

Year 4: Autumn - Looking at South America & Brazil

		Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
Substantive	Conceptual	<ul style="list-style-type: none"> Names of common human and physical features (Y1-3) While the school and community are at the local scale, and countries are at the national scale, continents are at the global scale (Y1) There are seven continents in the world, six of which people live on (Y1 Sum) There are five oceans in the world (Y2 Sum) The equator is an imaginary line across the earth (Y1 Sum) The North Pole and the South Pole are at the top and bottom of the Earth (Y1 Sum) There are poorer and wealthier areas in every county and city (Y1 Sum) History: Hunter-gatherers are people who travel looking for animals to hunt and plants and berries to gather (Y3 Aut) Agriculture is the farming of plants (arable) and animals (pastoral) to eat (Y2 Sum) 	<ul style="list-style-type: none"> Lines of longitude and latitude are imaginary lines that help us locate places on Earth. Lines of longitude run north to south. The main one is called the Prime Meridian. Lines of latitude run east to west. The main ones are called the Equator, Tropics of Cancer and Capricorn, Arctic and Antarctic Circle The Equator splits the Earth into the Northern and Southern Hemispheres; the Prime Meridian splits the Earth into the Eastern and Western Hemispheres South America is made up of 12 countries. Brazil is located in South America; it is the largest country on the continent. The Andes Mountains are found along the entire western coast of South America, covering 7 countries Brazil can be split into political and physical regions. Three physical regions include: the Amazon rainforest, Cerrado and Mata Atlantica. Indigenous people are the first people who lived in the place and the generations of people who came after. The Kayapo are indigenous people who live in the Amazon rainforest. They clear small patches of rainforest for agriculture, but are also hunter-gatherers Rio de Janeiro is one of the largest cities Brazil. Some of its population live in favelas (makeshift settlements), but there are also wealthy areas that are popular with tourists. 	<ul style="list-style-type: none"> Lines of longitude are important for considering time zones (Y5) Lines of latitude are important for considering climate zones (Y5) Rainforest have particular features, and unique flora and fauna that have adapted to the habitat (Y4) History: People have lived in the Amazon rainforest for millions of years, and populations fell quickly when Spanish and Portuguese explorers brought diseases and forcibly took control of the lands (Y5)
	Procedural	<ul style="list-style-type: none"> Mathematics: Identify horizontal/vertical lines and pairs of perpendicular /parallel lines (Y3) <p>Map skills:</p> <ul style="list-style-type: none"> Simple maps (Google maps); Satellite images (Google Earth); junior atlas (Y1) Photographs of places in plan/oblique view (Y1-2) Use and interpret 8 compass points (Y3) Identify country boundaries on a map (Y1) 	<p>Map skills:</p> <ul style="list-style-type: none"> Lines of longitude and latitude are imaginary lines that help us locate places on Earth. Lines of longitude run north to south. The main one is called the Prime Meridian. Lines of latitude run east to west. The main ones are called the Equator, Tropics of Cancer and Capricorn, Arctic and Antarctic Circle. The Equator splits the Earth into the Northern and Southern Hemispheres; the Prime Meridian splits the Earth into the Eastern and Western Hemispheres 	<p>Map skills:</p> <ul style="list-style-type: none"> Use thematic maps (showing climate zones and population density). (Y5)
VCS	<ul style="list-style-type: none"> Space & place: There are seven continents in the world, six of which people live on. There are countries within each continent (except Antarctica). (Y1) Human processes: There are poorer and wealthier areas in every city.(Y1) Human processes: Settlements can be hamlets, villages, towns and cities, depending on their size. (Y3) 	<ul style="list-style-type: none"> Space & place: South America is made up of 12 countries. Space & place: Case study: Rio de Janeiro Human processes: Indigenous people are the first people who lived in the place and the generations of people who came after, such as the Kayapo people in the Amazon Rainforest. Human processes: Rio de Janeiro is one of the largest cities Brazil. Some of its population live in favelas (makeshift settlements), but there are also wealthy areas that are popular with tourists. 	<ul style="list-style-type: none"> Space & place: Locating climate zones and biomes. (Y5) Physical processes: Climate zones share long-term weather patterns. There are six main climate zones: polar, temperate, arid, tropical, Mediterranean and mountains. (Y5) Physical processes: Biomes are areas of the world that, because of similar climates, have similar landscapes, flora and fauna. The major biomes of the world are tundra, tropical rainforests, coral reefs, temperate forests and hot deserts. (Y5) 	

