Curriculum rationale & design	**Curriculum Intent** Our Astrea KS3 Geography curriculum is designed to be a knowledge-rich spiral curriculum which enables our scholars to develop powerful knowledge through a narrative which is carefully and coherently sequenced, building geographical knowledge over time. This narrative is driven by overarching core geographical concepts which thread through our curriculum. Key knowledge is revisited at different levels of depth supporting the transfer of disciplinary knowledge from one context to another. It is designed to enable our scholars to build strong schema where geographical knowledge is deeply interconnected to develop fluency. Our curriculum takes a holistic approach to enabling our scholars to master the discipline of geography through the explicit teaching of substantive, disciplinary and procedural knowledge. It provides a robust foundation of conceptual knowledge which helps scholars deepen their understanding as they progress through the key stage. It also recognises the importance of scholars understanding how geographical knowledge originates and undergoes revision through enquiry, underpinning critical thinking and allowing scholars to engage in contemporary debates whilst discerning fact from fiction. Our curriculum aims to ignite geographical curiosity by immersing scholars in awe and wonder, enabling them to appreciate the variety and interconnectedness of both physical and human landscapes and processes. Scholars are given the opportunity to study through a local and personal lens to understand the area in which they live, with a focus in Year 7 on the UK, whilst also being taken beyond their limits of personal experience, offering opportunities to study the world around them at a range of scales, both locally and globally throughout the Key Stage. This approach cultivates an appreciation for the inherent diversity in our world, acknowledging the complex challenges facing our world today, whilst providing an opportunity to challenge scholar perceptions and provide them with the knowledge and skills required to become active global citizens. Through investigating and understanding the world as a complex and dynamic combination of physical and human systems our curriculum seeks to stimulate a sense of wonder and curiosity whilst enabling scholars to understand their place in the world and foster a sense of responsibility towards the world they are inheriting. The concept of sustainability is threaded through our curriculum to ensure our scholars understand the impact of human activities on environments, so they are equipped with the knowledge to help play a part in minimising such impacts.

Our curriculum is designed to be inclusive allowing all our scholars to foster a balanced understanding of the world they have been born into. It aspires to shape well-rounded individuals who appreciate diversity, thinking critically and are committed to making positive contributions to our global community.

Curriculum Rationale

Our curriculum is careful sequenced to help scholars learn more and remember more, breaking down and sequencing knowledge in a way which minimises cognitive load and supports schema building with increasingly complexity introduced across the key stage. It is a spiral curriculum, revisiting key knowledge and concepts across the curriculum at different levels of depth, to support the transfer of geographical knowledge from one context to another, for example the basics of the geomorphological processes of erosion, transport, and deposition in UK landscapes (Yr 7), and weathering in Earth's Story (Yr 7) which are returned to and applied, in units such as World of Water (Year 8) and World of Ice (Year 9). Ensuring our scholars develop strong prior knowledge of foundational concepts in Year 7 is a priority, making new learning more likely as scholars are then given opportunities to connect new learning to existing knowledge as they move through the key stage. In this way our curriculum is designed to enable our scholars to build strong schema where foundational knowledge is built on becoming deeply interconnected. Interleaving knowledge through the curriculum supports retrieval practice and also enables scholars to have 'fingertip' knowledge that can be used in new contexts.

Curriculum Aims:

- To provide a coherent sequenced curriculum based on key underpinning geographical concepts which guides our scholars to think like geographers, recognising patterns, making connections, and developing a deep understanding of the earth's key physical and human processes.
- To uphold the integrity of the geography discipline, by ensuring scholars grasp how knowledge originates and evolves over time through the process of geographical enquiry.
- To equip scholars with the knowledge and understanding needed to make sense of and navigate the natural, human, and digital worlds and to appreciate how these intersect and are interconnected.
- To enable scholars to appreciate place, space, scale and change.
- To challenge misconceptions and avoid misrepresentation.
- To stimulate intellectual curiosity and wonder about places, helping scholars navigate our complex, diverse and dynamic world.
- To develop scholars who are critical thinkers, and effective global citizens well prepared for the challenges of the future.

	• Encourages scholars to consider alternative futures and aspires to empower them to influence these futures positively. Lifted from rationale and intent documents. Core Underpinning Concepts Our common curriculum is underpinned through core concepts which act as lenses through which geographical knowledge is presented. They are: ***Diversity; Inequalities; Interdependence; Processes (physical and human); Place; Scale; Space; Sustainability; Systems; Time***

Year	Autumn		Spring		Summer	
Year 7	Unit 1: UK Landscapes		Unit 2: Earth Story	Unit 3: Weather and Climate	Unit 4: Population	Unit 5: Microclimate Enquiry
Year 8	Unit 1: World of Water	Unit 2: Connected Economies	Unit 3: Ecosystems and Biomes	Unit 4: Tectonic Hazards: Volcanoes	Unit 5 Global Issues	
Year 9	*					
Year 10						
Year 11						

*The Astrea Common Curriculum runs in Y7 and 8 currently. The Y9-11 curriculum is implemented by departments whilst the Subject Community continues to develop the common curriculum further.

Year 7	Subject: Geography	Unit title: UK Landscapes (Unit 1)	Term: Spring 1

Knowledge (Learn that):

- There are 7 continents and 5 oceans on earth.
- Oceans are large, interconnected saltwater bodies; seas are smaller and often enclosed by land.
- Latitude and longitude are imaginary lines used to pinpoint exact locations on Earth.
- Key lines include the equator (0o latitude) and the Prime Meridian (0o longitude).
- Compass directions (4, 8 and 16 point) are used to describe location relative to other places.
- The UK is part of Europe and maintains strong economic and cultural links with European countries.
- The channel tunnel connects the UK to mainland Europe.
- The British Isles includes the UK and the Republic of Ireland, along with over 6,000 smaller islands.
- The UK is made up of four countries: England, Scotland, Wales and Northern Ireland.
- Great Britain refers only to England Scotland and Wales.
- Counties are subdivision within England and other UK nations, used for local government.
- Grid References (4 and 6 figure) are used to pinpoint the location of places on Ordnance Survey Maps of the UK.
- There are 3 rock types: Igneous, Sedimentary and Metamorphic
- These rock types formed under different conditions and are unevenly distributed across the UK
- Weathering (physical, chemical, biological) breaks down rocks in situ and helps shape landscapes
- Physical weathering is caused by wind, rain or changes in temperatures; Chemical weathering is when rocks break down to a chemical reaction between naturally acidic rainwater and minerals in rock and Biological weathering is caused by roots and burrowing organisms.

Vocabulary to consolidate:

- Arable Farming
- Area
- Biome
- British Isles
- City
- Condensation
- Continent
- Contours
- Country
- County
- Deciduous
- Decomposer
- Deciduous
- Deposition
- Dispersed Settlement
- Drainage Basin
- Ecosystem
- Erosion
- Exports
- Evaporation
- Floodplain
- Food Chain
- Food Web
- Geology
- Gorge
- Great Britain
- Igneous
- Imports
- Landscape
- Latitude
- Longitude
- Lowlands
- Meander
- Metamorphic
- Mixed Farming

Teaching Sequence:

Where in the world?

Introduces the concept of location and place, developing scholars' understanding of the world's continents, oceans and the position of the UK within them. Scholars learn how latitude and longitude are used to describe global position and begin to apply these concepts to real-world maps.

Our place in the world?

Explores the UK's regional and global connections. Scholars identify the UK's place within Europe and the wider world, recognising how its geographical position influences climate, trade, and cultural links with other nations.

Our Island Home

Examines the structure and composition of the British Isles and the nations of the United Kingdom. Scholars learn about political and physical boundaries, national identity, and how geography has influenced where people live across the UK.

The Rocks Beneath Our Feet

Introduces scholars to the study of geology and the rock types that underpin the UK's landscapes. They learn how igneous, sedimentary and metamorphic rocks form and how they influence the shape, character and resources of different regions.

The UK's Uplands and Lowlands

Focuses on the relief of the UK and the distribution of its upland and lowland areas. Scholars interpret maps and cross-sections to describe patterns of height and relief and explain how geology and climate influence where these features are found.

The UK's Ecosystems

Explores the interconnections between living and non-living parts of the environment

• The relief of the land refers to the shape of the land. The UK's relief varies with both uplands and lowlands. • Uplands (e.g. Lake District, Grampians) are higher, often mountainous areas, mostly in the north and west. • Lowlands (e.g. South Downs, Fens) are flatter and found in the south and east. • Relief affects weather and population patterns (e.g. higher rainfall and lower temperatures at higher elevations). • Relief is shown by contour lines on Ordnance Survey Maps - where the contour lines are close together the relief is steep, and it is gentler where contour lines are further apart. • Ecosystems include both living (biotic) and non-living (abiotic) components that interact. • Producers make energy through photosynthesis, passed through food chains to consumers and decomposers. • Decomposers break down dead organic matter and release nutrients back into the soil • Weathering (physical, chemical, biological) breaks down rocks in situ and helps shape landscapes • Rivers shape landscapes through erosion, transport and deposition. • The drainage basin system shows how precipitation travels to rivers and the sea. • Key river features include source, confluence, tributary and mouth. • River erode material through Abrasion, Attrition, Hydraulic Action and Corrosion • Rivers transport material by Traction, Saltation, Suspension and Solution (depending on the size of the material and the velocity of the water) • When rivers lose energy, they will drop the material they are carrying. • Distinct landforms form along a river's course:	• Nation • Nucleated Settlement • Pastoral Farming • Physical Factors • Plunge Pool • Precipitation • Producer • Population Density • Population Distribution • Relief • Rural • Sedimentary • Settlement • Settlement Hierarchy • Settlement Pattern • Site • Situation • Town • Trade • United Kingdom • Uplands • Urban • Urbanisation • Village • Waterfall • Weathering **Vocabulary to retrieve:** N/A- first unit of Y7 but *this will be used as an opportunity to gain an understanding of key terms that scholars are already familiar with from their work at KS2.*	through the concept of ecosystems. Scholars examine how producers, consumers and decomposers interact, and how physical processes shape and sustain these systems. **Temperate Deciduous Woodland** *(Optional Extension for schools – not in the Core Knowledge as will not be assessed)* Introduces the characteristics of the UK's native biome, including the climate, vegetation and adaptations of species found there. Scholars learn how human activity and management influence biodiversity and woodland conservation. **How Water Shapes Our Landscapes** Examines how rivers and the sea shape the UK's landscapes through the processes of erosion, transportation and deposition. Scholars explore the role of weathering and the formation of distinctive landforms such as valleys and cliffs. **The Landforms Created by Our Rivers** Develops understanding of the river's course and how landforms such as waterfalls, meanders and floodplains are formed. Scholars apply process–sequence thinking to explain how rivers change from source to mouth. **How Important Are Rivers to Us?** Investigates the role of rivers in shaping human life in the UK. Scholars consider how rivers provide water, energy and transport, and how they influence settlement, trade and environmental management. **Where Do People Live in the UK?** Explores the patterns and causes of population distribution and density in the UK. Scholars analyse maps and data to explain how physical and human factors influence where people choose to live. **Where We Choose to Live** Examines how site and situation affect the development of settlements. Scholars

- Upper course: Waterfalls and Gorges; - Middle course: Meanders; - Lower course: Floodplains, Levees, Oxbow Lakes • These are formed through the action of erosion, transport and deposition. • Waterfalls are features of erosion formed in the upper course of a river, formed as rivers flow over areas of hard and soft rock. They are characterised by a steep drop, a deep plunge pool at the base and they form a narrow, steep sided gorge as they retreat upstream. • Rivers support settlement, agriculture, trade, industry and recreation. • Many major UK cities are located on rivers • River have influenced the growth of settlement due to factors such as flat land, fertile soils on floodplains and providing defensive advantage. • Rivers have shaped both historical development and modern land use. • The UK's population is unevenly distributed. • The south and the east of the UK are more densely populated. The North and West of the UK are more sparsely populated. • Urban areas are densely populated: rural areas are more sparsely populated. • Physical and human factors influence where people live (e.g. relief, jobs and transport). • Settlements can be urban or rural and have different functions (e.g. farming, trade, industry) • Rural areas have a low population density and a high % of countryside • Urban areas are built up and have a high population density • Site is the physical location of a settlement - the land is built on; Situation is where a place is in relation to other places and features.		identify patterns such as nucleated, linear and dispersed settlement forms and explore the concept of settlement hierarchy. **Our Local Settlement** Applies geographical skills to investigate the features and functions of the local area. Scholars collect and interpret data, linking physical geography, land use and accessibility to patterns of settlement growth. **The UK's Urban Landscape** Investigates how cities grow and change over time. Scholars study urbanisation, the function of the Central Business District (CBD), and how industrialisation shaped urban development in the UK. **Change in an Urban Landscape: Cambridge** Applies learning through a case study of Cambridge, exploring how urban growth, redevelopment and sustainability shape modern cities. Scholars analyse spatial patterns of change and their social and environmental impacts. **The UK's Rural Landscape** Introduces rural geography, examining the characteristics and challenges of the UK's countryside. Scholars compare rural and urban environments, exploring how farming, tourism and accessibility shape life in rural areas. **Rural Landscapes: The Peak District** Concludes the unit with an applied case study of the Peak District. Scholars explore how geology, relief and land use interact to create distinctive landscapes and consider the balance between conservation, tourism and local needs.

• There are three types of settlement pattern (i) Dispersed (scattered houses / buildings over an area) (ii) Nucleated (buildings grouped around a central area e.g. a crossroads) (iv) Linear (buildings grown up along roads or transport networks) • A settlement hierarchy shows settlements in order of importance by population size and number/ range of services provided (Hamlet - Village - Small Town - Large Town - City - Capital City). • Scholars should understand how site and situation has affected the location of their chosen local settlement and the nature of a local settlement hierarchy (will be academy dependent). • Urban areas in the UK grew due to the industrial revolution and continue to grow • The increase in the number of people living in urban areas is known as urbanisation. • Scholars should know the reasons for and impact of urban change in a chosen urban area (academies will chose an urban landscape suitable for the context of their scholars). • Rural areas support three types of farming (Arable - crops; Pastoral - livestock and mixed - both). • Farming is influenced by physical (e.g. soil, relief) and human (e.g. technology, market) factors. • Agribusiness and diversification have changed rural economies • Scholars should know the opportunities and challenges associated with a rural landscape (academies will chose a rural landscape suitable for the context of their scholars).		
Disciplinary Aims **1. Disciplinary concepts** • Understanding how physical landscapes are shaped by underlying geology, weathering and geomorphological		

processes.
- Recognising spatial patterns across the UK (uplands, lowlands, river systems, settlement distribution).
- Developing a sense of place through national-scale contrasts and landscape characteristics.

2. Working with geographical representations
- **OS maps:** symbols, scale, grid references and relief.
- **Relief maps** and **cross-sections**.
- **World and UK maps** to locate physical features.
- Introductory **choropleth maps** (population density).

