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**Knowledge Rich Curriculum Plan**

Geography Y7



| **Unit 1: What are settlements and how do they change?** |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **Baseline Assessment**  | KS2 skills and knowledge. Gaps identified and fed into activities during T1 and T2. |  |  |
| **Are all aspects of Geography the same?** | * Students will be able to define the key term physical geography. Physical geography is nature and the effects it has on people and/or the environment.
* Students will be able to define the key term human geography. Human geography is the branch of geography dealing with how human activity affects or is influenced by the earth's surface.
* Students will be able to identify which are human and physical features from a range of images.
 | Geography Physical Human | Students will need to have a basic understanding Geography is study of the physical features of the earth and its atmosphere, and of human activity as it affects and is affected by these, including the distribution of populations and resources and political and economic activities |
| **What is a settlement, and where are they located?** | * Students will know that a settlement is a place, typically one which has previously uninhabited, where people establish a community.
* Latitude is the horizontal lines north or south of the equator.
* Longitude is the vertical lines measuring east or west of the Prime Meridian.
* Longitude and latitude can be used to locate capital cities on a world map.
 | Latitude LongitudeSettlement | - Students will know that the equator runs round the centre of the Earth.  |
| **Where should we site a settlement?** | * The site is the actual location from where a settlement grew up.
* Choosing a location is based on multiple physical factors.
* These include the presence building materials, shelter, protection, water, wood, rivers and flat land,
* When choosing a site, advantages and disadvantages of the natural landscape need to be considered.
 | SiteAdvantagesDisadvantages | A settlement is a place, typically one which has previously uninhabited, where people establish a community.Physical geography is nature and the effects it has on people and/or the environment. |
| **What are the different settlement patterns?** | * Early settlements can take three main shapes: Nucleated, dispersed and linear.
* Nucleated settlements comprise of buildings that are situated close together, usually clustering around a central area such as a river crossing or road junction.
* Linear settlements consist of structures that are built in a line, usually along a major transport route such as a road.
* Dispersed settlements occur mainly in rural areas. Buildings are spread across a large distance and usually consist of farms.
 | NucleatedDispersedLinear | A settlement is a place, typically one which has previously uninhabited, where people establish a community.The site is the actual location from where a settlement grew up. Choosing a location is based on multiple physical factors. These include the presence building materials, shelter, protection, water, wood, rivers and flat land, When choosing a site, advantages and disadvantages of the natural landscape need to be considered. |
| **How do settlements change over time?** | * No town or city remains the same over time, the following may change: The shape of the settlement, the function of the settlement, the land use of the settlement and the population of the settlement.
* **Land use:** The human use of the land. This can be retail, residential, agricultural, industrial or transport.
* **Function**: The main activities that take place in a settlement e.g. a mining town.
* As time has progressed, land use has changed to include modern uses such as car parks and retirement homes.
* As time has progressed, the function of British towns had moved from industrial to retail and residential.
 | SettlementLand UseFunction Retail | Early settlements can take three main shapes: Nucleated, dispersed and linear.A settlement is a place, typically one which has previously uninhabited, where people establish a community. |
| **Can a settlement change function?**  | * In the early 1900’s, the main land use of the London Docklands was shipping warehouses and dry docks.
* In the early 1900’s, the main function of the London docklands was shipping and trade.
* In 2020, the main land uses of the London Docklands include office blocks and residential apartments.
* In 2020, the main function of the London Docklands is retail, residential and financial services.
* Over time, the population of the London Docklands has grown in size and wealth.
 | TradeShippingResidential Financial  | **Land use:** The human use of the land. This can be retail, residential, agricultural, industrial or transport.**Function**: The main activities that take place in a settlement e.g. a mining town.No town or city remains the same over time, the following may change: The shape of the settlement, the function of the settlement, the land use of the settlement and the population of the settlement. |
| **What can OS maps tell us about land use and function?** | * Contours are lines on maps which show the height of the land. The closer the lines are together, the steeper the hill.
* Relief: The variations in the elevation of the ground surface.
* The relief of the land impacts the land use of that area. Areas with a flat relief have larger amounts of land use than steeper areas.
* Human land use can be shown on OS maps using map symbols.