Year 4: Spring - Tropical Rainforests

	Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
Substantive	Conceptual <ul style="list-style-type: none"> • Science: Living things depend on each other in their habitats, for food or shelter (Y2 Spr) • Science: Plants need oxygen, carbon dioxide, water, light, nutrients from the soil, space, and a suitable temperature to grow (Y3 Spr2) • Science: An ecosystem is made up of all organisms living in an area and the non-living features of the environment (Y4 Aut1) • Science: The water cycle relies on evaporation and condensation. Water is collected in the oceans from rivers and seas; it evaporates and then condenses to form clouds; it then precipitates and the cycle begins again (Y4 Spr1) • The weather is short-term. Climate is long-term summary of the weather conditions. Precipitation is the fall of water (Y2 Spr) • Lines of latitude run east to west (Equator, Tropics of Cancer and Capricorn, Arctic and Antarctic Circle) (Y4 Aut) • The Amazon rainforest is in S America (Y4) • Agriculture is the farming of plants (arable) and animals (pastoral) to eat (Y2 Sum) 	<ul style="list-style-type: none"> • Biomes are large ecosystems that contain specific species of organisms. • Tropical rainforests are biomes that are found in places with high temperatures and lots of precipitation. • Tropical rainforests are found between the Tropics of Cancer and Capricorn, in the area known as the Tropics. • Tropical rainforests are found in five continents: Oceania (Australasian); Asia (Southeast Asian); Africa (Congo Basin); South America (Amazon) and North America (Central American) • Atmospheric circulation drives weather and climate conditions around the world, causing the hot and wet places in which tropical rainforests form. • Rainforests are made of four main layers of different heights: the emergent, the canopy, the understory and the forest floor. Each layer of the rainforest has different types of plants and animals that live there. • Tropical rainforests have very high biodiversity, and there is interdependence between species. • Tropical rainforests provide resources for humans, such as medicines and foods. This is important at the local and global scale. • Plants in tropical rainforests absorb CO₂ from the atmosphere, which is important for keeping our planet cool. • Chopping down trees is called deforestation. • Deforestation of the Amazon rainforest at the national level is making way for agriculture, mining and logging • At a global level, some countries at COP26 promised to end deforestation by 2030. At a local level, there are things we can do to reduce deforestation. 	<ul style="list-style-type: none"> • Tropical rainforests are one type of biome; there are several others in the world (Y5) • Flora and fauna have adapted to hot deserts, tundra, temperate forests and coral reefs (Y5) • Science: Adaptations can be behavioural, physiological or structural (Y6) • Science: Adaptations that provide an organism with an advantage are more likely survive and reproduce. This is how species evolve (Y6) • Deforestation has serious effects: it increases the likelihood of flooding and contributes to global warming (Y5)
	Procedural <ul style="list-style-type: none"> • Mathematics: Measure length and height (mm/cm/m) (Y3) • Draw routes around school on squared paper using 1 square : 1 pace (Y2) Map skills: <ul style="list-style-type: none"> • Satellite images (Google Earth) (Y2) • Globe (EYFS) 	<ul style="list-style-type: none"> • Draw an object (trees in the tropical rainforest) to scale. 	<ul style="list-style-type: none"> • Calculate distances on a map using scale of 1 unit : 1, 2, 4, 5 or 10 units (Y5) • Draw a basic map using scale of 1 unit : 1, 2, 4, 5 or 10 units (Y6)
Disciplinary		<ul style="list-style-type: none"> • Interconnections & change: Scale is used to identify the different impacts of change (small scale vs large scale logging) • Interconnections & change: Human activity can affect physical features (e.g. deforestation) • Forming judgements: Recognise that people have differing opinions about environmental issues (the issue of deforestation in the Amazon Rainforest). 	<ul style="list-style-type: none"> • Interconnections & change: Climate change and global warming happen due to both naturally occurring events and human activity. (Y5)
VCS	<ul style="list-style-type: none"> • Physical processes: We experience different types of weather in different seasons (focus on spring and winter). (EYFS) • Physical processes: Physical regions are identified by climate, land height and other physical features (Y4) 	<ul style="list-style-type: none"> • Space & place: Case study: Amazon Rainforest • Physical processes: The layer of air around the Earth is called the atmosphere. • Physical processes: Atmospheric circulation causes some areas on Earth to have higher levels of precipitation than others. • Physical processes: Tropical rainforests are places where there is lots of precipitation. • Human processes: Human uses of products of the tropical rainforest include wood, food, medicine. • Human processes: Deforestation of the Amazon rainforest at the national level is making way for agriculture, mining and logging. 	<ul style="list-style-type: none"> • Space & place: Locating climate zones and biomes. (Y5) • Physical processes: The natural greenhouse effect, the enhanced greenhouse effect, global warming and resulting climate change. (Y5) • Physical processes: Examples of natural resources include wood, food, water and fossil fuels. Fossil fuels are materials made from fossils over millions of years, like coal and oil. Humans use these to run cars and electrical items. (Y5)

