearing forests, and planting hedges. • Hedges divide fields, protect crops, and prevent erosion.	• Explain cause and effect; • Describe human impact on landscapes; • Use geographical terms accurately.	• Story 4 discussion. • Write explanations of how marshlands, forests, and hedges change landscapes.	landscape, marshland, forest, hedge, erosion
	How does the food we eat affect farming?	• Farmers grow what people want to buy. • Crop yield can be increased using fertilisers and pesticides. • Some people choose organic, seasonal, or local food.	• Explain links between choices and outcomes; • Use evidence to justify opinions; • Apply vocabulary in context.	• Story 5 discussion. • Writing task explaining crop yield and food choices.	yield, fertiliser, pesticide, organic, seasonal, local
	Why is sheep farming important in Wales?	• Much of Wales is hilly, making it suitable for sheep farming. • Sheep are reared for wool, meat, and sometimes milk. • Sheepdogs help farmers manage flocks.	• Interpret data; • Explain geographical suitability; • Use case study evidence.	• Story 6 discussion. • Data interpretation of farming in Wales.	sheep farming, flock, grazing, rearing, shearing, pasture
	Synoptic Task: By the end of the unit pupils will be able to answer the question: How are we connected to farmers?				

Year 3 Summer 1: Volcanoes
Disciplinary Skill: Interaction

Disciplinary Outcome: By the end of the unit pupils will be able to answer the question, How do volcanoes affect a place?

Learning Intent	Lesson Sequence and Big Question.	Core Knowledge	Core Skills	Suggested activities (with resource links)	Core Vocabulary
Pupils will learn: • Structure and composition of the earth How and why volcanoes erupt • Types of volcanoes Active, dormant and extinct volcanoes • Link to settlements with section on why people still live near volcanoes • Deepen Mediterranean place focus via Mount Etna and human settlements around it. • Why people visit volcanoes (work, tourism, farming, science) • Geographical skills: Using diagrams, describing distribution	**Lesson 1** What is the Earth made of on the inside?	• The Earth has four layers: the crust, the mantle, the outer core and the inner core. • The outer layer is the crust – the thinnest layer (8–65 km thick). • The crust is made of two types: oceanic crust (under the oceans) and continental crust (under the land). The oceanic crust is thinner than the continental crust. • Underneath the crust is the mantle, made of rock, iron and other substances. The upper mantle is hard; the lower mantle is hot and soft. In some places the mantle is liquid. • The outer core is liquid iron at around 4,000°C. • The inner core is solid iron and reaches around 5,500°C. • It gets hotter the closer you get to the centre of the Earth. • No human has ever reached deeper than 12 km below the surface. • Scientists have worked out what each layer is made of even though no one has seen deep inside the Earth.	• Label a diagram of the four layers of the Earth from memory. • Read and interpret a data table showing temperature, thickness, state and substances of each layer. • Write a guide to the inside of the Earth using geographical vocabulary (crust, mantle, outer core, inner core, solid, liquid, temperature, rock, iron). • Answer true/false questions about the Earth's layers to check understanding. • Use full sentences to explain why it is impossible to reach the centre of the Earth. • Make observational drawings of cross-section diagrams.	• Label the four layers of the Earth on a printed diagram. • Read and discuss the data table comparing temperature, state, thickness and substances of each layer. • Write a guide titled "A Guide to What is Inside the Earth" using key vocabulary. • Complete a true/false quiz about the Earth's layers. • Discuss in pairs why no human will ever travel to the centre of the Earth, using knowledge of heat, substances and thickness. • Optional: colour-code the layers of the Earth with appropriate colours.	• surface • mantle • crust • planet • core • scientists • oceanic crust • continental crust iron
	Lesson 2 What happens when a volcano erupts?	• When hot, melted rock in the mantle bursts through a thin part of the Earth's crust, a volcano is formed. • Molten (melted) rock underground is called magma. Molten rock above ground is called lava. They are the same substance in different locations. • Lava can be thin and runny, or thick and sticky (viscous). • Viscous lava traps gases, building up pressure until they escape violently, causing explosive eruptions. • Runny lava is less explosive and less dangerous (e.g. Mount Kilauea, Hawaii, which has poured out runny lava continuously since 1983). • Magma collects in a magma chamber beneath the surface before erupting through a vent. • Parts of a volcano include: magma chamber, main vent, secondary vent, lava flow, ash cloud and crater. • Composite volcanoes are steep-sided, made of layers of ash and viscous lava (e.g. Mount Etna). • Shield volcanoes have gently sloping sides and runny lava; they are less explosive.	• Label a cross-section diagram of a volcano including all key parts. • Use geographical vocabulary (magma, lava, vent, viscous, pressure, explosive) accurately in sentences. • Explain in writing what happens when a volcano erupts, including cause and effect. • Identify whether photographs show hot lava, cooled lava or magma and explain reasoning. • Draw and annotate a cross-section diagram of a volcano. • Compare the shapes of composite and shield volcanoes and explain differences in explosivity.	• Watch a video of a volcano erupting and discuss what is observed. • Quick lava drawing activity using rich colours (black, red, orange, yellow) to show flow. • Label a cross-section diagram of a volcano from memory. • Look at photographs of lava from Italy and Iceland and identify whether it is hot lava, cooled lava or magma. • Write a paragraph explaining what happens when a volcano erupts using key vocabulary. • Read Page 9 about composite, shield and super volcanoes and compare their features.	• melted • volcano • erupting • molten • magma • lava • viscous • explosive • pressure • vent • magma chamber • composite • shield • Mount Etna Super volcano