3. Geographical enquiry and practice
- Using cartographic techniques to describe distribution, pattern and location.
- Applying procedural vocabulary (site, situation, relief, distribution).
- Interpreting spatial information to explain relationships between processes and landforms.
- Early enquiry skills through identifying and explaining landforms using evidence.

4. Processes and change over time
- Glacial, fluvial and coastal processes shaping UK landscapes.
- How settlements develop in response to physical features.
- Changing land use across the UK over time.

Core concepts integrated:
Place, Space, Scale, Processes, Systems, Time

Links to other units:
Builds foundations for:
- This opening unit establishes the essential geographical foundations that scholars need before moving into more complex physical and human geography. It introduces core ideas such as location, relief, rock types, weathering, erosion, rivers, ecosystems, settlement, site and situation — all of which serve as the conceptual building blocks for the rest of Year 7 and Year 8. By beginning with the UK, scholars explore geography through both a local lens (their immediate environment, local settlement, and familiar landscapes) and a national lens (the wider physical and human geography of the UK). This helps scholars anchor new knowledge in places they recognise to support schema building while developing an early sense of spatial patterns,

national variation and geographical scale.

- This unit also introduces procedural and disciplinary knowledge—including map skills, describing distributions, interpreting physical processes, and early fieldwork language—which scholars will return to repeatedly across Key Stage 3. The understanding developed here directly supports later units: it prepares scholars for Earth's Story by introducing rock types and geomorphic processes; for Weather and Climate through relief, rainfall and UK climate patterns; and for Population through early work on distribution, density and settlements. It also provides the necessary grounding for the Microclimate Enquiry, where scholars draw on their knowledge of physical factors and apply their map and fieldwork skills.

In short, UK Landscapes is the foundation upon which all later progression is built — establishing the substantive concepts, geographical vocabulary and disciplinary habits that make the rest of the Key Stage coherent and accessible.

Links to the National Curriculum:

- This unit directly supports the National Curriculum (NC) requirement for scholars to *"understand the processes that give rise to key physical and human geographical features of the world… and how these are interdependent and how they bring about spatial variation and change over time."* Scholars study rocks, weathering and soils, river processes, coastal processes, and the formation of distinctive landforms, all of which sit within the NC strand of *"physical geography relating to: geological timescales and plate tectonics; rocks, weathering and soils; weather and climate; and hydrology and coasts."*
- The unit uses detailed place-based exemplars at a range of scales — such as UK upland and lowland landscapes, river valleys, local settlements and regional contrasts — meeting the requirement for scholars to use place-based studies to understand physical and human geography. Knowledge of population distribution, settlements, land use, urbanisation, and rural change also supports the NC human geography strand: *"population and urbanisation; economic activity in the primary, secondary, tertiary and quaternary sectors; and the use of natural resources."*
- The NC requires scholars to *"interpret a range of geographical information including maps, diagrams, globes and aerial photographs."* This unit provides extensive opportunities to do so through work on OS maps, scale and grid references, contours and relief, photograph interpretation, choropleth maps, and sketch maps. Scholars also communicate information using numerical and quantitative skills, written explanation, and graphical forms, in line with the NC expectation that scholars should *"communicate geographical information in a variety of ways."*

Moving Beyond the National Curriculum

- This unit moves beyond the statutory requirements by giving scholars a richer and more applied introduction to the UK's physical and human landscapes than the NC specifies. While the NC requires scholars to study *"rocks, weathering and soils; hydrology and coasts"*, this unit deepens understanding by linking geology directly to relief, ecosystems, river landforms and population patterns, enabling scholars to see how physical processes create the distinctive landscapes they recognise in the UK. Our curriculum is designed to ensure scholars do not simply learn processes in isolation; they apply them to real places, strengthening their ability to connect physical geography to people and place.
- The unit also begins to develop scholars' awareness of interactions between physical and human processes beyond what is explicitly required in the NC. For example, scholars explore how geology and relief influence settlement patterns, land use, agriculture and urban development, reinforcing the idea that human activity both depends on and reshapes natural systems.
- In disciplinary and procedural terms, scholars progress beyond the NC's baseline requirements by engaging with early enquiry skills. They apply map evidence, describe spatial patterns, interpret landscape photographs and use case-study contexts. Scholars also develop more advanced map-reading and spatial interpretation skills than expected at KS3 — including contour analysis, 6-figure grid references and using cross-sections — building a strong foundation for later geographical enquiry and the more demanding analytical skills required in subsequent units and at GCSE.

Year 7	Subject: Geography	Unit title: Earth Story (Unit 2)	Term: Spring 1
Knowledge (Learn that): • Geology refers to the study of rocks and the processes that shape our Earth. • Geology helps us to understand the past and is crucial for predicting and preparing for the future. • Studying Geology can help us understand Earth's history, understand natural processes, find resources and protect our environment. • The Earth is 4.5 billion years old • Radiometric dating is used to estimate the age of the Earth. • Geologists divide the Earth's history into units of time. • Geological units of time increase in time from age (shortest) - eon (longest) • The Triassic, Jurrasic and Cretaceous are three particularly interesting periods in time. • Our most recent period of time is the quaternary period, and we are in the epoch known as the Holocene. Lesson 3 • The first evidence of life on Earth is from around 3.5 billion years ago. • Stromatolites are rock like structures built by colonies of bacteria which provide some of the earliest life on Earth. • the rise of mammals took place at the end of cretaceous period when an asteroid impact caused the extinction of the dinosaurs. • homo sapiens (modern humans) evolved around 300,000 years ago with fossils found in Ethiopia (East Africa). • the start of the Holocene period (11,700 years ago) was the end of the ice age • The Earth's continents were once joined as a supercontinent called Pangea. • The large-scale movement of continents which were once	**Vocabulary to consolidate:** • Age • Algae • Anthropocene • Asteroid • Cartographer • Cartography • Continental Drift • Conservative Plate Boundary • Constructive Plate Boundary • Convection Currents • Cretaceous Period • Crust • Destructive Plate Boundary • Dinosaur • Earthquake • Eon • Epoch • Era • Evolution • Extinct • Fossil • Geomorphology • GIS • GPS • Holocene • Homo Sapiens • Ice Age • Inner Core	**Teaching Sequence:** **Our Earth – The importance of Geology** Introduces geology as the study of the Earth, its structure, and the processes that shape it. Scholars explore how geologists unlock clues about the Earth's past and why understanding rocks and natural processes helps us prepare for future challenges such as resource use and natural hazards. **From Eons to Epochs: The Geological Time Scale** Explores the vast timescales of Earth's history through the divisions of eons, eras, periods, and epochs. Scholars learn how scientists use evidence such as fossils and radiometric dating to piece together the timeline of life and major events that have shaped the planet. **Life on Earth – From microbes to mammals** Traces the evolution of life from simple microorganisms to complex plants, animals, and humans. Scholars examine how environmental changes, extinctions, and adaptations have influenced life's development over geological time. **Understanding our Earth: 1. Continental Drift** Introduces Wegener's theory of continental drift and the early evidence that continents were once joined together. Scholars use fossil, rock, and climate evidence to explore how ideas about a changing Earth began to emerge. **Understanding our Earth: 2. Plate Tectonics** Builds on continental drift by introducing the modern theory of plate tectonics. Scholars learn about the Earth's structure, convection currents in the mantle, and how these processes drive the movement of tectonic plates. **Understanding our Earth 3: Plate Boundaries** Examines the three main types of plate boundary—constructive, destructive, and	

joined together is known as continental drift.
- The theory of continental drift was proposed by Alfred Wegner.
- Evidence for continental drift includes biological evidence, jigsaw fit of continents, geology and paleoclimate data.
- Plate tectonics is the theory which explains the movement of the Earth's plates and the processes that occur at plate boundaries.
- The Earth is divided into a number of layers - crust, mantle, inner core, outer core.
- There are two types of crust - oceanic which is constantly renewed and destroyed and continental which is permanent.
- The Earth's crust is divided into slabs of crust known as plates.
- Slab pull and ridge push as the main forces causing plates to move.
- The point at which two plates meet is known as a plate boundary.
- A destructive plate boundary is where two plates move together. Earthquakes and volcanoes are common here.
- A collision boundary is where two plates of continental crust meet, mountains such as the Himalayas are formed. There are Earthquakes but no volcanoes.
- A constructive plate boundary is where two plates move away from each other. Earthquakes and volcanoes are common here.
- A conservative plate boundary is where two plates move by side. There are Earthquakes but no volcanoes.
- the rock cycle is the formation, breakdown and reformation of rocks over geological time
- geomorphological processes are natural processes that form and alter our landscapes
- weathering is the in-situ break down or rock whereas erosion is the removal and break down
- erosion and transport of material may be caused by wind, water or ice.

- Jurassic Period
- Mantle
- Map Projection
- Mass Movement
- Migration
- Outer Core
- Pangea
- Period
- Plate Boundary
- Plate Tectonics
- Radiometric
- Ridge Push
- Rock Cycle
- Sediment
- Slab Pull
- Stromatolite
- Subduction
- Tectonic Plate
- Triassic Period
- Uplift
- Volcano

Vocabulary to retrieve:

- Agriculture
- Climate
- Continent
- Deposition
- Erosion
- Geology
- Geologist
- Igneous
- Latitude

conservative—and the landforms and hazards they create. Scholars link processes such as subduction and seafloor spreading to real-world examples of earthquakes and volcanoes.

Sculpting Our Earth: The Rock Cycle and Geomorphology
Explores the continuous cycle through which rocks are formed, broken down, and transformed. Scholars learn how geomorphological processes such as erosion, weathering, and deposition shape the Earth’s landscapes.

Iconic Landscapes: How Geomorphology Has Shaped Our World
Applies understanding of rock type and geomorphic process to real examples such as the Grand Canyon and Hawaiian Islands. Scholars investigate how forces like uplift, erosion, and volcanic activity create distinctive landforms.

Mapping Human History: Origins and Migrations
Examines how plate tectonics and changing climates influenced human evolution and migration. Scholars consider the movement of early humans from Africa and explore how physical geography has influenced human settlement.

Navigating Our Earth: The Evolution of Maps and Co-ordinates
Explores how humans have represented and navigated the Earth over time. Scholars learn about latitude, longitude, and map projections, and how new technologies like GPS and GIS have transformed cartography.

Human Footprints: the geological consequences of human activity.
Investigates the impact of humans in the modern geological age, the Anthropocene. Scholars explore how activities such as deforestation, mining, and plastic production are leaving a lasting imprint on the Earth’s systems and landscapes.

• mass movement is the downslope movement of material due to gravity. • The Grand Canyon is formed from sedimentary rocks created by deposition • • Plate tectonics exposed the rocks of the Grand Canyon to erosion forces by uplift • The Grand Canyon has been shaped by wind and water erosion. • The Hawaiian islands are formed of igneous rocks created by magma and volcanoes • The Hawaiian islands are still being formed and destroyed by plate movements. • The formation of the Himalayas first led to the conditions that made it possible for the evolution of humans • Living close to plate boundaries can bring advantages to humans and have helped determine where people live • The end of the last ice age led to humans migrating into Europe and Asia • A stable climate enabled the development of agriculture and permanent settlement • cartography is the study of maps • the development of latitude and longitude was important for global navigation • longitude is also used to divide the Earth into different time zones • A map projection is the way that the 3D Earth is represented on a flat map • New technology means we now use GPS and GIS to help with navigation and mapping • The Anthropocene is the current period of Earth's history when humans have become a dominant force of change to Earth's environment and climate. • Humans are influencing the environment by: - creating new substances like plastic which doesn't break down completely	• Longitude • Lowlands • Metamorphic • Relief • Sedimentary • Settlement • Uplands • Urbanisation • Weathering	

- speeding up natural processes like the greenhouse effect through burning fossil fuels - affecting geomorphological processes - e.g. speeding up erosion through deforestation, mining and urbanisation or managing processes to slow them down (e.g. coastal management)		
Disciplinary Aims: **1. Disciplinary concepts** • Understanding deep time and the evolution of Earth systems over billions of years. • Recognising global patterns of past and present continents, landscapes and life forms. • Understanding interactions between tectonics, geology and biological evolution. **2. Working with geographical representations** • **Geological timelines** • **Global maps** showing continental drift and tectonic boundaries. • **Flow maps** (e.g., early human migration). • **Diagrams** of Earth's structure and plate boundaries. **3. Geographical enquiry and practice** • Understanding how geographers and geologists use evidence (fossils, rock strata, radiometric dating). • Exploring how scientific theories emerge, are evidenced and evolve (continental drift → plate tectonics). • Applying locational frameworks (latitude, longitude) to interpret global patterns. • Interpreting spatial patterns in early human dispersal. **4. Processes and change over time** • Movement of continents across geological time.		

• Geological processes (weathering, erosion, rock cycle). • Evolution, extinction and migration of species, including humans. **Core concepts integrated:** *Time, Processes, Systems, Scale, Interdependence, Diversity*		

Links to other units:

Builds on:

- This unit re-visits and builds directly on content from *UK Landscapes*, deepening scholars' understanding of the physical foundations beneath the landscapes they explored in Unit 1. Knowledge of rock types, weathering, erosion and relief introduced in *UK Landscapes* provides an essential starting point for understanding the deeper geological processes that have shaped the Earth over millions of years. By examining how igneous, sedimentary and metamorphic rocks form — and how plate tectonics drive uplift, mountain building and volcanic activity — scholars are able to contextualise the landscapes they previously studied and recognise the long-term processes that created them.
- *Earth Story* also strengthens scholars' grasp of how physical landscapes have influenced human settlement, movement and development, drawing on ideas from the latter lessons of UK Landscapes. Understanding how plate boundaries create fertile soils and can influence water sources helps scholars begin to see connections between geology, landforms and the early growth and migration of human life — links that are returned to later in the unit when exploring human origins and global migration patterns.
- Alongside this substantive knowledge, the unit reinforces and extends disciplinary skills first developed in Unit 1. Scholars again interpret maps, spatial patterns and physical processes, but now apply these skills to longer time scales and more complex systems. They begin to think geographically about change over time, using evidence to piece together Earth's story through fossils, plate movements and geomorphological processes. This strengthens some of our core underpinning concepts such as time, processes, scale and systems.

Builds Foundations for:

- This provides the conceptual foundation for later units on *Weather and Climate* (by explaining the physical structure of the Earth and its influence on atmospheric processes), *Population* (through links between geology, resources and patterns of settlement), and the *World of Water* in Year 8 (where understanding of geomorphic and tectonic processes supports river and coastal systems). It also introduces disciplinary ideas such as geological timescales, evidence and scientific enquiry that prepare scholars for more advanced study of hazards and earth systems in *Tectonics* and *Global Issues* in Year 8.