* A collection of tourist-based OS map symbols in a location, such as hotels or campsites, suggests that the function of the area is tourism.
 | Contour LineReliefOS Map | **Land use:** The human use of the land. This can be retail, residential, agricultural, industrial or transport.**Function**: The main activities that take place in a settlement e.g. a mining town.Choosing a location is based on multiple physical factors. When choosing a site, advantages and disadvantages of the natural landscape need to be considered. |

| **Unit 2: Weather and Climate**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **What is the difference between weather and climate?**  | * Students will know the definition of weather is the condition of the atmosphere now in terms of pressure, temperature, humidity etc.
* Students will know the definition of climate is the average weather for a place, usually calculated over a 30 year period.
* Students will learn how to construct and compare climate graphs for the UK and India
* Students will learn that India's climate is warmer than the UK and has clear wet and dry season.
 | ClimateWeather  | * Students will know examples of types of weather like rain, clouds, temperature, wind etc
 |
| **How does changing air pressure impact weather?**  | * Air pressure: the pressure exerted by the weight of air on the earth's surface
* Students will know that low pressure is created by warm air rising due to spreading of molecules and leads to unsettled weather
* Students will know that high pressure is created by cool air sinking due to increased density and leads to settled weather condition
* Students will know that wind blows from areas of high to low pressure
 | Air PressureUnsettled  | * Students will know the difference between weather and climate
* Students will need to know the characteristics of coastal locations
 |
| **What are depressions and anticyclones?**  | * Students will know the key characteristics of a depression including warm, cold and occluded fronts.
* Students will know the key characteristics of an anticyclone including the use of isobars.
* Students will know that an isobar is a line on a map connecting points that have the same atmospheric pressure at a given time/on average over given period.
 | Characteristic DepressionAnticyclone | * Students will understand the concept of high and low pressure
* Students will have knowledge of contour lines and how they are used.
 |
| **How can Geographers investigate weather and climate?**  | * Students will know that fieldwork is practical work conducted in the natural environment rather than laboratory or office
* Students will know the stages of 6 geographical enquiry
* Students will know that use Oktas scales which use shading to represent cloud cover
* Students will know that the method used for measuring wind speed is the Beaufort scale
 | Fieldwork Enquiry  | * Students will be aware of the concept of investigation in Science
* Students will know that weather can include wind speed, direction and cloud cover.
 |
| **How do Geographers present data?**  | * Students will learn how to create a range of graphs displaying geographical data including line graph and radar chart.
 | Data  | * Students will understand why graphs are used to represent data
* Students will understand and interpret line graphs
 |
| **What is extreme weather?** | * Students will know the definition of extreme weather is unexpected, unusual or severe weather events
* Students will know that a tropical storm is a localised, very intense, low pressure wind system forming over tropical oceans
* Students will know that hurricanes form in between the tropics
* Students will be able to label the key structural features of a hurricane
 | Extreme Weather Hurricane | * Students will be aware of low pressure and its features
* Students will know that latitude means distance from the equator (N/S)
 |
| **How do Tornado’s form and what are their impacts?** | * Students will know that tornado’s form over land, whilst hurricanes form over ocean.
* **Tornado** - a violently rotating column of air extending from an underground thunderstorm.
* Tornado’s form after intense heat causes air to rise, which mixes with cold air. This creates thunderstorms and rotating winds, which can cause funnel formation.
* Tornadoes are measured on the Fujita Scale (F-0 to F-5)
 | Tornado  | * Students will know the definition of extreme weather is unexpected, unusual or severe weather events.
* Students will know that a tropical storm is a localised, very intense, low pressure wind system forming over tropical oceans.
* Students will be aware of low pressure and its features.
 |

| **Unit 3: Ecology, Ecosystems and Expanding Threats in Russia** |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **How does the environment and landscape vary between Russian biomes?** | * Biome the name for a vegetation zone that can be mapped on a global scale, as shown below. Russia is such a large country that it contains several world biomes.
* Global biome distribution roughly follows lines of **latitude**.
* Grasslands dominate at lower latitudes. Coniferous forest is found further north. Tundra is found even further north.
* The size, shape, colour and amount of vegetation changes across each biome.
 | BiomeTundra | * Students will know that the equator runs round the centre of the Earth.
* Students will know that different climates exist around the world.
 |
| **Are all deserts hot?** | Hot deserts occur under high pressure zones. Hot Deserts include: * Truly arid places with < 250mm rain a year e.g. Ryn Desert, SE Russia.

Polar deserts occur under high pressure zones. Polar Deserts include: * Ice-covered places e.g. Severny Island, N Russia
* Places with frozen soils e.g. Siberia, NE Russia
* These can be measured using photographs, climate graphs and maps.
 | Arid | * Biome the name for a vegetation zone that can be mapped on a global scale, as shown below. Russia is such a large country that it contains several world biomes.