		• Supervolcanoes are enormous, highly explosive and very rare – no one alive has ever seen one erupt.			
	Lesson 3 How are volcanoes formed?	• Magma pushes through weak places in the Earth's crust and collects in a magma chamber. • Pressure in the magma chamber forces magma upwards through vents. Pressure is a force. • Where the crust is thin or weak, pressure forces magma through, forming a volcano. • Some volcanoes have secondary vents as well as a main vent, formed when pressure is very high. • Magma appears in several forms: liquid lava flows, volcanic bombs (lumps of molten rock that solidify as they fall), hot ash and dust, and steam and gases. • When lava cools and hardens it forms new layers of solid rock; repeated eruptions gradually build up a volcano. • When an explosive eruption blows off the top of a volcano, a large hole called a crater forms. • Mount Bromo in Indonesia is a steep-sided, composite, active volcano famous for its enormous crater (ten kilometres wide). • Composite volcanoes are more likely to have craters because their viscous lava makes eruptions more explosive.	• Use knowledge of pressure to explain why magma is forced upward through vents. • Add arrows to a diagram of a magma chamber to show the direction of pressure. • Write a paragraph explaining how Mount Bromo got its crater, using geographical vocabulary. • Explain the difference between lava flows, volcanic bombs, ash and steam. • Compare composite and shield volcanoes and explain differences in explosivity. • Use maps to locate Mount Bromo in Indonesia.	• Add pressure arrows to a previously-drawn volcano diagram and write a sentence explaining the word "pressure". • Watch a short film clip and identify which form of magma is visible (e.g. steam). • Read Pages 10 and 11 in the Volcanoes booklet about Mount Bromo. • Write a paragraph and draw a picture explaining how Mount Bromo got its crater. • Class quiz reviewing key vocabulary: vents, craters, volcanic bombs, viscous, composite, shield. • Locate Indonesia on a world map.	• secondary vents • volcanic bombs • solidify • Mount Bromo crater
	Lesson 4 What is the difference between active, dormant and extinct volcanoes, and how do volcanoes endanger people?	• Active volcanoes have erupted recently and are likely to erupt again. Over 700 active volcanoes exist worldwide. • Dormant volcanoes are currently inactive but might erupt again ("sleeping" volcanoes). • Extinct volcanoes are unlikely ever to erupt again. Scotland and Northern Ireland have many extinct volcanoes. Edinburgh Castle is built on an extinct volcano. • Lava flows can bury houses, farms, villages and towns. • Mudflows can travel at 100 km/h, drowning people and animals. • Pyroclastic flows are a mixture of hot steam, ash, rock and dust; they travel at 200 km/h and smother everything in their path. • Volcanic gases can suffocate people and animals. • Ash and dust clog car engines, ruin crops and disrupt air traffic. • In 2010, a volcanic eruption in Iceland sent plumes of ash thousands of feet into the air, closing most of Europe's airspace for over five days.	• Define and distinguish between active, dormant and extinct volcanoes. • Describe and explain different types of volcanic danger using appropriate vocabulary. • Use cause-and-effect reasoning to explain how lava, ash, pyroclastic flows and gases affect people. • Draw and annotate a diagram of an active, dangerous composite volcano showing all dangers. • Watch and interpret film clips of volcanoes erupting, identifying lava flows, mudflows, plumes and pyroclastic flows.	• Watch short film clips of volcanoes erupting – identify plumes of ash, hot steam, lava flows and mudflows. • Draw a composite volcano and label the dangers around it (lava flows, ash, pyroclastic flows, gases, volcanic bombs). • Discuss how mudflows and lava flows affect farms, buildings and people. • Read Pages 12, 13 and 14 in the Volcanoes booklet. • Discuss how dangerous gases, dust and ash affect people, animals, engines, crops and air traffic. • Look at photographs of Edinburgh Castle and discuss what the landscape would have looked like when the volcano was active.	• active volcano • dormant • extinct • flow • lava flows • mudflows • pyroclastic flows • smother • clog • disrupt plumes
	Lesson 5 Where is Mount Etna and why is it so dangerous?	• Mount Etna is located on the east coast of the island of Sicily, which is part of Italy. • Sicily is an island in the Mediterranean Sea.	• Locate Sicily and Mount Etna on a map using compass directions.	• Locate Sicily and Mount Etna on a map; describe its position using compass directions.	• Sicily • Destructive endangered