Links to the National Curriculum:

- This unit directly addresses the NC requirement for scholars to *"understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time."*
  Through its study of geological timescales, plate tectonics, rocks, weathering, and soils, it fulfils the physical geography strand that calls for teaching about *"geological timescales and plate tectonics; rocks, weathering and soils; weather and climate (including change since the Ice Age); and glaciation, hydrology and coasts."*
- Scholars build *"knowledge and understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments"* by exploring how Earth's internal forces (e.g. plate movement, volcanism, uplift) have shaped global and UK landscapes, and by examining how these processes underpin human evolution, settlement, and resource use. The unit also develops core geographical skills, requiring scholars to *"interpret a range of sources of geographical information, including maps, diagrams and GIS"* through

their use of tectonic and geological maps, cross-sections and spatial visualisations.

Moves Beyond the National Curriculum

- This unit moves beyond the NC by deliberately broadening both the temporal and conceptual scope of physical geography. Scholars are introduced to deep time and Earth systems thinking, engaging with the geological timescale, evolution, and the Anthropocene — themes that reach beyond the statutory expectations of KS3.
  The teaching of plate tectonics extends beyond process description to include the scientific evolution of theory, linking geography with scientific enquiry and epistemology — how knowledge about the Earth has changed through evidence and technology including the latest understanding of processes such as slab pull and ridge push as being dominant forces in place movement.
- Quantitative and spatial skills go further than NC expectations through the interpretation of geological data, global mapping of plate boundaries, and the use of GIS and satellite imagery. The inclusion of the Anthropocene and human impact on geomorphic processes introduces a forward-looking, sustainability-focused dimension.

Year 7	Subject: Geography	Unit title: Weather and Climate (Unit 3)	Term: Spring 2
Knowledge (Learn that):	**Vocabulary to consolidate:**	**Teaching Sequence:**	

- Learn the difference between weather and climate.
- Learn how our lives are affected by weather and climate.
- Learn the processes that lead to cloud and rainfall formation
- Learn the three main types of rainfall: relief, convectional and frontal
- Learn how different types of clouds are associated with different types of rainfall.
- Learn why is meany by air pressure and how it affects weather conditions
- Learn how high- and low-pressure systems form and how they influence wind patterns
- Learn how air masses influence the UK's weather
- Learn how the interaction between air pressure and wind patterns affects the UK climate
- Learn why the UK's weather is so changeable
- Learn what aspects of the weather can be measured
- Learn what instruments can be used to measure the weather
- Learn how data is recorded and presented
- Learn how to construct and interpret climate graphs.
- Learn what is meant by climate zone and named examples of the world's climate zones.
- Learn how climate varies across the world.
- Learn why climate varies across the world, including factors such as altitude, latitude, and distance from the sea.
- Learn how and why climate varies within Europe.
- Learn what is meant by extreme weather.
- Learn the cause Tornadoes

Disciplinary Aims:

1. Disciplinary concepts

- Distinguishing between weather (short-term) and climate

- Air Mass
- Altitude
- Anemometer
- Anticyclone
- Barometer
- Beaufort Scale
- Climate
- Climate Zones
- Condensation
- Convectional Rainfall
- Depression
- Evaporation
- Frontal Rainfall
- High Pressure
- Humidity Low Pressure
- Meteorologist
- Ocean Currents Precipitation
- Prevailing Winds
- Relief Rainfall
- Temperature
- Thermometer
- Tornado
- Weather
- Winds

Vocabulary to retrieve:

- Latitude
- Temperature
- Precipitation
- Relief

Weather and Climate: How Do They Affect Me?
Introduces the key difference between weather and climate and explores how atmospheric conditions affect daily life, health, and economic activity. Scholars begin to consider the role of climate change and how human activity is influencing global weather patterns.

Rainfall Formation: Why Does It Rain?
Explains how rainfall forms through evaporation, condensation, and cooling. Scholars learn the three main types of rainfall—relief, frontal, and convectional—and explore why rainfall patterns vary across different landscapes and climates.

Pressure Systems and Surface Winds: What Drives Our Weather?
Explores the relationship between air pressure, wind, and weather systems. Scholars learn how high- and low-pressure systems create different conditions, how air masses influence the weather, and how the Coriolis effect shapes global wind patterns.

The UK's Weather Story: What Makes Our Climate Unique?
Investigates why the UK's weather is so variable, linking air masses, prevailing winds, and ocean currents. Scholars learn how geography and location influence the country's mild but unpredictable climate.

Measuring the Weather: How Do We Measure the Weather?
Introduces the instruments and methods used to measure weather, including thermometers, barometers, rain gauges, and anemometers. Scholars explore the importance of reliable data collection for forecasting and understanding patterns.

Recording and Presenting Weather: How Do We Make Sense of Weather Data?
Focuses on how meteorologists record and present weather data through charts, maps, and symbols. Scholars interpret synoptic charts, satellite images, and weather forecasts to understand how atmospheric information is communicated.

Climate Graphs: Comparing World Climates
Teaches scholars how to construct and interpret climate graphs showing temperature and rainfall patterns. Scholars compare climates from different parts of the world and begin to explain why they vary.

(long-term patterns). • Understanding atmospheric processes that drive temperature, rainfall, pressure and wind. • Recognising spatial and seasonal variation in weather and climate. **2. Working with geographical representations** • **Climate graphs** (dual-axis representation). • **Satellite imagery** showing cloud cover and weather systems. • Basic **synoptic features** (pressure systems) and **synoptic charts** • **Meteorological data tables**. **3. Geographical enquiry and practice** • Measuring weather using instruments (thermometer, rain gauge, anemometer, wind vane). • Collecting, recording and analysing primary data. • Applying procedural vocabulary (trend, anomaly, variability). • Using meteorological evidence to explain weather conditions and events. **4. Processes and change over time** • Seasonal cycles and their influence on climate and weather. • Long-term climate change from Ice Age to present (NC requirement). • Development of local microclimates due to physical and human factors. **Core concepts integrated:** Processes, Systems, Scale, Space, Sustainability, Time		**World Climates: Why Do They Differ?** Explores the global factors that shape climate zones, including latitude, altitude, ocean currents, and prevailing winds. Scholars link these to the distribution of biomes and the contrast between tropical, temperate, and polar climates. **Europe's Climate Contrasts: Why Does Climate Vary So Much?** Examines how Europe's physical geography and position create regional climate differences. Scholars explore how altitude, distance from the sea, and ocean currents explain why places like Spain and Norway experience such different conditions. **When Weather Turns Wild: What Is Extreme Weather?** Introduces the concept of extreme weather and its impacts on people and places. Scholars investigate recent global and UK examples of floods, droughts, storms, and heatwaves, considering how human activity is influencing their frequency and severity. **Twisting Winds of Destruction: How Do Tornadoes Form?** Concludes the unit by examining how tornadoes develop, where and why they occur most often, and the science behind their formation. Scholars explore how meteorologists track and forecast these powerful weather events, linking back to themes of prediction, risk, and human response.

Links to other units:

Builds on:

- This unit builds on the physical geography foundations introduced in earlier Year 7 units, helping scholars deepen their understanding of how Earth's physical systems shape everyday

experience. From *UK Landscapes*, scholars draw on their earlier knowledge of relief, rivers and the hydrological cycle, which provides the foundation for understanding how water moves through the atmosphere. Their understanding of upland and lowland patterns also supports explanations of how altitude and relief influence temperature and rainfall, and helps make sense of why weather varies across different parts of the UK.

- Crucially, the unit reinforces and develops disciplinary skills established earlier in the year. Scholars learn to view weather and climate through both a local/national lens (UK climate patterns and regional variability) and a global lens (climate zones, pressure systems and extreme weather). This dual perspective enables them to connect familiar, everyday weather with large-scale physical systems, supporting the curriculum aim of helping scholars explain not just *what* the weather is like, but *why* it is like that.
- Scholars also strengthen core geographical skills first introduced in *UK Landscapes* — including describing and interpreting spatial patterns, reading climate graphs, making comparisons and linking physical processes to outcomes. These procedural foundations help prepare scholars for the analytical and explanatory demands of later units across KS3.

Builds Foundations for:

- Weather and Climate provides the physical foundations scholars need for the human geography that follows. Understanding global climate zones, temperature patterns and rainfall distribution prepares scholars for the Population unit, where they explain how climate influences agriculture, resources and habitability, and why some regions are more densely populated than others. These links ensure that when scholars study global population patterns later in the year, they already have a secure grasp of the key physical drivers that shape where people live.
- The unit also introduces the physical principles essential for World of Water in Year 8, including precipitation processes, the water cycle and storm formation. These ideas underpin later learning about river systems, water availability and global water challenges. More broadly, the large-scale atmospheric processes taught here lay early foundations for future work on sustainability and global issues, where scholars revisit the role of climate systems in environmental change and their impacts on people and places.

Links to the National Curriculum:

- This unit directly addresses the NC requirement for scholars to *"understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time."* Scholars develop understanding of the physical processes that shape weather and climate, meeting the expectation to study *"weather and climate, including the change in climate from the Ice Age to the present."* Lessons explore the global circulation of the atmosphere, types of rainfall (relief, convectional and frontal), and the relationship between temperature, air pressure and wind patterns. These processes are then applied through place-based examples, aligning with the requirement to use *"detailed place-based exemplars at a variety of scales."*
- The unit also strengthens geographical skills by enabling scholars to *"interpret a range of sources of geographical information, including maps, diagrams, globes and GIS"*. Scholars analyse climate graphs, choropleth maps and satellite imagery, developing the competence to represent and communicate spatial patterns of weather and climate data in line with the National Curriculum's emphasis on *"numerical and quantitative skills"*. In studying UK and global climates, scholars consolidate their *"locational knowledge"* of environmental regions and their *"contextual knowledge of the location of globally significant places"*.

Moves Beyond the National Curriculum:

- This unit goes beyond statutory expectations by providing scholars with a more applied and data-rich introduction to weather and climate than the NC specifies. Rather than learning processes in isolation, scholars examine how weather affects people, places, the economy and everyday decision-making, strengthening their ability to connect physical processes to lived human experience.
- Although the NC makes a general reference to *"the change in climate from the Ice Age to the present"*, this unit extends that scope by introducing scholars to ideas around contemporary climate change, including increased extreme weather and shifting rainfall patterns. This helps scholars consider how physical processes are being altered by human activity and, in turn, how

these altered processes affect human systems — building early awareness of sustainability and environmental responsibility, which sit beyond the explicit requirements of the KS3 programme of study.

- In disciplinary and procedural terms, the unit moves beyond the geographical skills outlined in the NC by developing scholars' confidence in working with a wider range of weather data and representations. Scholars move beyond basic map interpretation to use simple data loggers, read and decode weather symbols, analyse introductory synoptic maps, and construct and interpret climate graphs. These skills deepen geographical enquiry and support scholars in becoming more confident, independent geographers who can work with real-world data and evidence.

Year 7	Subject: Geography	Unit title: Population (Unit 4)	Term: Summer 1
Knowledge (Learn that):	**Vocabulary to consolidate:** • Accessibility	**Teaching Sequence:**	

- Learn how the world's population is distributed
- Learn how to describe and interpret global population maps (choropleth and dot distribution)
- Learn how physical and human factors affect global population distribution
- Learn how to describe population change over time
- Learn how birth rate, death and migration cause population to change
- Learn what is meant by the Demographic Transition Model and how birth and death rates change at each stage
- Learn that development can affect which stage a country is in in the DTM
- Learn that the DTM is a model and doesn't apply perfectly to every country.
- Learn what is meant by population structure and how this is shown using population pyramids
- Learn how and why population structure varies between different places.
- Learn what is meant by a population census and what information is collected
- Learn how to interpret census population data
- Learn how and why the UK's population has changed over time.
- Learn what is meant by resources and why they are important for people's lives
- Learn what is meant by a population policy and why they are needed
- Learn an example of a pro-natalist and an anti-natalist policy.
- Learn how population growth can increase pressure on resources

Disciplinary Aims:
1. Disciplinary concepts

- Ageing Population
- Anti-natalist Policy
- Birth Rate
- Census
- Death Rate
- Demographic Transition Model
- Dependency Ratio
- Development
- Dot Distribution
- Ethnicity
- Fertility Rate
- Inequality
- Limitations
- Natural Increase
- Migration
- Migrant
- Model
- Overpopulation
- Population Change
- Population Policy
- Population Pressure
- Population Pyramid
- Physical Factors
- Pro-Natalist
- Push factors
- Pull factors
- Resource Scarcity
- Resources
- Rural
- Sparsely Populated
- Trend
- Urban
- Youthful Population

Vocabulary to retrieve:
- Choropleth Map
- Population
- Population Density

Where Do People Live and Why?
Introduces the concept of population distribution and density, exploring how and why people are unevenly spread across the world. Scholars use choropleth and dot distribution maps to interpret global patterns and investigate the physical and human factors that explain them.

How and Why Does Population Change Over Time?
Examines how population size changes through births, deaths and migration. Scholars interpret population graphs to identify trends such as growth, stability and decline, linking these to levels of development and changes in living conditions.

What Is the Demographic Transition Model?
Introduces the Demographic Transition Model (DTM) to explain population change over time. Scholars explore each stage of the model, linking shifts in birth and death rates to economic development, healthcare, and social change, and consider how well the model applies to real countries.

How and Why Does Population Structure Vary?
Explores population structure through population pyramids, showing how age and gender composition reveal key characteristics of countries. Scholars compare youthful and ageing populations and consider the opportunities and challenges each presents.

Who Lives Here and How Do We Know? (The Census)
Investigates how governments collect and use population data through the national census. Scholars explore the purpose and importance of the UK Census, how data is gathered, and how it informs planning for housing, transport, and public services.

How and Why Is the UK's Population Changing?
Examines patterns of population growth and migration in the UK. Scholars explore how urbanisation, industrialisation, and international migration have shaped the country's population and how ageing and diversity present new challenges and opportunities.