* Students will know that high pressure is created by cool air sinking due to increased density and leads to settled weather condition.
 |
| **How do Russian’s survive in the world’s coldest city?** | * Yakutia (Russia) is the coldest inhabited region on Earth with the lowest recorded temperature -71°C (-95°F) and the average winter temperature -50°C (-58°F). Yatuskh is the coldest city in the region.
* Challenges include water access, transport and frostbite.
* Houses must be heated all year round, and cars kept running and buildings are built differently to normal cities.
* Despite daily temperatures of –40, children in the town still attend school.
 | Challenges | Polar deserts occur under high pressure zones. Polar Deserts include: * Ice-covered places e.g. Severny Island, N Russia
* Places with frozen soils e.g. Siberia, NE Russia
 |
| **What natural resources does Russia have?** | * Russia accounts for around 20 percent of the world's production of oil and natural gas and possesses large reserves of both fuels.
* Russia uses these natural resources to increase the wealth of their country.
* Western Europe (until recently) was reliant on Russian Gas, making Russia a powerful country.
* These natural resources are often found in sensitive biomes, which often need to be destroyed for the resources to be removed.
 | Natural Resource Exploited | * When choosing a site, advantages and disadvantages of the natural landscape need to be considered.
* Grasslands dominate at lower latitudes. Coniferous forest is found further north. Tundra is found even further north.
 |
| **How are humans threatening biomes: Logging/Forestry** | * Siberian forests in Russia are home to 1/5th of the world’s timber supply. This is being exploited for financial gain.
* Much of the logging is illegal, but the government does little to prevent it.
* In the Vostochnaya pine nut harvesting zone between 2005 and 2009, on average 728 ha had been authorized for logging each year but the average area actually harvested was 1591 ha.
* Such forests are prime habitats for the Amur tiger, the population of which is around 450 individuals in the wild. The widespread illegal in these forests reduces the food supply of pine nuts and acorns for the tiger’s most important prey, wild boars and red deer.
* This is leading to possible extinction of these animals.
 | Logging | * Russia accounts for around 20 percent of the world's production of oil and natural gas and possesses large reserves of both fuels.
* Russia uses these natural resources to increase the wealth of their country.
* These natural resources are often found in sensitive biomes, which often need to be destroyed for the resources to be removed.
 |
| **How are humans threatening biomes: Natural Resources** **(Oil/Gas)** | * Russia is rich in natural resources such as oil, gas and coal. Their extraction can lead to environmental damage.
* In Chechnya, an estimated 30 million barrels of oil have leaked into the ground from the region's black market ("pirate") oil industry.
* Oil spills in Siberian rivers near the city of Nizhnevartovsk, have polluted drinking water and have been linked to increased cancer rates in several affected areas.
* In Russia, the mayor of the world's northernmost city has been charged with criminal negligence over a massive oil spill in Siberia, which was so large it could be seen from space.
 | Oil Spill  | * Russia accounts for around 20 percent of the world's production of oil and natural gas and possesses large reserves of both fuels.
* Russia uses these natural resources to increase the wealth of their country.
* These natural resources are often found in sensitive biomes, which often need to be destroyed for the resources to be removed. Siberian forests in Russia are home to 1/5th of the world’s timber supply. This is being exploited for financial gain.
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| **Unit 4: A land shaped by wind and ice**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **Are all rocks the same?** | * Igneous rock is formed when magma (molten rock) cools and hardens
* Sedimentary rocks are formed from the broken remains of other rocks that become joined together.
* Metamorphic rocks start out as either igneous rocks or as sedimentary rocks. These rocks are changed by massive pressures or by heat.
* The three rock types are created and destroyed as part of the rock cycle.
* Metamorphic is the strongest, and sedimentary the weakest rock type.
 | IgneousSedimentary MetamorphicMagma | * Students will be able to define the key term physical geography. Physical geography is nature and the effects it has on people and/or the environment.
* Students may have a rudimentary understanding of geology.
 |
| **How are rocks weathered?**  | * Weathering is the breakdown of rocks at the Earth’s surface
* Diurnal – the daily cycle of night and day
* Onion Skin Weathering: Heat causes the outer layer of rocks to expand and then contract when it cools which make the rock break.
* Freeze Thaw – Ice in cracks expands, which breaks the rock over time.