		• Mount Etna is a steep-sided composite volcano with over 300 vents. • It is the most active volcano in southern Europe and one of the largest on the planet. • Evidence of eruptions dates back 500,000 years. The most destructive eruption was in 1669, destroying at least ten villages and killing 2,000 people. • Since 2001, Mount Etna has erupted every year except 2007. • In 2017, lava flowed into snow causing huge explosions; ash spread as far as Bucharest in Romania, disrupting flights. • Mount Etna is part of a pattern of volcanoes along the western coast of Italy, forming a line; some are active, most are dormant. • The distribution of volcanoes can be described as spaced out along a line, or clustered into groups.	• Describe the distribution of volcanoes on a map of Italy using geographical language (spaced out, clustered, pattern, line). • Explain what makes Mount Etna dangerous using evidence from case study material. • Write a guide for a geographer visiting Mount Etna, covering location, type, eruption history and dangers. • Sketch a map with a key (e.g. red triangle = volcano) showing Mount Etna's location. • Use vocabulary: destructive, endangered, distribution.	• Study a map of Italian volcanoes and describe the distribution pattern. • Read Pages 15, 16 and 17 in the Volcanoes booklet. • Write a guide for a geographer visiting Mount Etna (covering location, type, eruptions, dangers). • Include a sketch map with a key in the guide. • Discuss what problems ash from the 2017 eruption caused for aeroplanes and people's breathing.	