Can Governments Control Population Growth?
Explores how governments respond to population challenges through policy. Scholars study pro-natalist and anti-natalist strategies, comparing case studies such as China's One Child

• Understanding spatial patterns of population distribution and density at a range of scales. • Recognising how population structures vary between places. • Interpreting human processes (births, deaths, migration) and their interactions with physical environments. **2. Working with geographical representations** • **Choropleth maps**, **dot maps** and distribution maps showing population patterns. • **Population pyramids** to compare age–sex structures. • **Line graphs** demonstrating demographic change over time. • Using **map-based evidence** to describe patterns, contrasts and anomalies. **3. Geographical enquiry and practice** • Using population models (DTM, migration frameworks) to explain demographic processes. • Constructing evidence-based explanations for population change and movement. • Strengthening comparative and analytical writing (similarities, differences, inequalities). • Applying procedural vocabulary (trend, pattern, anomaly, distribution, cause, effect). **4. Processes and change over time** • How and why population structures change over time through development and migration. • How population growth and decline shape places. • How physical and human factors influence demographic change at different scales. **Core concepts integrated:** *Inequalities, Diversity, Interdependence, Space, Scale, Processes*	• Population Distribution • Relief	Policy and Hungary's family incentives, evaluating their impacts and ethical implications. **Is There Enough for Everyone?** Brings together learning by connecting population growth to resource use and sustainability. Scholars consider how increasing population and development place pressure on natural resources and explore global inequalities in access to food, water, and energy.
Links to other units: **Builds on:**		

- This unit builds on key physical geography foundations introduced earlier in Year 7. From *UK Landscapes*, scholars draw on their understanding of relief, rivers and the movement of water through landscapes, which provides an essential basis for exploring atmospheric water processes. The knowledge gained about the hydrological cycle, including how water flows, stores and transfers in physical systems, supports scholars in understanding evaporation, condensation and precipitation within the atmosphere. Their earlier learning about uplands and lowlands also helps them explain how relief and altitude influence temperature, pressure and rainfall variation across the UK and globally.
- The unit also prepares the ground for the human geography studied later in the year. It links back to ideas introduced in Population, where scholars begin to consider how physical factors shape where people live. Understanding global climate zones, temperature patterns and rainfall distribution provides the physical context needed to explain why some regions can support agriculture and large populations while others remain sparsely populated. These foundations help scholars recognise how climate and weather influence human activities, resource pressures and patterns of settlement.
- Alongside this substantive knowledge, Weather and Climate reinforces key disciplinary and procedural skills introduced in Units 1 and 2. Scholars extend their ability to describe spatial patterns, interpret and analyse climate graphs, and explain cause-and-effect relationships within large-scale physical systems. The unit deepens core geographical concepts such as place, scale, processes and change, strengthening scholars' capacity to link physical processes to their real-world impacts — a skill that will be essential as they move into more complex physical and human geography in Year 8.

Builds Foundations for:

- Population prepares scholars for the human and environmental themes they will encounter across Year 8 and beyond. Understanding global demographics — including patterns of growth, ageing, and migration — and the relationships between population, resources and development provides the conceptual grounding for Connected Economies, where scholars explore how economic opportunities, trade and global interdependence are shaped by unequal access to people, skills and resources.
- The unit also establishes key ideas about inequality, resource pressure and sustainability, which are developed further in Ecosystems and Biomes, where scholars examine how population growth and human activity impact natural environments, and again in Global Issues, where these themes are returned to through the lens of climate change, consumption and environmental risk.

Links to the National Curriculum:

- This unit addresses the NC requirement for scholars to develop understanding of the key human geography themes of *"population and urbanisation; international development; economic activity in the primary, secondary, tertiary and quaternary sectors; and the use of natural resources."* Scholars explore population distribution and density, reasons for uneven population patterns, rural–urban contrasts, migration, and population change, all of which deepen their knowledge of how human processes shape places and vary at different scales.
- Through the contextualisation of the Demographic Transition Model and population pyramids, using contrasting global examples, scholars develop the contextual knowledge required by the NC to understand *"the location of globally significant places… including their key physical and human characteristics."* By explaining how physical factors (such as relief, climate and resources) and human factors (such as jobs, infrastructure and history) combine to influence where people live, scholars meet the NC expectation that they *"understand how human and physical processes interact to influence and change landscapes and environments."*
- The unit provides regular opportunities for scholars to *"interpret a range of geographical information"*: maps showing population density, choropleth maps, graphs, bar charts, age–sex structures, and data tables. Scholars also communicate this information using numerical and quantitative skills, as required by the NC, through constructing and interpreting population graphs, DTM stages, and comparative descriptions of demographic data. The unit strengthens scholars' ability to write at length using reasoned explanations about population change, supporting the NC requirement to *"communicate geographical information in a variety of ways."*

Moves Beyond the National Curriculum:

- While the NC requires pupils to study population and urbanisation, this unit extends that learning by introducing pupils to demographic models such as the Demographic Transition Model and population pyramids, enabling them to interpret how and why populations change over time. This use of abstract geographical models is not required at KS3 but provides important conceptual challenge and ambition, supporting pupils to think beyond descriptive knowledge.
- Although sustainability is not explicitly referenced in the current NC, it is a core concept and a golden thread running through our curriculum. This unit begins to embed sustainability-focused thinking by encouraging pupils to consider the implications of population growth, ageing populations and resource pressures. This supports our curriculum aim of preparing scholars to be responsible global citizens who can understand demographic challenges, consider their long-term consequences and think critically about alternative population futures in an increasingly interdependent world.

Year 7	Subject: Geography	Unit title: Microclimate Enquiry	Term: Summer
Knowledge (Learn that): **Microclimates and weather** • Learn the definition of a microclimate. • Recap the difference between weather and climate. • Learn about the role of a meteorologist. **Microclimate factors** • Learn about the effect of shelter on microclimates. • Learn about the effect of buildings on microclimates. • Learn about the effect of surface material on microclimates. • Learn about the effect of aspect on microclimates. • Learn about the effect of vegetation on microclimates. • Learn about the effect of water bodies on microclimates. • Learn about the effect of relief on microclimates. **Stages of geographic enquiry** • Learn about the structure needed to conduct an effective and rigorous geographic enquiry. • Learn about selecting a suitable topic for enquiry and posing an enquiry question. • Learn about the importance of designing a considered hypothesis. • Learn about the difference between primary and secondary data. • Consider appropriate types of primary and secondary data to answer the enquiry question and hypothesis. • Learn about the methods of primary and secondary data collection. • Learn about the use of GIS as part of the geographic enquiry process.	**Vocabulary to consolidate:** • Air pressure • Analysis • Anemometer • Bias • Climate • Conclusion • Data • Enquiry • Hypothesis • Instrument • Precipitation • Primary data • Qualitative • Quantitative • Rain gauge • Reliability • Secondary data • Thermometer • Wind direction • Wind speed • Wind vane **Vocabulary to retrieve:** • Geology • Relief • Rural • Urban • Site • Situation • Vegetation	**Teaching Sequence:** ***To be confirmed for first teaching in Summer 2026.***	
Disciplinary aims:			

This enquiry unit enables scholars to *think, question and work like geographers* by conducting a complete field investigation from hypothesis to conclusion. Scholars apply disciplinary knowledge about weather and climate processes at a local scale, using fieldwork to test how physical and human factors influence microclimates. They collect, measure and record primary data (e.g. temperature, wind speed, aspect, surface type) and combine these with secondary sources such as maps and satellite images. The focus is on developing *procedural knowledge*—how geographical knowledge is created through enquiry. Scholars learn to analyse data, identify patterns and draw evidence-based conclusions, refining their ability to communicate findings through graphs, maps and extended explanations. These enquiry and fieldwork skills will be explicitly revisited and built upon through further fieldwork opportunities across KS3, ensuring that by the end of the key stage scholars are fully prepared for the demands of geographical enquiry at KS4.		

Links to other units:

Builds on:

- The Microclimate Enquiry builds on key knowledge and skills developed throughout the earlier Year 7 units. From *UK Landscapes*, scholars extend their understanding of human environments by examining how land use, vegetation and urban surfaces influence local climate conditions. Earlier introduction to features such as settlement patterns, land cover and the physical characteristics of places helps scholars recognise why microclimates vary across different parts of the school grounds.
- The unit also builds directly on the atmospheric understanding established in *Weather and Climate*. Scholars revisit prior learning about temperature, rainfall, wind, and the factors that create variations in weather, now applying these ideas through practical fieldwork. This enquiry gives scholars the opportunity to observe and measure these processes first-hand, strengthening their ability to link theory to real-world environments and deepening their understanding of how small-scale physical and human factors shape weather conditions.

Builds Foundations for:

- This unit introduces scholars to the structure of a rigorous geographical enquiry from hypothesis to conclusion. The emphasis on enquiry and fieldwork reflects their importance as

fundamental disciplinary skills within our curriculum, supporting progression not only through KS3 but also into KS4 and KS5, where scholars must demonstrate increasing independence in planning, conducting and evaluating investigations. Scholars learn how to design considered enquiry questions, set hypotheses, distinguish between primary and secondary data, collect measurements accurately (e.g. temperature, wind speed) and combine field data with mapped and, where possible, digital sources such as GIS. These experiences deepen geographical skills first developed in earlier units — describing patterns, interpreting spatial variation and using evidence to justify explanations — while strengthening scholars' ability to communicate findings through graphs, maps and extended written explanations.

- Crucially, *Microclimate Enquiry* provides scholars with their first structured fieldwork investigation in KS3, establishing essential procedural foundations that will be built on in Year 8 and 9 and beyond. The enquiry cycle introduced here — systematic data collection, careful analysis and evidence-based conclusions — is revisited and extended in later fieldwork opportunities supporting scholars to develop increasing confidence and independence. By securing these foundations early, this unit helps develop the disciplined geographical thinking and enquiry habits that are essential for becoming a confident and capable geographer.

Links to the National Curriculum:

- This enquiry directly fulfils the NC requirement for scholars to *"collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes."* Through conducting a local microclimate investigation, scholars apply core physical geography ideas, strengthening their understanding of how small-scale atmospheric processes create variation across space.
- The unit also develops scholars' competence in *"interpreting maps, diagrams and aerial photographs"* by requiring them to use sketch maps, field sketches, site plans and annotated photographs to record and represent spatial patterns. Scholars handle and interpret numerical and quantitative data (e.g. temperature, wind speed and shelter index readings), meeting the NC expectation to *"communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length."*
- By investigating how microclimate varies across contrasting local locations, scholars develop the contextual knowledge described in the NC. Explaining how physical factors combine to influence temperature and wind speed enables scholars to meet the NC requirement to *"understand how physical processes give rise to key geographical features… and bring about spatial variation."*

Moves Beyond the National Curriculum

- This enquiry moves beyond the statutory requirements by giving scholars a more structured and methodical introduction to fieldwork design and investigation than the NC specifies. While the NC requires scholars to collect and analyse data, this unit enhances that experience by guiding scholars through a full enquiry sequence. This helps to meet one of the core aims underpinning our curriculum: to uphold the integrity of the geography discipline and ensure scholars grasp how geographical knowledge originates through the process of enquiry.
- The unit strengthens early disciplinary thinking by requiring scholars to justify site selection and begin to consider issues of data reliability — elements that extend beyond the minimum expectations of the NC.
- Finally, the enquiry provides an early foundation for investigative geographical practice, helping scholars recognise how geographical knowledge is generated through observation and measurement, and preparing them for greater complexity and independence in fieldwork later in Key Stage 3 and beyond.

Year 8	Subject: Geography	Unit title: World of Water	Term: Autumn 1

Knowledge (Learn that):

- Water is essential to our lives.
- Most water worldwide is used for Agriculture.
- Access to safe water around the world is uneven - some areas have a water surplus (supply>demand) and some a water deficit (demand>supply).
- Water scarcity is where people do not have enough clean, usable water to meet their basic needs.
- Climate and Geology are two key physical factors affecting access to water.
- Human factors mean that even if water is present, the poorest in society may not be able to access water if they can't afford to this is called economic scarcity.
- Water consumption in the UK is increasing due to population growth and people becoming wealthier and using more water.
- Both population and rainfall in the UK are unevenly distributed.
- The highest population densities are in the South and Southeast of the UK, whereas the highest rainfall is in the North and Northwest of the UK - so areas of surplus are where the demand is least.
- This can create water stress (pressure on water supply).
- Water transfer (moving water from an area of surplus to an area of deficit) is used to help reduce water stress and ensure demands are met.
- Kielder Water Transfer Scheme in Northumberland is a water transfer scheme in the UK.
- In 2018, due to water scarcity Cape Town (South Africa) were at risk of reaching 'Day Zero' where all municipal water supplies would be turned off.
- reasons for the water crisis in Cape Town were (i) drought

Core Vocabulary:

- Adaptation
- Aquifer
- Biosphere
- Coastal Erosion
- Coastal Management
- Dam
- Delta
- Desalination
- Domestic
- Estuary
- Freshwater
- Grey Water
- Groyne
- Hydrosphere
- Infiltration
- Groundwater
- Groundwater Flow
- Hard Engineering
- Longshore Drift
- Managed Retreat
- Reservoir
- Revetment
- Rock Armour
- Sea Wall
- Sea Level Rise
- Soft Engineering
- Water Conservation
- Water deficit
- Water surplus
- Water stress
- Water scarcity

Teaching Sequence:

Part 1 – Water as a Global Resource

Liquid Life: Why Water Matters
Introduces the essential role water plays in sustaining life, from personal and agricultural use to industrial needs. The lesson also examines the global access to water and highlights why access to clean water varies significantly across regions.

Running Dry: Water Stress and Inequality (UK Case Study)
Explores regional variations in water availability within the UK, identifying causes such as population distribution and rainfall patterns. Scholars consider how water stress is managed through strategies like transfer schemes and conservation efforts.

Running Dry: Water Stress and Inequality (South Africa Case Study)
Focuses on Cape Town's near-crisis during "Day Zero," exploring the impacts of drought, population growth, and limited infrastructure. The lesson highlights the human and environmental consequences of water scarcity and the city's response to avert disaster.

Rising Demand, Rising Challenge
Examines the increasing global demand for water driven by urbanisation, population growth, and climate change. Scholars consider the implications for sustainability and explore future challenges in securing water resources for all.

Part 2 – Our Blue Planet

Planet Water
Explores Earth's unique ability to support life as the "Goldilocks Planet," focusing on the balance between saltwater and freshwater. Scholars investigate where water is stored globally, including glaciers, groundwater, rivers, and the atmosphere.

From Sky to Sea
Traces the movement of water through the hydrological cycle and the drainage basin. Scholars learn how water transitions through various stages—precipitation, infiltration, runoff—before eventually reaching the sea.

(ii) Rapid population growth and (iii) Inequality in infrastructure. • Water conservation was used to try and tackle the water stress and water scarcity. • Global demand for water is increasing due to a number of reasons: - Population growth - Urbanisation - Economic Development - Agriculture • Water scarcity is a growing world problem, and sustainable solutions are needed - to ensure that people's needs are met without harming environment or reducing what is available for future generations. • Poorest in society are the worst affected. • There are number of ways to tackle water scarcity: - Water conservation - Desalination - Sustainable solutions • There are two types of water on earth Freshwater and Saltwater. • The earth is made up of four spheres - Biosphere, Atmosphere, Lithosphere and Hydrosphere - the Hydrosphere includes ALL water on earth. • 97.5% of water on earth is saltwater (in the oceans) - and only 2.5% freshwater. • Most freshwater is locked up in Glaciers and Ice Sheets. • Only 1% of freshwater is easily accessible. • The Hydrological Cycle is how water moves around the earth at a global scale and is a closed system (no new water added or lost). • Water in the hydrological cycle moves between three stores - Land, Air and Sea.	• Water transfer	**From Trickles to Tides** Follows the journey of a river from source to mouth, analysing how characteristics like width, depth, velocity, and sediment load change along its course. The lesson emphasizes the river's role in shaping the landscape. **Part 3 – Reaching the Coast** **Where Rivers Meet the Sea** Explores estuaries and deltas as key zones of interaction between rivers and the sea. Scholars investigate why these areas are significant for human settlement, agriculture, and trade, using examples such as the Nile Delta and UK estuaries. **Shaping the Shoreline** Investigates the dynamic processes that shape coastal landscapes, including erosion, deposition, and longshore drift. Scholars examine how these natural forces continuously reshape the coastline over time. **Coasts Under Pressure** Focuses on the human and environmental pressures facing coastlines, such as erosion, flooding, and climate change. The lesson uses real-world examples to highlight the impacts on communities and ecosystems. **Engineering the Edge** Explores how humans attempt to manage and protect coastlines using hard and soft engineering strategies. Scholars explore the potential environmental consequences of these interventions.