* Biological – plant roots grow in cracks, which breaks the rock over time.
* Chemical – Acid rain reacts with calcium carbonate in rocks to break them down over time.
 | WeatheringDiurnal Biological Chemical Acid Rain  | * The three rock types are created and destroyed as part of the rock cycle.
* Students will know the definition of weather is the condition of the atmosphere now in terms of pressure, temperature, humidity etc.
 |
| **How do rocks support life on earth?**  | * Soil is a mixture of tiny particles of rock, dead plants and animals, air and water.
* Soil is created mainly from broken down rocks.
* Weathering of bedrock results in the weathered parent material forming organic matter and layers of topsoil. This process continues over time.
* Soil gains its nutrients from rocks, which help plants to grow.,
* Soil formation is influenced by time, climate, geology and relief.
 | SoilBedrock | * Abiotic - physical rather than biological; not derived from living organisms
* Ecosystem - a biological community of interacting organisms and their physical environment.
* Students will know the definition of climate is the average weather for a place, usually calculated over a 30 year period.
 |
| **What did the earth look like in the past?**  | * An ice age is a long period of reduction in the temperature of the Earth's surface and atmosphere, resulting in the presence or expansion of continental and polar ice sheets and alpine glaciers.
* During the last ice age, ice sheets were prevalent across much of the world.
* Prevalent: widespread in a particular area or at a particular time.
* Interglacial: A period of time when there is less ice cover because temperatures are warmer. This characterises the world we live in today.
* Changes in the tilt of the Earth on its axis and the shifting of the plates under the Earths' crust have been responsible for the glacial and interglacial periods
 | Ice AgeGlacial Interglacial Prevalent  | * Climate: the weather conditions prevailing in an area in general or over a long period.
* UK consists of 4 distinct areas: Scotland, England, Wales and Northern Ireland
* The 8 points of a compass to use for directions
 |
| **What are glaciers and how do they change the landscape?** | * Glaciers are large masses of ice, that flow across the land and down slopes.
* Glaciers form when snow accumulates in a hollow and is compacted. Glaciers move under their own weight and carve the landscape.
* Erosion: The process of rock being worn away.
* Glaciers erode rock in three main ways: Abrasion, plucking and freeze-thaw.
* Abrasion: Rocks are frozen to the base, and the ice scrapes along the bedrock.
* Freeze-Thaw: Water enters cracks in rocks, freezing, and breaking the rocks apart.
* Plucking: Melt water freezes to the back wall, and as the ice moves it is broken off.
 | Glacier Abrasion Freeze-ThawPlucking | * An ice age is a long period of reduction in the temperature of the Earth's surface and atmosphere, resulting in the presence or expansion of continental and polar ice sheets and alpine glaciers.
* During the last ice age, ice sheets were prevalent across much of the world.
 |
| **What landforms are created by glaciers?**  | * A landform is a feature on the Earth's surface that is part of the terrain.
* Students will know that a corrie forms when snow is compressed in a hollow, which moves and erodes the landscape by plucking, abrasion and freeze thaw weathering to create a depression.
* Following the erosional process, a lake (tarn) can be left in the corrie.
* Students will know than an arete forms when two corries form side by side.
* Students will know that a pyramidal peak form when three or more corries form in the same location.
 | CorrieAretePyramidal Peak  | * Abrasion: Rocks are frozen to the base, and the ice scrapes along the bedrock.
* Freeze-Thaw: Water enters cracks in rocks, freezing, and breaking the rocks apart.
* Plucking: Melt water freezes to the back wall, and as the ice moves it is broken off
 |
| **What are the opportunities in glaciated landscapes?** **BUT avalanches!!**  | * Chamonix is located in the French alps at the foot of Mont Blanc.
* Chamonix is a popular tourist destination, with up to 100,000 visitors a day!
* In the winter Chamonix hosts skiing, snowboarding, ice climbing and paragliding.
* In summer Chamonix hosts Montenvers railway tours to the nearby mer de glace glacier, alongside hiking and biking trails.
 | Tourism  | * Avalanche: a rapid downhill movement of a mass of snow, ice and rocks, usually in a mountain area; can reach speeds of up to 300kph.
* Students will be able to map the location of significant Geographical locations
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| **Unit 5: A tale of two cities (Development)**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **Are all countries equally developed?** | * Inequality - The state of ‘not being equal’
* Development is a process of social and economic advancement, in terms of the quality of human life.
* A development indicator is a statistic that can be used to measure how ