Geography: Progression of Knowledge

Geography focus, Years 3 to 6

Our geographical concepts

Map Skills & Navigation | Climate & Change | Settlements & Resources | Physical Processes | Interdependence & Diversity | Place Knowledge

Year 3

Autumn Term

Wild World

- Know the structure of the Earth - crust, mantle, outer core and inner core (see the diagram below)
- Know that the crust is a layer of rock on the surface of the Earth
- Know that the mantle forms about half of the inside of the Earth and is a layer of rock underneath the crust
- Know that the upper mantle is hard but there is magma (liquid rock) beneath
- Know that the core is at the centre of the Earth and mostly consists of iron
- Know that temperatures at the core can reach 5500oC
- Know that the crust and upper mantle of the earth are divided into large tectonic plates that 'float' on the liquid rock beneath; this means they are able to move very slowly, often a few cm per year. (see diagram below)
- Know that a fault is a crack in the surface of the Earth
- Know that most volcanoes form at the edges of tectonic plates where there are faults; magma – which is molten (hot liquid) rock bursts through the Earth's crust (becoming lava); this builds up in layers leading to a cone shape; some volcanoes are even tall enough to be classed as mountains; know that volcanoes are either classified as active – meaning that they have erupted recently – or dormant – meaning they have not erupted for a long time.
- Know that volcanic eruptions can be deadly for people living near to active volcanoes, but that the soil around volcanoes is very fertile meaning that people live there to ensure that crops grow successfully on farms
- Know the basic structure of a volcano including and the associated vocabulary, including magma, lava, vent, crater, ash and flank
- Know that tectonic plates move very slowly over time and that when they suddenly slip past each other, this causes earthquakes that can have devastating consequences for human life through destruction of buildings and tsunamis (extremely large series of waves)
- Know that the strength of earthquakes can be defined using the Richter scale
- Know that people have attempted to lessen the effects of earthquakes through the building of earthquake-proof buildings with foundations that absorb the shock of an earthquake, protecting the building from collapse
- Know that Mount Vesuvius is an example of a volcano and that the eruption at Pompeii in the times of ancient Rome
- Know that Antarctica is a continent because there is a land mass below the ice; the Arctic is not a continent as there is no land beneath the ice; however, the Arctic circle reaches out to include the northern part of other land masses
- Know that the polar regions are dominated by ice-sheet and tundra regions
- Know that animals and plants are adapted to their environment; know that an example of this is the Arctic fox which is adapted to its environment through its thick fur for warmth; its fur that changes colour through the year (white in winter, brown in summer) to allow it to camouflage in the tundra; and its short legs and small nose and ears that ensure that less of its body is exposed to the cold; know that the Arctic fox is a nomadic animal and an opportunistic eater due to the scarcity of food
- Know that Norway, Sweden, Finland, Russia, the United States (Alaska), Canada, and Denmark (Greenland)are the countries located in the Arctic Circle and identify these on a map.
- Know that the sea ice of the Arctic Ocean changes in the total area it covers through the year and that it is slowly diminishing over time as one of the major effects of climate change; know that this change, if it continues, will cause sea levels to rise threatening lives and major cities around the world

Spring Term

Stone Age to Iron Age

- Know how the physical features of a location helped humans to settle there (Brayford Pool/Creswell Crags)
- Know which resources a new settlement might need and where they might be found on a map

Summer Term

Ancient Egypt

- Know that the River Nile is the longest river in the world and locate it on a map; know that during the time of ancient Egypt, the Nile flooded every year
- Know that the River Nile was also used as a means of transporting people and goods; it was also the source for the water used in irrigation in ancient Egyptian agriculture
- Know the source and mouth of the River Nile

Contrasting locality Nottinghamshire

- Know that Lincolnshire is in the East of England
- Know that some counties have a coast line, others are landlocked
- Know that position can be described by compass directions
- Know that settlements occur where resources are available (water, land, shelter)
- Know that coal mining became an important industry and new settlements were built to support the workers in the coalmine
- Know that Nottinghamshire, along with Yorkshire, contained some of the largest coal areas in England
- Know that Sherwood Forest is an example of a temperate forest with mainly deciduous trees (birch and oak)
- Know that specific animals and plants live in a temperate climate
- Know that temperate climates have warm wet summers and mild wet winters
- Know that Sherwood Forest was once one of the largest forests in the country (100,000 acres) and is now around 1,000 acres
- Know that Sherwood was the property of the King and had its own laws and foresters who enforced them
- Know that the forest had parts cleared by owners of coal mines and housing

Year 4

Autumn Term

Ancient Greece

- Know that where the land meets the sea is called a coast and when seen on a map this can be called a coastline; know that at the coast there can be steep drops where cliffs meet the sea or ocean and that there can be beaches where the land meets the sea or ocean
- Know that there are sandy beaches and pebble beaches, which depends on the strength of the waves in an area
- Know that the sand and pebbles on a beach have been created by the water hitting land and eroding it
- Know that the sea moves in waves and that tides bring the sea further into land, reaching a peak at high tide; and that at low tide sea is furthest from a particular part of the coast
- Know that there is one global ocean that is often divided into five distinct oceans and locate them on a world map and globe: the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Southern Ocean and the Arctic Ocean
- Know that the Pacific Ocean is the largest body of water on Earth
- Know that seas are smaller bodies of water than oceans that are often partly surrounded by land and that other bodies of water include rivers and lakes
- Know that the UK is surrounded by: The North Sea, The English Channel, The Irish Sea and The Atlantic Ocean.
- Know that a tributary is a smaller river or stream that join a larger river, adding to its flow
- Know how to locate these bodies of water on a labelled map.
- Know that Britain's coastline – like that or every country – is changing due to erosion and deposition; know that erosion is where the movement of water, especially coastal waves, leads to the breaking down of cliffs into smaller pieces of rock; know that pebbles and sand are the result of erosion; know that deposition is where sediment that is carried by a river is dropped as the river slows at the river's mouth
- Know that rivers move downhill due to the force of gravity and towards seas and oceans, and that the location where a river meets the sea or ocean is called the mouth of a river
- Know that a location on a river that is further away from the sea or ocean is called upstream and that a location that is closer to the sea or oceans is called downstream

Spring Term

Romans

- Know the modern countries that were part of the Roman Empire
- Know how Rome benefitted from the resources from these places

- Know similarities between Rome and Greece in terms of climate and position

Summer Term

Farm to Fork

- Know the names of the seven continents and name on a world map and globe: Europe, North America, South America, Africa, Asia, Australia and Antarctica
- Know that there is one global ocean that is often divided into five distinct oceans and locate them on a world map and globe: the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Southern Ocean and the Arctic Ocean
- Know that an endangered species is one that is threatened by extinction
- Know that the Amazon River carries more water than any other river on Earth
- Know that a tributary is a smaller river or stream that joins a larger river, adding to its flow
- Know that the Amazon River and its tributaries flow through Peru, Bolivia, Venezuela, Colombia, Ecuador, and Brazil before emptying into the Atlantic Ocean; know how to identify the countries and the Amazon River using an atlas
- Know that the Amazon rainforest is the largest rainforest on Earth and provides the habitats for the largest variety of plants and animals on the planet; this variety can also be described as biodiversity; part of the reason for this biodiversity is the wet, warm climate that encourages plant growth
- Know that large parts of the Amazon rainforest – like most rainforests across the world – are being cut down for timber and to make way for farming; the current rate equates to an area around 80 times the size of our school field being cut down every minute; know that this process is called deforestation
- Know that deforestation is threatening many animals and plants with extinction, as well as contributing to climate change; 1/10 of all the world's species of plants and animals; around 1/4 of all modern medicines originated rainforests; there may be many more to be found that won't be due to deforestation
- Know that a rainforest is made up four layers: an emergent layer, which is the uppermost layer (the treetops); a canopy layer, which is a middle layer of closely-growing tree branches and leaves; an understory, which is made up of smaller trees, plants and shrubbery beneath the canopy layer; and the forest floor, the ground level of the rainforest, home to large mammals not suited to climbing
- Know that there are tropics to the north and south of the Equator - the Tropic of Cancer to the north and the Tropic of Capricorn to the south – and that the Amazon rainforest is located in and around the Tropic of Capricorn

Year 5

Autumn Term

Vikings

- Know that physical features of a location determine the human activity
- Know that the physical features of Scandinavia limited the space available for a growing population
- Know that Taiga biome covers most of Scandinavia, this climate include very cold winters and snowfall
- Know that plants and animals have adapted to the conditions in a Taiga biome
- Know that climate conditions affect human settlement and activity
- Know the modern countries that would have been settled by Vikings and Saxons

Spring Term

North American study

- Know that a mountain is a landform that rises prominently above its surroundings. It is generally distinguished by steep slopes, a relatively confined summit, and considerable height
- Know and use the following terms to describe mountains, and identify on photographs and diagrams: altitude/elevation: height above a given level, usually sea-level, base: the lowest part of a mountain, hill: a raised area of land, not as high as a mountain, peak/pinnacle/summit: the top of a hill or mountain plateau: an area of fairly level high ground range: a series of hills or mountains in a line, connected by high ground, ridge: a long, narrow top of a mountain or hill, slope: the inclined surface that forms the side of a hill or mountain valley: a low area of land between hills or mountains, often with a river running through it
- Know that there are different types of mountain: fold mountains, fault-block mountains, volcanic mountains and dome mountains
- Know that fold mountains are formed where two or more tectonic plates are pushed together and the plates warp and fold into hills and mountains; fold mountains are the most common type of mountain on earth (e.g. Himalaya, Alps, Andes)

- Know that fault-block mountains are formed when faults or cracks in the earth's crust force some materials or blocks of rock up and others down. Instead of the earth folding over, the earth's crust fractures (pulls apart). It breaks up into blocks or chunks. Sometimes these blocks of rock move up and down, as they move apart and blocks of rock end up being stacked on one another (e.g. Sierra Nevada mountains in the USA)
- Know that volcanic mountains are formed when volcanoes erupt and the molten rock cools; this happens over and over leaving layers of rock that make a mountain (e.g. Mount Kea in Hawaii, USA)
- Know that Dome mountains are formed by a large amount of molten rock pushing up beneath the crust without breaking through, cooling and leaving a dome shape mountain (e.g. Round Mountain in Canada)
- Know that the height of mountains is measured as the height above sea-level
- Know that the biggest mountain range in Europe is the Alps, in North America the Rocky Mountains and in South America the Andes.

Summer Term

The changing face of Lincoln (Our Story)

- know that the physical features of the locality determine human settlement (hill for defense, river for transport and water source)
- know how and why settlements change and develop
- know how Lincoln grew through the Industrial Revolution and show changes through maps
- know the issues the growth of a population causes and what might be done to solve these
- Know that Britain had an empire and the countries that were part of this

Year 6

Autumn Term

WWI & WWII

- Know that Britain's Empire had been built across the previous century.
- Know that the borders of countries and the names of countries sometimes change; these changes often come about due to conflicts, social movements or political
- Know that the landscape and physical features of France provided natural boundaries and determined the battlefield sites
- Know that the expansion of the population and the lack of quality housing caused a rapid development of social housing during 1950s and 60s. Housing estates were often built on the outskirts of a city or town and developed into suburbs. Suburbs included shops, schools, churches and medical facilities as well as housing and leisure. Birchwood is one example of this type of development

Spring Term

Ancient Baghdad

Islamic Civilisation

- Know that a desert climate is reflected by the small amount of annual rainfall
- Know that plants and animals have adapted to life in a desert biome
- Know that climate and landscape have an impact on human settlements
- Know that the location of Baghdad was influenced by Tigris river because a river floodplain ensured access to water for agriculture (through irrigation) and for drinking

Summer Term

Climate change

- Know that there are imaginary lines of latitude and longitude on the Earth; know that latitude shows the north/south position of a given location and that longitude shows the east/west position of a given location
- Know that the UK does not usually experience extremely cold winters or summers, and is thus a temperate country
- Know that particular types of precipitation are more common in different seasons
- Understand the terms rainfall, temperature, wind and humidity, and know that weather represents the day-to-day levels of these things and that climate represents an average for a given area
- Know that a desert is a region with extremely low precipitation; for example, the world's largest desert is found in Antarctica – although it is not hot there, there is very little rainfall
- Understand lines of latitude and how the Earth can be divided into polar, temperate, sub-tropical and tropical zones and that each tend to have different climates and biomes; know that a biome is a community of plants and/or animals that share

characteristics based on the environment in which they live

- Know that the climate of an area determines the vegetation that will grow there and the animals that will thrive there
- Know that there are five different types of vegetation regions in the world: forest, grassland, tundra, desert, and ice sheet; know that these regions are determined by the climate of an area
- Know that forest regions are covered in trees; that grasslands are dominated by thick grass; that tundra regions are areas where tree growth is hindered by low temperatures and that a mixture of grass, sedges, lichen and moss dominate; that ice sheet regions are large masses of ice where very little plant-life can survive
- Know that when areas of land that are usually dry become covered with water, this is called a flood; floods can be caused by heavy rainfall and storms that lead to temporarily higher sea levels along a coast; floods can lead to destruction of property and even death
- Know that areas of the UK experience floods and that some areas of the world experience annual floods
- Know that 2/3 of the Earth's surface is covered by water, mostly oceans.
- Know that a biome is a community of plants and/or animals that share characteristics based on the environment in which they live (e.g. evolved to survive in hot conditions)
- Know that biomes are valuable to humans and that they are also worth protecting in their own right (i.e. regardless of their use to humans); understand that our oceans are under threat from pollution in particular plastics; know that while some plastic ends up in the ocean due to intentional dumping, large amounts are blown into the sea from the land; know that the plastic in the oceans can be deadly to marine life and that once it has entered the food chain it can cause health problems for humans
- Know that there are massive 'garbage patches' in the Atlantic, Pacific and Indian oceans and that all of the world's oceans are affected by plastic pollution
- Know that a lot of plastic can be recycled, but that creating less plastic waste in the first place is even better solution than recycling
- Know that the most common gas in the atmosphere is nitrogen, but that other important gases in our atmosphere include oxygen and carbon dioxide
- Know that our atmosphere acts like a blanket that traps the Sun's heat; know that people on Earth are making carbon dioxide, mainly through transport, manufacturing and agriculture; know that this extra carbon dioxide is leading to global warming as the world heats up
- Know that manufacturing involves the creation of products for people to use; these are made from natural resources that are distributed unevenly across the planet; know that oil – from which plastics and fuels are both made – is an example of such a resource