• There are three flows responsible for cycling the water between the three stores - (i) Evaporation (ii) Condensation (iii) Precipitation. • At a local scale water moves through a Drainage Basin (area of land drained by rivers) - these are open systems with INPUTS and OUTPUTS. • Physical factors such as relief of land and amount of vegetation can affect flows and stores. • Human factors such as urbanisation can affect flows and stores. • The long profile of a river is the change in gradient downstream. • Gradient decreases downstream as a river moves from the upland areas of its source down towards sea level (its mouth) due to gravity. • River Width, Depth, Velocity and Discharge increase with distance downstream of a river. • River width and depth increase downstream due to erosion • Velocity (speed) increases downstream. • Particle size decreases downstream. • Delta's and Estuaries form where rivers meet the sea. • Delta's form at the mouth of very large rivers due to deposition. • Deltas often have a high population density due to flat fertile land for farming and development and trade • There are no deltas in the UK. • The mouth of rivers in the UK are often wide, and funnel shaped, known as estuaries. • Coastlines are dynamic and shaped by erosion, transport and deposition. The main driving force of energy is the Wind. • The wind creates waves of which there are two types (i) Constructive and (ii) Destructive.		

- Destructive waves are steep, high energy and erode the coast; Constructive are gentle, low energy and deposit material around the coastline.
- Material is moved around the coastline by the transport process of Longshore Drift.
- When energy is lost this material is then deposited
- Coastlines are under increasing pressure from Climate Change and Human Activity.
- Sea-level rise is due to increasing temperatures causing (i) melting of glaciers and ice caps and (ii) thermal expansion of water.
- Coastal management is used to try and control natural processes - there are two types (i) Hard Engineering and (ii) Soft Engineering.
- Managed Retreat is an option sometimes used (where people are encouraged to relocate and an area is left to naturally flood and erode (often an economic decision: cost-benefit).

Disciplinary Aims

1. Disciplinary concepts

- Deepening understanding of hydrological processes and how water moves through systems at multiple scales.
- Recognising how physical and human processes interact to shape water availability, stress and management.
- Understanding place through comparison of local, national and global water challenges.
- Applying system thinking to the hydrological cycle and human interventions.

2. Working with geographical representations

- Interpreting and constructing **flow diagrams** of the

Vocabulary to Retrieve:

- Abrasion
- Agriculture
- Atmosphere
- Attrition
- Condensation
- Climate Change
- Deposition
- Drainage Basin
- Erosion
- Evaporation
- Irrigation
- Lithosphere
- Lowland
- Mouth
- Natural Resource

hydrological cycle. • Using maps (world, regional, **choropleth**) to investigate global and national patterns of water stress. • Reading **climate graphs**, supply–demand graphs, and distribution maps. **3. Geographical enquiry and practice** • Explaining physical processes such as evaporation, condensation, interception, and groundwater storage. • Analysing causes of water stress using evidence from climate, population, infrastructure and demand. • Comparing case studies (UK vs South Africa) using spatial and quantitative evidence. • Developing extended, causal geographical explanations using the "Because, But, So" sentence tools. • Evaluating human responses to water stress, including sustainability considerations. **4. Processes and change over time** • Understanding how seasonal and climatic variation influence water resources. • Exploring long-term drivers of water stress, including climate change and population growth. • Investigating how water systems evolve as demand increases, or management strategies are implemented. **Core concepts integrated:** *Processes, Systems, Scale, Space, Interdependence, Sustainability, Inequalities, Place*	• Percolation • Population Pressure • Relief • Settlement • Source • Upland • Urban • Watershed • Weathering	

Links to other units:

Builds on:

- *World of Water* builds on a range of foundational knowledge and skills developed across Year 7. From *UK Landscapes*, scholars revisit the processes of erosion, transport and deposition, extending these ideas into drainage basin systems, source-to-mouth changes and coastal features such as estuaries and deltas. Earlier learning about uplands and lowlands, and how relief influences runoff and river flow, helps scholars understand why river sources, flooding and water movement vary between different landscapes.
- From *Earth Story*, scholars draw on their knowledge of rock types, permeability and resistance, which supports explanations of why some coastlines erode more quickly, how groundwater is stored and why water moves differently through contrasting landscapes.
- Knowledge from *Weather and Climate* also provides an essential foundation. Scholars revisit earlier understanding of evaporation, condensation and rainfall formation, now applied within the water cycle and drainage basin systems, strengthening their grasp of hydrological processes at multiple scales.
- The unit also builds on ideas from *Population*, where scholars explored resource distribution and pressure on natural systems. This understanding helps explain global variations in water availability and the increasing demand for water linked to population growth and development.
- Across these links, scholars continue to develop key disciplinary skills introduced throughout Year 7 — describing physical processes, interpreting spatial patterns and explaining cause-and-effect relationships — now applied to hydrological systems and water-related challenges.

Builds foundations for:

- *World of Water* provides essential conceptual foundations for several future units in Year 8. Understanding global water distribution, resource pressures and hydrological processes supports the study of Connected Economies, where ideas about resource availability, inequality and global interdependence become increasingly important. The unit also prepares scholars for *Ecosystems and Biomes*, where water availability is a key driver of biome distribution, and for *Tectonics: Volcanoes,* where links between plate activity, volcanic landscapes and hazard-related water challenges (e.g., lahars, tsunamis) emerge. More broadly, the unit strengthens scholars' capacity to think about sustainability, environmental change and resource management, all of which support understanding in numerous forthcoming units, particularly the *Global Issues* unit and also support the development of the geographical thinking required beyond KS3.

Links to the National Curriculum:

- This unit directly supports the NC requirement for scholars to study key physical geography processes, including *"hydrology and coasts."* Scholars deepen their understanding of the drainage basin system, river processes, water stores and transfers, and the causes of water stress, extending foundational knowledge from Year 7. The NC expectation to understand *"how physical and human processes interact to influence and change landscapes, environments and the climate"* is met through investigating how climate, population growth and economic development shape patterns of water availability, demand and scarcity.
- The unit develops scholars' ability to *"interpret maps, diagrams, globes, aerial photographs and GIS"* by analysing water availability maps, climate data, rainfall patterns, flow diagrams, and evidence from contrasting case studies (e.g. Cape Town's Day Zero, UK water stress). Examining different levels of water security across global locations builds the contextual knowledge required by the NC to understand *"the location of globally significant places… and their key physical and human characteristics."*
- The unit further supports the NC human geography strand relating to *"the use of natural resources."* By studying water as a vital but unevenly distributed resource, scholars consider how societies manage, overuse and protect limited supplies, laying foundations for later learning about sustainability, global inequality and environmental decision-making across KS3.

Moves beyond the National Curriculum:

- While the NC requires scholars to understand hydrological processes, this unit extends that understanding by applying it to real-world challenges such as water stress, over-abstraction, climate variability and unequal access to water. Through case studies such as Cape Town's Day Zero and regional water stress in the UK, scholars explore how physical processes, human decisions, governance and inequality interact — moving into socio-environmental analysis beyond KS3 expectations.
- The unit also strengthens disciplinary thinking by introducing systems thinking (a core underpinning concept), for example by understanding the drainage basin as an open system, and by encouraging scholars to explain causes and consequences using evidence from multiple sources.
- Although sustainability is not explicitly required in the current NC, it is a central concept within our curriculum. This unit embeds sustainability as a lens through which scholars consider the environmental and social implications of water use. By evaluating how societies manage water resources amid competing demands and climate pressures, scholars begin to think about alternative futures and the long-term consequences of human actions — supporting our aim of developing responsible global citizens.

Year 8	Subject: Geography	Unit title: Connected Economies (Unit 2)	Term: Autumn 2
Knowledge (Learn that) • An economy is how a country makes and uses money through the goods and services people produce. • There are four economic sectors: Primary, Secondary, Tertiary and Quaternary. • The employment structure shows the percentage of workers in each sector. • As countries develop employment shifts from primary industries to predominantly secondary and tertiary sectors. • The most developed countries are post-industrial with most jobs in the tertiary and quaternary sector. • Trade means the buying or selling of goods or services. • Goods are physical products (e.g. food and clothes). • Services involve providing skills or knowledge. • The UK needs to trade because it cannot produce everything it needs – it imports and exports goods and services. • A country's balance of trade is the difference between the value of its exports and imports. It may have a trade surplus or trade deficit • Globalisation means the increasing interconnectedness between people and countries around the world. • The industrial revolution was an early driver of globalisation. • Modern globalisation has been driven by (i) improvements in transport and (ii) communication technology (e.g. the internet). • Globalisation has influenced many aspects of the UK including for example food, fashion, sport, music etc. • Countries that operate in more than one country are known as Transnational Corporations (TNCs). • TNCs have grown due to globalisation. • TNCs bring both advantages and disadvantages to a country. • The movement of money out of a host country back to the TNCs home country is known as economic leakage. etc.	**Vocabulary to consolidate:** • Balance of Trade • Circular Economy • Colonisation • Consumers • Development • Economy • Economic Leakage • E-Waste • Employment Structure • Ethical Source • Export • Globalisation • Goods • Gross National Income (GNI) • Human Development Index (HDI) • Import • Industrialisation • Inequality • Interconnectedness • Interdependence • Knowledge Economy • Manufacturing • Multiplier Effect • Natural Resources • Post-Industrial Economy • Primary Sector • Producer • Quaternary Sector • Raw materials • Recycling	**Teaching Sequence:** **The Economy** Introduces the concept of an economy and how people earn a living through different sectors. Scholars explore how employment structures change as countries develop. **Goods In, Goods Out: The Balance of Trade** Introduces why countries trade and how goods and services move between them. Scholars explore the UK's main imports, exports, and trading partners, and begin to understand the idea of the balance of trade and what creates a trade surplus or deficit. **Globalisation: A Shrinking World** Explores how advances in transport and communication connect countries and people. Scholars investigate how globalisation has influenced the UK and their own live, for example through technology, fashion, music, and media, recognising how these links make the world more interdependent. **TNCs: Apple – A Global Giant** Introduces what transnational corporations (TNCs) are and how globalisation has led to their growth. Using Apple as a case study, scholars explore how global companies operate across borders and how they shape jobs, trade, and consumer habits around the world. **The Global Supply Chain: Primary Industry Part A – Mine to Mobile (DRC)** Introduces the idea of a global supply chain and how products connect countries and sectors. Scholars begin to explore this through the example of a mobile phone, focusing on coltan mining in the Democratic Republic of Congo. This lesson begins to consider the nature of the physical and human characteristics of the DRC. **The Global Supply Chain: Primary Industry Part B – From Mine to Mobile: The Resource Curse** Explores why the Democratic Republic of Congo experiences a resource curse, despite its mineral wealth. Scholars examine the social and environmental impacts of coltan mining	

• Raw materials are the first stage in many supply chains such as Coltan used in the production of mobile phones. • Much of the world's coltan is found in the Democratic Republic of the Congo (DRC). • The DCR has diverse physical landscapes and is one of the most resource rich countries in the world. • Development is measured using the HDI (Human Development Index), which combines health, education and income indicators. • The DCR is an LIC with a low level of development. • The DCR has a resource curse - the idea that countries rich in natural resources can experience slower development and more conflict than those with fewer resources. • In the DCR, the problems caused by coltan mining often outweigh the benefits. • Coltan mining has led to conflict, corruption, low pay, child labour and environmental damage. • Ethical sourcing means ensuring minerals such as coltan are mined responsibly, protecting people and the environment. • The secondary stage of a supply chain involves the manufacturing of goods. • Raw materials have a low value, but value is added when they are made into finished goods. • China has become a world leader in manufacturing, leading to rapid economic growth due to its large workforce, lower wages, investment in infrastructure, and government incentives. • The multiplier effect occurs when investment by Transnational Corporations (TNCs) creates jobs, boosts incomes and encourages further economic growth in an area. • The quaternary sector includes jobs that use knowledge, information and research and development. • As countries develop, there is a significant growth in the quaternary industry.	• Research and Development • Resource Curse • Secondary Sector • Services • Special Economic Zone • Supply Chain • Sustainability • Tertiary Sector • Trade • Trade Deficit • Trade Surplus • Transnational Corporation (TNC) • Value Added **Vocabulary to retrieve:** • Development • Population • Resources	and consider how ethical sourcing can help reduce inequality and conflict within global supply chains. **The Global Supply Chain: Secondary Industry – Made in China** Continues the study of the mobile phone supply chain by examining manufacturing in China. Scholars explore how and why rapid industrial growth has driven development and transformed China's economy, while also highlighting how economic growth can deepen regional and social inequality. **Quaternary Sector: The Knowledge** Shifting focus to the UK, scholars examine the growing importance of the knowledge economy, exploring how research, design, and technology contribute to development while recognising that some regions benefit more than others. Also revisits the importance of knowledge and innovation in the mobile phone supply chain particular in relation to value added. **Growing Economies: The Impact on Development** Explores how economic growth can drive development through the multiplier effect, while also contributing to inequality within and between countries. Scholars analyse how the gains from growth are unevenly distributed across people and places. **Growing Economies: The Need for Sustainability in a Throwaway World** Returns to the mobile phone as a lens for exploring the growing problem of e-waste and the environmental impacts of global consumption. Scholars begin to recognise that alternatives exist, exploring how the circular economy offers a more sustainable approach to production and consumption.