	Lesson 6 Why do people choose to live, work and visit near a dangerous volcano?	• More than a quarter of the population of Sicily live close to Mount Etna. • Volcanic lava and dust enrich the soil, making it very fertile. • The fertile soil around Mount Etna, combined with the warm Mediterranean climate, allows farmers to grow citrus fruits (lemons and limes), grapes, vegetables and pistachio nuts. • Some of Sicily's best wines come from grapes grown on the sunny slopes near Mount Etna. • Tourists visit Mount Etna to walk, ski, see the volcano and enjoy the surrounding towns, hotels and restaurants. • Scientists (geologists) study volcanoes to monitor for signs of eruption and to learn about the Earth's structure. • Signs of an impending eruption include: the top of the volcano being hotter than usual, more gases from vents, or the volcano changing shape. • People use explosives and concrete blocks to divert lava flows into new channels to protect settlements. • Evacuating means people leave the area near the volcano until the danger has passed. • A geologist is a scientist who studies rocks; geologists capture lava samples to learn what the mantle is made of.	• Explain why people choose to live near a volcano despite the dangers, using geographical reasoning. • Use vocabulary: enrich, fertile, citrus fruits, evacuate, divert, geologist. • Re-apply vocabulary from Rivers unit: channel, course. • Discuss different groups who visit volcanoes (farmers, tourists, scientists/geologists) and their reasons. • Interpret photographs to identify tourist activity and signs of farming near Mount Etna. • Describe how scientists monitor volcanoes and why this is important for public safety.	• Review writing from Lesson 4 about the dangers of volcanoes. • Look at photographs of farmland near Mount Etna and identify what crops are grown. • Read Pages 18–22 in the Volcanoes booklet. • Discuss why so many people live near Mount Etna despite the danger. • Look at tourist photographs of Mount Etna and identify signs of tourist activity. • Oral discussion with partner: why people live/work/visit near volcanoes, and how people keep safe if an eruption is expected.	• enrich • citrus fruits • explosives • divert • evacuated geologist
	Synoptic Task:	By the end of the unit pupils will be able to answer the question: How do volcanoes affect a place?			

Year 3 Summer 2: Climate and Biomes
Disciplinary Skill: Interaction

Disciplinary Outcome: By the end of the unit pupils will be able to answer the question, How does the climate affect the way people live?