Year 4: Summer - Earthquakes and Settlements

		Required prior knowledge	Knowledge to be explicitly taught	How knowledge will be built upon
Substantive	Conceptual	<p>Year 3 Spring (Volcanoes):</p> <ul style="list-style-type: none"> The Earth is made of four main layers: the inner core (solid), the outer core (liquid), the mantle (semi-liquid) and the crust (solid) The crust is split into pieces called tectonic plates that meet at plate boundaries. Tectonic plates move: towards each other, away from each other, or alongside each other. Volcanoes can be formed at destructive plate boundaries (where plates move toward each other, or at constructive plate boundaries (where plates move away from each other). <p>We can categorise effects into social, economic and environmental (Y3 Sum)</p>	<ul style="list-style-type: none"> An earthquake is the sudden shaking of the Earth's surface. They are caused by movements of the tectonic plates. Minor earthquakes can occur anywhere; major earthquakes usually occur at plate boundaries. Earthquakes usually occur at boundaries where the plates are sliding past each other. They can also occur at destructive and constructive plate boundaries. The focus is the point inside the Earth where the earthquake came from; the epicentre is the point on the Earth's surface above. The size of an earthquake is measured on the Richter scale, which goes from 1-10. Those measuring 7 or higher cause major damage. Countries in the world can be classified as low- medium- or high-income countries (LIC, MIC, HICs). They appear in all continents. Humans can minimise the effects of earthquakes with earthquake-proof buildings, evacuations and having earthquake survival kits. This is usually different in HICs and LICs. Haiti is a LIC in North America that experienced an earthquake in 2010. Sendai is in Japan, a HIC in Asia, and it experienced an earthquake and tsunami in 2011. Primary effects are those that happen immediately that are the direct result; secondary effects are a result of primary effects. The responses to earthquakes in HICs and LICs differ 	<ul style="list-style-type: none"> Forced migration occurs when people can no longer live safely in their home (Y6) Natural disasters in KS3
	Procedural	<ul style="list-style-type: none"> (Mathematics: Numbers written as decimals correct to one decimal place Y4-5 – optional, Richter scale) Mathematics: Coordinates in the first quadrant (Y4) Identify similarities and differences between two non-local places (Y2) <p>Map skills:</p> <ul style="list-style-type: none"> Simple maps (Google maps) (Y1) 	<p>Map Skills:</p> <ul style="list-style-type: none"> Locate places and features using letter and number coordinates on a map. 	<p>Map skills:</p> <ul style="list-style-type: none"> Locate places using 4-figure grid references on OS maps. (Y5)
Disciplinary	<ul style="list-style-type: none"> Interconnections & change: Physical features can affect human development e.g. living near volcanoes (Y3) Forming judgements: Evaluate the positives and negatives associated with living near volcanoes.(Y3) 	<ul style="list-style-type: none"> Comparisons: Comparing the responses to Earthquakes in Haiti and Japan Interconnections & change: Similarities and differences between LICs, MICs and HICs Interconnections & change: Humans adapt to living in earthquake-prone areas 		
VCS	<ul style="list-style-type: none"> Physical processes: Shield and composite volcanoes can form at plate boundaries, which produce lava, pyroclastic flows and lahars.(Y3) Human processes: Humans use most of land around volcanoes for agriculture.(Y3) 	<ul style="list-style-type: none"> Space & place: Case study: Haiti Space & place: Case study: Japan Human processes: Countries in the world can be classified as low-, medium-, or high-income countries (LIC, MIC, HICs). They appear in all continents. Human processes: Humans adapt to living in earthquake-prone areas Physical processes: Tectonic hazards occur at plate boundaries due to movement and include earthquakes and volcanoes (Y4) 	<ul style="list-style-type: none"> Human processes: HICs, MICs and LICs tend to have primary, secondary, tertiary and quaternary industries at different levels.(Y5) Human processes: Forced migration happens as a result of life-threatening events, such as conflict or physical disasters.(Y6) 	