• The UK has a knowledge economy, meaning most jobs are in the tertiary and quaternary sectors. • Some parts of the UK have benefited more than others from the growth of the knowledge economy creating regional inequality. • Development means an improvement in people's quality of lives. • Scattergraphs are used to show the relationship between two variables. • As an economy grows, the multiplier effect can increase a countries level of development. • Economic growth does not benefit everyone equally, leading to inequality within and between countries. • The production of goods like mobile phones has environmental impacts at every stage of their supply chain. • E-waste refers to broken, unwanted or discarded electronic devices. • Most e-waste is produced in High Income Countries (HICs) such as in North America and Western Europe but often exported to poorer countries in Africa and Asia. • E-waste can harm both the environment and human health. • A circular economy is one where, instead of throwing things away, we reuse, repair and recycle to make resource use more sustainable.		
Disciplinary Aims **1. Disciplinary concepts** • Understanding economic processes (globalisation, trade, industrial change) and their spatial impacts. • Recognising interdependence between producers, consumers and countries within global systems. • Developing an understanding of inequality through economic structures, labour conditions and supply chains. • Interpreting change over time through industrialisation,		

sector shifts and economic development. **2. Working with geographical representations** • Interpreting **flow-line maps** showing trade patterns, imports/exports and global connectivity. • Using **pie charts** and, **bar charts** to analyse economic sectors. • Reading **maps** and **diagrams** showing global supply chains (e.g., DRC → China → UK for mobile phones). • Using **world maps** and **choropleths** to examine patterns of development and inequality. • Working with simplified **economic models** (Clark–Fisher Model, development indicators). **3. Geographical enquiry and practice** • Explaining economic change using causal reasoning (mechanisation, industrialisation, globalisation). • Analysing real-world examples (China as a manufacturing hub, UK as a post-industrial economy). • Evaluating evidence on TNCs, economic leakage, and the multiplier effect. • Investigating ethical and sustainability issues within global supply chains. • Developing structured extended writing using "Because, But, So" to build sophisticated explanation and contrast. • Applying comparative geographical thinking across LICs, NEEs and HICs. **4. Processes and change over time** • Understanding how economic sectors shift over time through development (pre-industrial → post-industrial). • Investigating changes in trade relationships and global flows over time. • Exploring long-term consequences of global economic		

processes (inequality, environmental degradation, e-waste). • Evaluating how economic growth both drives and challenges sustainable futures. **Core concepts integrated:** *Interdependence, Inequalities, Processes, Systems, Scale, Space, Sustainability, Diversity, Place*		

Links to other units:

Builds on:

- This unit builds on key human and physical geography foundations laid across Year 7 and early Year 8. From *UK Landscapes*, scholars revisit the idea that **resources shape human activity**, extending their earlier understanding of how physical landscapes support settlement and industry to a global scale through the study of natural resource distribution, extraction and trade.
- From *Population*, scholars draw on their prior understanding of **development and inequality**, where they first explored differences in wealth, health and opportunity; these ideas are now deepened through examining how employment structure, global trade and economic systems influence quality of life.
- Knowledge from *World of Water* also provides an important foundation. Scholars previously learned how uneven access to essential resources — such as freshwater — creates patterns of inequality and interdependence; in Connected Economies, they apply the same geographical thinking to **economic resources**, considering how access to minerals, manufacturing and technology shapes global connections.
- Across these links, scholars build on disciplinary and procedural skills developed throughout Year 7 and Year 8 — including interpreting spatial data, comparing places, explaining cause-and-effect relationships and analysing global patterns — now applied to employment structure, globalisation and trade flows.

Builds foundations for:

- *Connected Economies* provides essential conceptual foundations for later Year 8 units, particularly Ecosystems and Biomes, Tectonics, and Global Issues. Scholars' growing understanding of interdependence, global connections and economic inequality directly supports work on global sustainability, resource pressures and environmental change. The study of trade, global supply chains, and transnational companies prepares scholars to think critically about who benefits and who loses within global systems—an idea revisited in *Global Issues* through themes such as consumption, waste, climate change and global inequality.
- The disciplinary thinking developed here—evaluating evidence, analysing patterns across different scales, and explaining complex systems—also strengthens the procedural foundations needed for later geographical enquiries and for the increasing analytical demands of KS4.
- Ultimately, this unit deepens scholars' ability to see the world as a set of interconnected systems, laying the groundwork for understanding how economic, environmental and social processes interact at a global scale.

Links to the National Curriculum:

- This unit directly supports the NC requirement for scholars to understand key aspects of human geography, including *"international development; economic activity in the primary,*

secondary, tertiary and quaternary sectors; and the use of natural resources." Scholars extend this understanding through the **Clark–Fisher Model**, global supply chains, patterns of global trade, and changes in employment structure over time.

- The unit also supports the NC expectation to *"understand how human and physical processes interact to influence and change environments."* Scholars explore how physical factors (e.g. access to resources, location and climate) and human factors (e.g. infrastructure, technology and governance) shape differing pathways of development. Contrasting examples from countries at different stages of development strengthen the NC aim for scholars to understand *"globally significant places… and their key human characteristics."*
- Finally, the unit strengthens geographical skills through interpreting **trade maps, flow diagrams, graphs, employment data and development indicators**. These activities reinforce the NC requirement to *"interpret a range of geographical information… and communicate geographical information through maps, numerical and quantitative skills and writing at length."*

Moves Beyond the National Curriculum

- This unit moves beyond statutory expectations by engaging scholars in a more analytical exploration of global economic interdependence than the NC specifies. While the NC introduces economic activity, this unit extends it by examining interdependence, interconnectedness, globalisation, and shifting patterns of production and consumption, encouraging scholars to evaluate how global connections shape inequality, opportunity and development.
- It also deepens disciplinary thinking by introducing geographical models such as the Clark–Fisher Model and applying systems thinking to help scholars understand economic change within wider global systems.
- Although sustainability is not explicitly referenced in the current NC, it is a core concept within our curriculum. This unit embeds sustainability as a critical lens through which scholars consider the environmental and social impacts of global trade and production. This supports our aim of developing responsible global citizens, capable of recognising the long-term implications of economic choices and thinking critically about alternative, more circular and sustainable economic futures.

Year 8	Subject: Geography	Unit title: Ecosystems and Biomes	Term: Spring 1
Knowledge (Learn that) • An ecosystem is a system made up of biotic and abiotic components that interact.	**Vocabulary to consolidate:** • Active Layer • Albedo • Adaptation	**Teaching Sequence:** **What is an Ecosystem? Revisiting Components, Energy & Interactions** Scholars revisit what an ecosystem is and deepen their understanding by viewing it as a	

• Producers, consumers and decomposers have distinct roles in transferring energy through a food chain or food web. • Energy flows through ecosystem starting with energy from the sun fixed through photosynthesis. • Nutrients move through an ecosystem in the nutrient cycle between the soil, biomass and litter layer. • Ecosystems are interdependent. Changes in one component can affect the whole system. • Biodiversity is important in an ecosystem as it helps increase stability and their ability to recover from changes. • Local ecosystems vary depending on environmental conditions. • A biome is a large-scale ecosystem defined by its climate, vegetation and characteristics species. • Biomes form global patterns linked to climate conditions such as temperature and rainfall. • Climate is influenced by factors such as latitude, altitude, continentality and ocean currents. • Major Global Biomes include Tropical Rainforests, Deserts, Savanna, Tundra and Temperature Forests. • Similar biomes occur on different continents due to similar climate conditions. • Climate influences the type of vegetation that grows and the animals that live in each biome. • Global Atmospheric Circulation (GAC) explains how heat and air move around the Earth. • Rising and sinking air influences wind and rainfall. • Climate Zones form as some regions receive more rainfall (near the equator) whilst others are dry (30^{o} North and South). • The GAC helps to explain why major biomes are found in specific locations. • The Savanna biome has a seasonal climate with distinct wet and dry periods.	• Biodiversity • Biome • Carbon Store • Climate Zone • Coral Bleaching • Coral Polyp • Coral Reef • Deforestation • Desertification • Drought • Energy Flow • Global Atmospheric Circulation • Grazing • Herbivore • Interdependence • Marine Ecosystem • Migration • Nutrient Cycling • Ocean Acidification • Peat • Periglacial Processes • Permafrost • Photosynthesis • Poaching • Predator • Productivity • Resilience • Savanna • Snow Cover • Symbiosis • Thermokarst • Tundra	system with inputs, processes and outputs. They refine knowledge of producers, consumers and decomposers and explore how energy flows through food webs. The nutrient cycle is introduced to show how nutrients move through soil, plants and animals, underpinning ecosystem productivity. The lesson emphasises interdependence and how changes to one component affect the whole system. **Local Ecosystem Study: Structure, Characteristics & Interdependence** Scholars investigate a local ecosystem near their academy and examine its key features, including climate, soils, species and food webs. They explore interdependence within the ecosystem and consider how nutrient availability, species interactions and environmental conditions shape its functioning. **Mapping the World's Biomes** Scholars zoom out to the global scale to interpret world biome maps and identify patterns in the distribution of major biomes. They revisit climate factors learned in Year 7—such as latitude, altitude, continentality and ocean currents—and link these to global variations in temperature and rainfall. This helps explain why different biomes form where they do. **Global Circulation: Linking the Atmosphere and Biosphere** Scholars are introduced to the Global Atmospheric Circulation model and learn how rising and sinking air, pressure belts and global wind patterns shape climate zones. They use this understanding to explain the global location of rainforests, deserts and tundra, strengthening the link between climate and vegetation**.** **HOT BIOMES:** **African Savanna: Climate, Soils and Adaptations** Scholars explore the African Savanna's seasonal climate, grass–tree balance, soils and water availability. They examine key plant and animal adaptations—such as drought tolerance, fire resistance and migration—and consider how nutrient cycling and interdependence shape this dynamic environment. **Human Pressures on the Savanna** Scholars investigate major pressures on the savanna, including water scarcity, poaching and population growth. They explore how human and environmental factors interact to alter

• Soils in the Savanna are nutrient-poor, making nutrient cycling vital for plant growth. • Plants and animals in the Savanna have adapted to the climate, for example developing fire resistance and drought tolerance. • The plants and animals in the Savanna are highly interdependent. • The Savanna faces pressures such as water scarcity, population growth and land-use change. • Poaching and habitat loss threatens many species in the Savanna. • Human activities like farming and grazing degrades soils and reduce biodiversity. • Climate variability increases the risk of drought and affects wildlife migration patterns • The Tundra biome has extremely cold temperatures, short summers and low rainfall • Permafrost is permanently frozen ground shaping tundra landscapes and ecosystems • Nutrient cycling in the Tundra is slow due to low temperatures and limited decomposition • The Tundra is a fragile ecosystem with low productivity and limited biodiversity • Rising temperatures are causing melting of the permafrost in the Tundra • Resource extraction such as oil and gas is damaging tundra habitats and disrupting wildlife. • Thawing permafrost has a feedback systems, releasing greenhouse gases further contributing to warming. • Coral reefs are among the most diverse and productive ecosystems on earth • Coral reefs are formed coral polyps living in symbiosis with algae. • Reefs thrive in warm, clear shallow waters	• Zooxanthellae **Vocabulary to retrieve:** • Abiotic • Algae • Biotic • Decomposer • Ecosystem • Food Chain • Food Web • High Pressure • Latitude • Low Pressure • Migration • Primary Consumer • Secondary Consumer • Sustainability • Tertiary Consumer • Tropic Level. • Water scarcity	habitats and impact both wildlife and local communities. **COLD BIOMES:** **The Tundra: Extreme Climate, Permafrost & Fragile Ecosystems** Scholars study the tundra's key characteristics—its harsh climate, permafrost, limited vegetation and specialised animal adaptations. They explore why the tundra has low productivity and slow nutrient cycling, offering a strong contrast with the savanna. **Human Impacts on the Tundra** Scholars examine how warming temperatures, resource extraction and melting permafrost are reshaping the tundra. They consider consequences for wildlife, Indigenous communities and wider global systems. **MARINE BIOMES:** **Coral Reefs: Structure, Function and Global Importance** Scholars explore coral reefs as highly diverse and productive ecosystems. They examine how reefs form, the role of coral polyps and symbiotic algae, and why reefs thrive in warm, clear, shallow waters. The lesson highlights their ecological importance, including the habitat, food and protection they provide for many marine species. **The Great Barrier Reef: Biodiversity and Emerging Threats** Scholars study the Great Barrier Reef's rich biodiversity, its range of species and habitats, and its importance to people and the environment. They explore key threats—including warming seas, coral bleaching and overfishing—and consider how these pressures affect reef resilience. **Biomes – Interdependence at the Global Scale** The unit concludes by zooming back out to the global level. Scholars explore how changes in one biome—such as deforestation in the rainforest—create ripple effects across the Earth system. They connect the atmosphere, biosphere and hydrosphere, reinforcing ideas of systems, feedback loops and tipping points at an accessible KS3 level.

• Coral Reefs provide habitats, food and protection for many marine organisms. • Biodiversity on coral reefs supports food webs and contributes to the health of marine ecosystems. • The Great Barrier Reef is the largest coral reef systems in the world and home to thousands of species • Coral bleaching occurs when warming seas stress corals and cause them to expel their algae • Pollution, overfishing and climate change are major threats to health and resilience • Biomes are interconnected parts of the Earth system • Changes in one biome can have global effects. • Deforestation can affect global climate, weather and biodiversity • Earth's systems are connected through feedback loops		
Disciplinary Aims **1. Disciplinary concepts** • Understanding ecosystems as interdependent systems with inputs, processes and outputs. • Developing systems thinking by connecting changes within individual biomes to wider Earth systems and feedback loops. **2. Working with geographical representations** • Interpreting world biome maps to identify global patterns and spatial distributions. • Reading climate graphs, temperature–precipitation data and local ecosystem maps. • Using diagrams of nutrient cycles, food chains, food webs and ecosystem structures. • Working with photographs to observe vegetation structure, wildlife adaptations and evidence of human impacts in contrasting biomes.		

3. Geographical enquiry and practice • Analysing how climate factors (latitude, altitude, continentality, ocean currents) shape global biome patterns. • Evaluating human pressures such as water scarcity, poaching, habitat loss, resource extraction and climate change. **4. Processes and change over time** • Investigating how climate variability and long-term change affect ecosystem structure, biodiversity and productivity. • Analysing how human activities (deforestation, overfishing, land-use change) reshape biomes and alter global systems. • Understanding how changes in one biome can create wider effects through feedback loops and Earth-system interactions. **Core concepts integrated:** Processes, Systems, Interdependence, Sustainability, Diversity, Inequalities, Space, Scale, Place, Time		

Links to other units:

Builds on:

- This unit builds on foundational ideas introduced throughout Year 7. From *UK Landscapes,* scholars revisit the concept of ecosystems, returning to earlier learning about producers, consumers, decomposers and nutrient cycling. This prior knowledge supports scholars in understanding local ecosystems and how biotic and abiotic components interact to form functioning systems.
- Learning from *Weather and Climate* provides an essential foundation. Scholars bring forward their understanding of global climate zones, temperature, rainfall and atmospheric processes, which allows them to explain the global distribution of major biomes. Knowledge of latitude, altitude and ocean currents supports scholars in explaining location of biomes. They also return to the use of climate graphs.
- The unit also builds on ideas from *Population*, where scholars explored how physical factors—such as climate, water availability and natural resources—shape where people live and how they use land. These ideas support understanding of human pressures on biomes, including farming, resource extraction and land-use change. Concepts such as interdependence, inequality and sustainability, introduced earlier in the year, are deepened here.

- Across these links, scholars continue to strengthen key disciplinary skills introduced throughout Year 7 and Year 8 — interpreting spatial patterns, explaining processes, analysing cause and effect, and recognising the interconnected nature of physical and human systems.