Learning Intent	Lesson Sequence and Big Question.	Core Knowledge	Core Skills	Suggested activities (with resource links)	Core Vocabulary
Pupils will learn: • Continent of Europe • Climate zones - first mention of Equator, Arctic, Antarctic and the North/South poles. • Climate and relationship with oceans. • Climate and biomes within climates • Depth focus 1) Mediterranean climate • Depth focus 2) Temperate climate, using examples of Rhine & UK ready for ongoing regional comparison • Geographical skills: World map and key lines of latitude	Lesson 1: Where is Europe, and what does it look like?	• A continent is a very large mass of land; there are seven continents in the world. • The seven continents are: Europe, Asia, Africa, South America, North America, Australia, and Antarctica. • Europe is bordered by Asia to the east, the Mediterranean Sea and Africa to the south, the Atlantic Ocean to the west, and the Arctic Ocean to the north. • The Mediterranean Sea separates Europe from Africa; the Atlantic Ocean is to the west of Europe. • There are over fifty countries in Europe. • Some countries in Europe are islands (e.g. UK, Iceland); some are landlocked, meaning surrounded entirely by other countries (e.g. Austria). • Many European countries have coastlines; landlocked countries cannot see the sea from any part of their territory.	• Use compass directions (N, S, E, W) to describe the location of continents and oceans relative to Europe. • Locate and label continents and oceans on a world map. • Distinguish between oceans (Pacific, Atlantic, Indian, Arctic, Southern) and seas (Mediterranean, North, Black, Baltic). • Identify island countries and landlocked countries on a map of Europe. • Write descriptive sentences using geographical vocabulary.	• Study a map of the world from space and identify the seven continents and major oceans — draw and label from memory to consolidate new knowledge. • Label a blank map of Europe with surrounding oceans and seas, plus neighbouring continents. • Sort European countries into two groups: islands and landlocked, using a map of Europe. • Write a description of the continent of Europe using sentence starters: 'To the north...', 'To the south...', 'To the east...', 'To the west...' • Oral quiz: partner asks directional questions about European geography (generative retrieval practice).	• continent • oceans • Europe • Mediterranean Sea • Atlantic Ocean • Arctic Ocean landlocked
	Lesson 2: What is climate, and why does it differ around the world?	• Weather is what the atmosphere is like at a specific time and place (e.g. sunny, rainy, hot, cold). • Climate is what the weather is usually like over a long period of time in a particular place. • The Equator is an imaginary line drawn around the middle of the Earth. • Lines of latitude are imaginary lines that circle the Earth parallel to the Equator. • Countries closer to the Equator have a tropical climate: very hot and very wet. • Countries far from the Equator (near the poles) have a polar climate: very cold and very dry. • Climate varies around the world primarily because of distance from the Equator (latitude).	• Distinguish between weather (short-term) and climate (long-term pattern). • Locate the Equator and label lines of latitude on a world map. • Classify countries as having tropical or polar climates based on their latitude. • Use geographical vocabulary (Equator, latitude, tropical, polar) accurately in sentences. • Explain with reasoning why countries near the Equator are hotter than those near the poles.	• Look out of the classroom window and describe today's weather; then discuss: is this the climate? — unpacking the difference between weather and climate. • Label the Equator on a world map and draw arrows from countries to the correct climate zone (tropical or polar). • Classify a set of climate image cards (tropical/polar) and write a sentence justifying each classification. • Write full-sentence answers to: 'Why does India have a different climate from Greenland?' using the word 'latitude' and 'Equator' — generative writing task. • Partner quiz: one person describes a climate, the other names it and gives an example country.	• weather • climate • Equator • latitude • tropical polar
	Lesson 3: How do oceans affect the climate?	• 70% of the Earth's surface is covered by water (oceans). • There are five oceans: Pacific, Atlantic, Indian, Southern, and Arctic. The Pacific is the largest. • Living close to the ocean produces a milder climate — not too hot and not too cold. • Ocean currents are movements of water through the oceans.	• Name and locate the five oceans on a world map. • Explain the difference between an ocean and a sea. • Describe how proximity to the ocean affects climate. • Use maps to explain how the Gulf Stream travels from the Equator to western Europe.	• Label a blank world map with the five oceans, major continents, and the Equator. • Draw arrows on a map to show the direction of the Gulf Stream and annotate with one sentence explaining its effect on Britain's climate. • Compare Britain and Canada: discuss why countries at the same latitude have different climates — produce a written explanation using key vocabulary.	• mild • currents Gulf Stream