Builds foundations for:

- Ecosystems and Biomes provide essential foundations for later Year 8 and Year 9 units. Understanding how climate shapes vegetation, and how ecosystems function through energy flows, nutrient cycling and interdependence, prepares scholars for *Global Issues*, where they explore issues such as climate change in detail. The systems thinking introduced here helps scholars recognise how environmental change in one biome can create ripple effects across the planet.
- The study of human impacts on the savanna, tundra and coral reefs — including land-use change, resource extraction, population pressures and climate variability — lays the groundwork for understanding global sustainability challenges, further supporting the *Global Issues* unit.
- In addition, the emphasis on processes, systems and adaptation strengthens conceptual foundations for Tectonics and Hazards, where scholars continue to explore how physical processes shape environments and influence human activity.
- Overall, this unit deepens scholars' understanding of the Earth as a set of interconnected systems and strengthens the geographical thinking needed to engage confidently with the global environmental challenges that follow.

Links to the national curriculum:

- This unit directly supports the National Curriculum requirement for scholars to understand key physical geography processes, including *"weather and climate… hydrology and coasts"* and the interaction of physical systems. Scholars deepen their knowledge of ecosystems as systems, energy transfer through food chains and webs, and nutrient cycling, building on Year 7 foundations.
- The NC expectation to understand *"how physical and human processes interact to influence and change environments"* is met through studying how climate, soils, vegetation and human pressures shape ecosystems at different scales. Scholars explore local ecosystems, then global biomes, linking climate factors (latitude, altitude, continentality, ocean currents) to patterns of temperature and rainfall and, in turn, to vegetation, biodiversity and species adaptations.
- The unit also develops competence in interpreting geographical information, as required by the NC statement to *"interpret maps, diagrams, globes… and communicate geographical information through maps, numerical and quantitative skills and writing at length."* Scholars use world biome maps, climate graphs, nutrient cycle diagrams, and species adaptation case studies, applying structured explanation to show how climate, vegetation and human activity are connected.

Moves Beyond the National Curriculum

- While the NC introduces broad physical processes, this unit goes further by providing scholars with a more detailed and applied understanding of ecosystem functioning, including energy flow, nutrient cycling, adaptations and interdependence. This systems-based approach — linking changes in one component to impacts across the whole ecosystem — offers conceptual challenge beyond what is required at KS3.
- The unit also extends beyond NC expectations by exploring contrasting biomes in depth (Savanna, Tundra, Coral Reefs), including their climate, soils, biodiversity, adaptations and vulnerabilities.
- Sustainability — not explicitly mentioned in the NC — This aligns with our curriculum aim of preparing scholars to be responsible global citizens who can understand environmental challenges and think critically about alternative futures.
- Finally, the unit moves beyond statutory expectations by helping scholars connect local and global scales, linking changes in one biome (e.g. rainforest deforestation) to impacts across the

Earth system (climate, biodiversity, hydrological cycles). This strengthens understanding of systems, interdependence and feedback loops, core disciplinary ideas that exceed the minimum KS3 requirements.

Year 8	Subject: Geography	Unit title: Tectonics: Hazards - Volcanoes	Term: Spring 2
Knowledge (Learn that) • The Earth is made up of four main layers. • The crust is broken into tectonic plates that move slowly over the mantle. • Slab Pull, Ridge Push and Convection are the key forces driving plate movement. • Different types of plate boundary create different patterns of tectonic activity. • Plates move apart at Constructive Boundaries with new crust created as magma rises, forming mid-ocean ridges. • Plates move together at Destructive boundaries with an ocean plate forced to subduct underneath a continental plate. • Subduction creates deep ocean trenches at destructive plate boundaries. • Volcanoes form at destructive boundaries when magma, generated during the process of subduction erupts at the surface. • GIS allows geographers to layer and analyse spatial data. • Earthquakes and volcanoes are clustered along tectonic plate boundaries. • Volcanoes show clear global patterns, most in linear chains following the edges of continents and the centre of oceans. • Some volcanoes are anomalies, formed away from plate boundaries in the middle of plates – e.g. Hawaii in the middle of the Pacific Plate. • Magma type influences the shape and behaviour of a volcano • Basaltic magma has a low viscosity and low gas content and leads to gentle frequent eruptions • Rhyolitic magma is viscous and gas rich creating violent, explosive eruptions • Shield volcanoes from basaltic lava spreading large distances. • Composite volcanoes form alternating layers of ash and lava produced during explosive eruptions.	**Vocabulary to consolidate:** • Active Volcano • Adaptation • Andesitic Magma • Ash • Basaltic Magma • Caldera • Cinder Cone • Crater • Destructive Boundary • Dormant Volcano • Eruption • Evacuation • Exclusion Zone • Extinct Volcano • Geothermal Energy • Hazard • Hazard Map • Hotspot • Jökulhlaup • Lahar • Lava Flow • Long Term Response • Magma • Magma Chamber • Main Vent • Prediction • Primary Effect • Pyroclastic Flow • Resilience • Rhyolitic Magma • Risk	**Teaching Sequence:** **The Power Beneath Our Feet** Scholars revisit the structure of the Earth and the forces that move tectonic plates, building directly on their Year 7 learning about convection currents, slab pull and ridge push. They explore how these processes create global patterns of earthquakes and volcanoes and begin linking different hazards to specific plate boundaries. **Forces at the Margins When Plates Collide and Divide** Scholars look more closely at what happens when plates move apart or collide. They learn how constructive boundaries create new crust and mid-ocean ridges, and how destructive boundaries form trenches and volcanic mountain chains through subduction. Real examples help them understand how these processes at these boundaries lead to volcanic eruptions. **Mapping Danger Zones** Scholars will be shown how GIS can be used to explore global patterns of earthquakes and volcanoes – they will be shown data such as plate boundaries, volcanoes and earthquakes can 'layered' in a GIS to identify patterns and the distribution of earthquakes and volcanoes. They will connect these patterns to the plate boundaries studied previously, strengthening their understanding of where and why tectonic hazards occur. **Inside the Volcano: The Force Behind the Power** Scholars learn how different types of magma shape the form and behaviour of volcanoes. Comparing basaltic, andesitic and rhyolitic magma helps them understand why some eruptions are gentle and others explosive, and why shield and composite volcanoes look and erupt so differently. **Volcanic Hazards: The First Wave of Danger** Scholars firstly become familiar with the internal structure of a volcano and then explore primary hazards—pyroclastic flows, ash clouds, tephra, lava flows—and how each affects people and landscapes. Scholars will consider how hazard type depends on eruption style and magma characteristics, relating to real-life examples.	

- Primary effects are those that happen during a volcanic eruptions
- Magma is stored in a magma chamber below a volcano.
- Magma rises through the main vent of a volcano
- Secondary vents and secondary cones may form where the main vent of a volcano becomes blocked.
- Pyroclastic flows are fast moving currents of hot ash, gas and dust.
- Tephra (including ash, lapilli and volcanic bombs) is thrown from a volcano.
- Lava flows vary in speed and thickness depending on the magma type. Basaltic lavas travel far and faster whilst thicker lava flows move slowly.
- Secondary hazards are those that occur after the initial eruption but are triggered by it, often causing additional destruction.
- Jökulhlaups are sudden glacial outburst floods caused when volcanic heat rapidly melts ice beneath or around a glacier.
- Tsunamis can be caused by volcanoes as underwater eruptions; volcanic landslides or the collapse of a volcanic cone can displace large volumes of water.
- Lahars are fast-moving volcanic mudflows made of ash, water and debris that can travel down river valleys and bury settlements.
- Hawaii is formed over a hotspot in the Pacific Ocean.
- A hotspot is an area where a hot mantle plume rises under a plate, melting crust and creating gentle, frequent volcanic eruptions.
- The Hawaiian Islands are formed in a chain as the plate moves over the stationary hotspot.
- Hawaiian eruptions are gentle but still pose risks to communities.
- Lewotobi (Indonesia) is a volcano on a destructive plate boundary where the Indo-Australian plate meets the Eurasian Plate.

- Secondary Cone
- Secondary Effect
- Secondary Vent
- Shield Volcano
- Short Term Response
- Sulphur Dioxide
- Supervolcano
- Stratovolcano
- Tsunami
- Vent
- Vulnerability
- Volcanic Bomb
- Volcanic Cone

Vocabulary to retrieve:

- Destructive Boundary
- Constructive Boundary
- Hotspot
- Plates
- Plate Tectonics
- Ridge Push
- Slab Pull
- Subduction
- Volcano

Volcanic Hazards: The Power of Secondary Impacts
In this lesson, scholars will explore the secondary hazards that can develop after an eruption and why they often cause equal, if not greater, long-term destruction than the eruption itself. The hazards studied include lahars, tsunamis, landslides and jökulhlaup, helping scholars understand how volcanic events can trigger wider environmental and human impacts.

Fire in the Ocean: Hotspots and the Hawaiian Chain
In this lesson, scholars revisit Hawaii—first introduced in Year 7—as an important anomaly that forms away from plate boundaries at a hotspot. They explore why basaltic magma creates frequent, gentle eruptions and how this leads to the formation of shield volcanoes and the chain of islands. Scholars also consider what it is like to live with regular volcanic activity and the dangers that Hawaiian communities still face.

When the Mountain Awakes: The 2025 Lewotobi Eruption
Scholars study the recent explosive eruption of Lewotobi in Indonesia. They examine what triggered the eruption, how it unfolded and the hazards that followed. By comparing Lewotobi with Hawaii, they strengthen their understanding of how magma chemistry affects eruption style and hazard impact.

Reading the Signs: How Volcanoes Are Monitored
Scholars investigate how modern technology helps predict and manage volcanic activity. They explore tools such as satellite RADAR, InSAR, GPS and seismic sensors and consider how monitoring supports management strategies like hazard maps, exclusion zones and evacuation planning.

Living in the Shadow
Scholars examine why people live close to volcanoes, including fertile soils, geothermal energy, tourism, identity and affordable land. They explore the human factors that increase vulnerability and compare how different countries prepare for and recover from eruptions. The White Island tragedy shows the limits of monitoring and prediction.

Volcanoes and the Planet
In this final lesson, scholars are introduced to super volcanoes and how their eruptions differ from typical volcanic events. They explore the potential global effects of a major

• Lewotobi experiences powerful explosive eruptions due to gas rich, viscous magma • Recent Lewotobi eruptions have resulted in both primary and secondary hazards. • Volcanoes often behave more predictably than earthquakes. • Volcanoes are monitored to detect early signs of an eruption, which can allow timely evacuation and save lives. • GPS systems track movements of the volcano's surface; changes in size or shape can indicate rising magma. • Seismic sensors detect small earthquakes that happen as magma rises towards the surface. • Sulphur dioxide measurements help identify when magma is moving upwards, as gas levels increase before eruptions. • Satellite imagery (including InSAR and RADAR) can measure ground swelling caused by magma building beneath the volcano. • Volcanic management strategies include hazard maps, exclusion zones, evacuation plans and early-warning systems. • Evacuation is the most effective way to protect people during volcanic eruptions. • Volcanoes in warm, moist environments create fertile soils, providing ideal conditions for farming. • Volcanic areas provide geothermal energy, a clean and reliable source of power. • Volcanoes attract tourism, creating jobs and income for local communities. • Cultural ties, identity and strong connections to place mean many communities remain despite risks. • Land near volcanoes is often more affordable, especially for low-income families. • Vulnerability increases when people have low incomes, weak governance, poor infrastructure, limited communication, or live in densely populated areas.		eruption, such as short-term climate cooling and disruption to life on Earth. Scholars also consider how volcanic activity has shaped the planet over the long term and its links to climate change.

• Countries with stronger preparation—such as effective monitoring, hazard maps, education and evacuation planning—tend to recover more quickly. • The White Island (Whakaari) tragedy shows that volcanic activity can still be unpredictable and that monitoring cannot always give advance warning. • Super volcanoes erupt far more explosively than typical volcanoes because they release enormous volumes of magma from large caldera systems. • A major super volcano eruption can cause global impacts, including short-term climate cooling, widespread ash fall and major disruption to life on Earth. • Over geological time, volcanic activity has helped shape Earth's atmosphere, landforms and climate, influencing both long-term warming and cooling. • Supervolcanoes are enormous volcanic systems that can release huge volumes of magma in exceptionally explosive eruptions. • Supervolcanoes can cause global impacts such as short-term climate cooling, widespread ash fall and major disruption to life on Earth. • Over geological time, volcanic activity has shaped Earth's atmosphere, landforms and climate, contributing to both long-term warming and cooling.		
Disciplinary Aims **1. Disciplinary concepts** • Deepening understanding of tectonic processes and how Earth's internal forces create global patterns of volcanic activity. • Understanding how physical processes create hazards and shape human vulnerability and risk. • Developing systems thinking through the connections between tectonics, hazard generation, monitoring and human responses.		

2. Working with geographical representations • Using global maps and GIS layers to analyse spatial patterns of volcanoes, earthquakes and plate boundaries. • Working with hazard maps and satellite imagery. • Using photographs to observe, interpret and compare volcanic landscapes and hazards, **3. Geographical enquiry and practice** • Explaining tectonic processes using accurate geographical vocabulary (convection currents, subduction, magma viscosity). • Investigating how monitoring technologies are used to make predictions and inform management strategies. **4. Processes and change over time** • Investigating how primary hazards lead to secondary hazards over time (e.g., lahars, tsunamis, landslides, jokulhlaups). • Exploring how volcanic landscapes evolve and change over time (Hawaiian Islands) • Analysing the sequence of events during eruptions (e.g., Lewotobi 2025). • Examining long-term planetary impacts of volcanic activity, including past super-volcano events and their influence on climate. **Core concepts integrated:** *Processes, Systems, Scale, Space, Interdependence, Inequalities, Sustainability, Time, Diversity*		

Links to other units:

Builds on:

- Volcanoes & Hazards builds directly on the tectonic, geological and geomorphological knowledge introduced in *Earth Story*. Scholars revisit their understanding of the Earth's structure, plate tectonics, convection currents, slab pull and ridge push, now applying this knowledge to explain why volcanic and earthquake activity occurs at specific plate boundaries.
- The unit also builds on geographical skills developed in earlier units. From *Weather and Climate*, scholars bring forward their understanding of how physical processes can generate large-scale environmental impacts, supporting their ability to explain how volcanic eruptions influence the atmosphere, climate and hazards such as ash clouds and lahars.

- From *Population*, scholars draw on ideas about development, inequality and vulnerability, helping them understand why the impacts of volcanic hazards differ between places.
- Scholars extend their early experience with GIS from *UK Landscapes* and *Earth Story*, using it to analyse global patterns of tectonic activity and identify relationships between plate boundaries, earthquakes, volcanoes and hotspots.

Builds foundations for:

- This unit provides essential conceptual and disciplinary foundations for later Year 8 and Year 9 learning. It prepares scholars for *Global Issues*, where they explore climate change, environmental risk and global interconnectedness; knowledge of volcanic impacts, atmospheric changes and hazard management strengthens their understanding of how physical events shape global systems and human responses.
- The unit also deepens scholars' understanding of **risk, vulnerability and resilience**, key ideas revisited in later work on global inequality and sustainability and environmental management. More broadly, Volcanoes & Hazards strengthens recurring geographical concepts such as processes, change over time, interdependence, systems and sustainability, helping scholars develop the disciplined geographical thinking necessary for understanding complex physical–human interactions.

Links to the national curriculum:

- This unit directly supports the National Curriculum requirement for scholars to study key physical geography processes, including *"geological timescales and plate tectonics; rocks, weathering and soils; and hydrology and coasts."* Scholars deepen their Year 7 understanding of Earth structure, plate movement, and the forces driving tectonic activity (slab pull, ridge push and convection). They explore how different types of plate boundary create distinctive patterns of earthquakes, volcanoes and landforms, meeting the NC expectation to understand *"how physical processes give rise to key geographical features of the world."*
- The unit further supports the NC requirement to develop contextual knowledge of *"globally significant places… including their key physical and human characteristics."* Scholars study contrasting volcanic contexts including Hawaii (a hotspot), Lewotobi, Indonesia (a destructive boundary), and global earthquake and volcano clusters. These case studies help scholars interpret real-world hazard patterns, hazard types and their impacts on people and environments.
- The unit also strengthens scholars' competence in *"interpreting maps, diagrams and GIS"*. Scholars use GIS layers, hazard maps, tectonic boundary maps, and satellite imagery to analyse spatial patterns of earthquakes, volcanoes and hotspots. This supports the NC requirement to communicate geographical information using maps, quantitative skills, and extended explanation.

Moves Beyond the National Curriculum

- This unit goes beyond the NC by giving scholars a more detailed and applied understanding of **magma chemistry**, **eruption style** and the formation of **different volcanic landforms**, linking viscosity and gas content directly to hazard type — a level of analysis not required at KS3. Scholars also develop a deeper understanding of **primary and secondary volcanic hazards** (e.g. pyroclastic flows, jökulhlaups, tsunamis and lahars) and how these impact communities with differing levels of vulnerability.
- The unit further extends beyond NC expectations by introducing scholars to **hazard monitoring and management**, including interpreting real data from GPS, seismic sensors, gas measurements and satellite imagery to understand how eruptions are detected and managed. Sustainability — not explicitly referenced in the NC — is embedded through exploring why people remain in volcanic areas and how these environments provide long-term benefits, supporting our aim of developing responsible global citizens.
- Finally, scholars compare typical volcanic systems with **supervolcanoes**, considering their potential global impacts and long-term influence on Earth systems — analysis that sits beyond the scope of the KS3 programme of study.

Year 8	Subject: Geography	Unit title: Global Issues	Term: Summer
Knowledge (Learn that) • A global issue is a problem that affects people and environments across many countries • Global issues are interconnected, meaning a change in one part of the world can affect another. • Examples of global issues include climate change, pollution, resource shortages and conflict. • Earth's climate system is drive by the sun's energy • Global atmospheric circulation re-distributes heat around the world. • Feedback loops can speed up or slow down changes in the climate system. • Examples of positive feedback include melting permafrost releasing methane. • Climate change refers to an increase or decreases in global temperatures. • Natural causes of climate change include volcanic eruptions, changes in the earth's orbit and variations in solar activity. • The greenhouse effect is a natural process where gases in the atmosphere trap some of the sun's heat and keep the Earth warm enough to support life. • Greenhouse gases absorb and re-radiate heat in the atmosphere. • Major examples of greenhouse gases include carbon dioxide, methane and water vapour. • Human activity such as burning fossil fuels, deforestation and farming release greenhouse gases that warm the earth. • This increase in greenhouse gases leads to an enhanced greenhouse effect. • Global Warming refers to the rise in the Earth's average temperature caused by the enhanced greenhouse effect. • Some countries produce higher greenhouse gas emissions than others.	**Vocabulary to consolidate:** • Adaptation • Algae Bloom • Carbon Footprint • Carbon Sink • Climate injustice • Dead Zone • Enhanced Greenhouse Effect • Exclusive Economic Zone (EEZ) • Feedback Loop • Geographical Information Systems • Greenhouse Effect • Global Governance • Global Warming • Greenhouse Gas • Governance • International Cooperation • IPCC (Intergovernmental panel on climate change). • Mitigation • Overfishing • Pre-Industrial Levels • Resource Insecurity • Rewilding • Sea-Level Rise • Sustainable Future • Tipping Point • Thermal Expansion **Vocabulary to retrieve:**	**Teaching Sequence:** *This unit is still in development but will focus around the following:* **1. The Planet Under Pressure: What Are Global Issues?** Scholars explore what we mean by a *global issue* and why some problems—like climate change, pollution and inequality—affect the whole world. Using maps and data, they learn that global issues don't stay in one place and often link together. This lesson introduces simple systems thinking to help scholars understand how one change can cause another. **2. Earth's Climate System: How Does It Actually Work?** Scholars revisit how heat moves around the Earth through the atmosphere and oceans, building on their Year 7 learning. They learn that the climate is a system made of many parts that affect each other, including feedback loops that can speed up or slow down change. This helps them see why Earth's climate doesn't stay the same. **3. Causes of Climate Change: Natural and Human Drivers** Scholars look at natural changes to the climate over long periods and then compare these with the rapid warming happening today. They investigate how burning fossil fuels, farming and global supply chains produce greenhouse gases. **4. Impacts of Climate Change: Why Some Places Are Hit Harder** Scholars examine how climate change affects places differently, leading to floods, droughts, stronger storms and rising sea levels. Through case studies they will learn that some countries—especially poorer ones—are more at risk even though they have contributed least to the problem. **5. Climate Migration** Scholars explore why climate change is forcing more people to move, either because of sudden disasters like cyclones or slow changes such as rising sea levels. They learn how environmental change can increase pressure on cities, create conflict or worsen poverty. Examples will help scholars understand how climate and human processes link together. **6. Mitigation and Adaptation: How Do We Respond to Climate Change?** Scholars learn the difference between mitigation (reducing the causes) and adaptation	

• Climate Change leads to more extreme weather including stronger storms, droughts and floods. • Rising sea levels due to thermal expansion and melting ice threaten low-lying coastal areas. • The impacts of climate change are uneven, and poorer countries are often more vulnerable. • Climate injustice refers to the fact that countries least responsible for emissions are often the most affected. • Climate migration occurs when people move because of environmental change due to a changing climate change. • Sudden events such as cyclones can force people to leave their homes quickly. • Slow-onset climate change e.g. sea-level rise can make places uninhabitable over time. • Climate change can increase pressure on cities. • Mitigation involves reducing greenhouse gas emissions. • Adaptation involves adjusting to the impacts of climate change (e.g. using drought-resistant crops). • International agreements such as the Paris Agreement aim to reduce global emissions through international cooperation • Global action is difficult as countries have different levels of wealth and priorities. • Water, Food and Energy are increasingly under pressure from Climate Change Droughts, crop failures and rising energy demand can lead to a global resource crisis and higher prices. • Resource insecurity can contribute to migration, conflict and poor health. • Oceans help to regulate the earth's climate through absorbing heat and carbon dioxide. • Oceans provide vital resources supporting the livelihoods of many. • Human activities are causing ocean warming and pollution in oceans. • Dead zones form when fertilisers cause algae blooms that remove oxygen from seawater.	• Atmosphere • Atmospheric Circulation • Biosphere • Carbon Dioxide • Circular Economy • Climate Change • Cryosphere • Cyclone • Deforestation • Drought • Ecosystem • Extreme Weather • Global Warming • Greenhouse Effect • Human Activity • Inequality • Inputs • Interdependence • Lithosphere • Microplastics • Migration • Natural Resources • Outputs • Sustainability • Systems	(coping with the impacts) and look at examples in both the UK and other parts of the world. They explore why it can be difficult for countries to work together on climate action and how world meetings like COP try to solve this. Scholars also look at how climate change is shown in the media and how some information can be misleading. **7. Resource Pressures: Water, Food and Energy in a Changing World** Scholars explore how climate change and population growth are putting pressure on the world's most vital resources: water, food and energy. They will learn how shortages in one resource can trigger problems in another, creating global "resource crises" that affect millions of people. Case studies from East Africa, South Asia and Europe help students understand how resource insecurity links to migration, conflict and health. **8. Oceans Under Threat** Scholars investigate the vital role our oceans play, how they are changing and why this matters for people and the planet. They will explore issues such as ocean warming, plastic pollution, and "dead zones," learning how human activity is damaging ocean life. **9. Who Owns the Oceans? Governance, Overfishing and Conflict** Scholars will learn that most of the ocean is shared, but parts of it belong to different countries. They explore why countries disagree over who controls certain areas, including fishing grounds and resources under the seabed. Using examples like the South China Sea and deep-sea mining, scholars see how environmental and political issues are often linked. **10. Global Health: Disease, Pandemics and a Connected World** Scholars will explore how diseases spread in an interconnected world, learning that globalisation, travel and trade mean illnesses can move quickly across countries. They will examine the potential impact of climate change on the global range of diseases spread by insects, such as malaria. **11. Future Pathways: Scenarios, Solutions and Hope** Scholars explore different possible futures for the planet and the solutions that could help create a fairer and more sustainable world. They learn about ideas such as renewable energy, rewilding, the circular economy and climate-resilient cities.

• Plastic pollution affects marine life and enters food chains through microplastics. • Most of the ocean is government through the UN Convention on the law of the Sea. • Countries control resources in the ocean within their Exclusive Economic Zones (EEZs). • Overfishing and illegal fish stocks and marine ecosystems. • The South China Sea dispute shows how ocean resources can lead to conflict between countries. • Globalisation means diseases can spread rapidly across countries. • Climate change can expand the range of vector-borne diseases e.g. malaria. • Countries are closely connected, and cooperation is vital for managing global health risks. • A sustainable future may include renewable energy, the circular economy and climate resilient cities • Nature-based solutions like rewilding and restoring wetlands can help reduce emissions • Individual national and global actions are all important In contributing to a more sustainable world.		
Disciplinary Aims **1. Disciplinary concepts** • Understanding global issues as problems that cross borders and link people, environments and places through interconnected systems. • Interpreting Earth's climate as a system driven by energy, atmospheric circulation and feedback loops. • Applying systems thinking to explore how changes in one part of the world or one resource (water, food, energy, oceans) create wider ripple effects. • Understanding governance, cooperation and conflict in global commons such as the oceans.		

2. Working with geographical representations • Using world maps, choropleths and proportional symbols to identify spatial patterns of emissions, vulnerability, hazards and global issues. • Interpreting climate graphs, CO_2 datasets, sea-level rise records. • Interpreting photographs showing environmental change, extreme weather, ocean pollution, resource extraction and impacts on communities. • Working with maps showing Exclusive Economic Zones (EEZs), international boundaries and contested ocean areas (e.g. South China Sea). **3. Geographical enquiry and practice** • Analysing why climate impacts are uneven, using case studies from different income levels and world regions. • Evaluating mitigation and adaptation strategies at local, national and global scales, including international agreements such as the Paris Agreement. • Considering alternative futures and evaluating solutions for sustainability, resilience and climate justice. **4. Processes and change over time** • Understanding long-term and short-term processes driving climate change, including volcanic eruptions, orbital cycles, greenhouse gas emissions and land-use change. • Investigating how global warming leads to stronger storms, droughts, sea-level rise and changes in disease distribution. • Exploring possible future pathways and how different actions could lead to more sustainable, resilient outcomes. **Core concepts integrated:** Interdependence, Inequalities, Sustainability, Processes, Systems, Scale, Space, Time, Diversity, Place		

Links to other units:

Builds on:

- This unit builds directly on key physical and human geography foundations established earlier in the curriculum. From *Weather and Climate* and *Ecosystems and Biomes* scholars draw on their understanding of Earth's climate system, including global atmospheric circulation, temperature patterns, rainfall and the factors that influence climate zones. This prior knowledge supports scholars in explaining how heat is redistributed around the world, why global warming occurs and how climate change drives extreme weather, sea-level rise and changing global patterns.
- Learning from *Ecosystems and Biomes* also provides important foundations. Scholars revisit ideas about interdependence, nutrient cycles, feedback loops and the sensitivity of ecosystems to environmental change. This supports their understanding of how climate change affects biomes such as coral reefs, tundra and savanna, and how changes in one part of the Earth system can create global ripple effects.
- The unit also builds on the *Population* unit, where scholars explored development, inequality, resource distribution and pressures on people and places. This helps scholars explain why the impacts of climate change are uneven and why climate injustice occurs

Builds foundations for:

- Global Issues prepares scholars for the more complex environmental and human themes they will meet later in KS3. Understanding global systems, climate processes and resource pressures provides a foundation for later work on sustainability, conflict and global development in Year 9. The unit also strengthens scholars' grasp of inequality, governance and international cooperation, helping them understand why global challenges require coordinated responses.
- Alongside this substantive knowledge, the unit develops key disciplinary skills — interpreting global data, evaluating sources and recognising how physical and human processes connect across scales — which support scholars' progression into more advanced geographical enquiry.

Links to the national curriculum:

- This unit supports the National Curriculum requirement for scholars to understand *"how physical and human processes interact to influence and change environments"*. Scholars revisit and extend their understanding of climate systems, global atmospheric circulation, greenhouse gases and feedback loops, building on Year 7 and 8 learning to understand how global issues emerge from interacting Earth systems.
- The NC expectation to develop contextual knowledge of *"globally significant places… including their key physical and human characteristics"* is met through case studies exploring the uneven impacts of climate change, climate migration, resource pressures, ocean governance, global health, and conflict over shared resources.
- The unit also strengthens scholars' geographical skills in line with the NC requirement to *"interpret a range of geographical information… including maps, diagrams and data"*. Scholars use climate graphs, CO_2 maps, and sea-level data.
- Human geography elements of the NC — such as *"international development; economic activity; and the use of natural resources"* — are addressed through lessons on water–food–energy pressures, resource insecurity, global inequality, and cooperation through international agreements like the Paris Agreement and UN Law of the Sea.

Moves Beyond the National Curriculum

- This unit moves beyond the NC by helping scholars understand global issues as interconnected systems, showing how climate change, resource pressures, migration, oceans and global health influence one another — a level of systems thinking not required at KS3.
- It extends beyond NC expectations by introducing concepts such as feedback loops, climate injustice, climate migration and global governance, encouraging scholars to think critically about responsibility, vulnerability and inequality at a global scale.
- Sustainability, not explicitly referenced in the NC, is embedded throughout the unit. Scholars explore mitigation and adaptation, renewable energy, rewilding, circular economy ideas and

climate-resilient futures, aligning with our curriculum aim of developing responsible global citizens.

- The unit also goes further than the NC by engaging scholars with real-world data (emissions, sea-level rise, disease spread, ocean warming).