		• The Gulf Stream is an ocean current in the Atlantic Ocean that carries warm water from near the Equator northwards to western Europe. • The Gulf Stream gives Britain a mild climate despite its latitude. • Britain and parts of Canada are on the same line of latitude, but Britain has a milder climate because of the Gulf Stream.	• Write sentences using cause-and-effect language (e.g. 'Because of the Gulf Stream... Britain's climate is...').	• Complete a cloze activity summarising how ocean currents affect Britain's climate (mild, Gulf Stream, Atlantic, currents). • Pair discussion: 'What would happen to Britain's climate if the Gulf Stream stopped?' — use knowledge to predict and reason.	
	Lesson 4: What are biomes, and what are they like?	• A biome is a large area of the Earth where the climate, plants, and animals are similar. • The plants and animals in a biome depend on each other — animals eat plants, and animals help spread seeds. • A savanna biome is hot and dry with very little rain; plants include dry grass and wide trees; animals include giraffes and zebras. • A rainforest biome is hot and wet all year round; it contains half of all the world's plant and animal species. • A tundra biome is the coldest biome; it has very little rain or snow, very long winters, and permanently frozen soil — no trees grow there. • The River Indus flows through different biomes as its climate, soil, and landscape change. • Other biomes include woodlands and deserts.	• Define the term 'biome' and give examples of different biomes. • Describe the key features (climate, plants, animals) of savanna, rainforest, and tundra biomes. • Explain why trees cannot grow in the tundra (frozen soil, low temperatures, short growing season). • Use photographs and descriptions to identify and classify different biomes. • Write descriptive sentences comparing biomes using geographical vocabulary.	• Watch short video clips of different biomes and identify each from visual clues (climate, vegetation, animals) before being told the name — generative prediction task. • Create a fact file or annotated drawing for one biome (savanna, rainforest, or tundra) using key vocabulary. • Sort image cards of plants, animals, and landscapes into the correct biome category and justify choices. • Write 2-3 sentences describing the biome in which giraffes live, using: biome, savanna, climate, dry, grass. • Discussion: 'Why can't trees grow in the tundra?' — use knowledge of climate and soil to reason aloud before writing an explanation.	• biomes • savanna • rainforest tundra
	Lesson 5: What is a Mediterranean climate, and where in the world is it found?	• A Mediterranean climate is hot and dry in summer, and mild and cool in winter. • The Mediterranean climate gets its name from the land around the Mediterranean Sea. • In Europe, a Mediterranean climate is found between approximately 30° and 45° north of the Equator. • A Mediterranean climate is also found between 30° and 45° south of the Equator in places such as southern Australia (e.g. Adelaide) and South Africa. • Many British people holiday in Mediterranean climates because of the hot, dry summers. • Turkey (40°N) and Adelaide, Australia (30°–40°S) both have Mediterranean climates because of their latitude.	• Describe the key features of a Mediterranean climate. • Use lines of latitude to identify where Mediterranean climates are found (30°–45° north and south of the Equator). • Locate examples of Mediterranean climate regions on a world map (e.g. southern Spain, Turkey, Adelaide, South Africa). • Explain why a place such as Adelaide has a Mediterranean climate despite not being near the Mediterranean Sea. • Write explanations using the vocabulary: latitude, Equator, Mediterranean climate, north, south.	• Look at photographs of Mediterranean holiday destinations and describe the climate features — then identify where on a latitude map such climates would be found. • Label a world map showing Mediterranean climate zones north and south of the Equator; use the key provided. • Compare two places: one with a Mediterranean climate and one without — write sentences explaining the difference using latitude. • Explain in writing: 'Why does Adelaide in Australia have a Mediterranean climate?' — apply knowledge of latitude to a new example (generative transfer task). • Retrieval quiz: name the features of a Mediterranean climate, where it is found (latitude), and give two examples of countries with this climate.	Mediterranean climate
	Lesson 6: What is a temperate climate, and what is it like to live in one?	• A temperate climate lies between tropical and polar climates — it is not very hot or very cold, and not very wet or very dry. • Britain has a temperate climate.	• Define and describe the features of a temperate climate. • Name and describe the four seasons and link them to a temperate climate.	• Name the four seasons in order and write adjectives to describe each one — discuss how this reflects a temperate climate. • Write a description of life in a temperate climate: what can you grow? What are the	• temperate climate • temperature seasons

		• In a temperate climate, the temperature changes throughout the year; these changes are called seasons (spring, summer, autumn, winter). • In winter, days are shorter and cooler; in summer, days are longer and warmer. • A wide variety of crops can be grown in temperate climates throughout the year. • Much of northern Europe, including Germany, also has a temperate climate. • Grapes are grown along the River Rhine in Germany — evidence of the mild temperate climate. • Britain's temperate climate is influenced by the Gulf Stream, which brings warmth from the Atlantic Ocean.	• Compare temperate, tropical, and polar climates using appropriate vocabulary. • Locate countries with temperate climates on a map of Europe (UK, Germany, France, etc.). • Write comparative explanations using: temperate, tropical, polar, seasons, temperature, mild.	seasons like? How does it compare to a tropical or polar climate? • Compare a temperate and a tropical climate using a Venn diagram or side-by-side sentences — then do the same for temperate vs. polar. • Study photographs of Cambridge and the Rhine valley in Germany: identify clues that show both have a temperate climate (e.g. grapes, green fields, mild-looking conditions). • Retrieval challenge: without looking at notes, pupils write everything they know about temperate, tropical, polar, and Mediterranean climates — self-check and fill gaps (generative retrieval).	
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	Synoptic Task:	By the end of the unit pupils will be able to answer the question: How does the climate affect the way people live?			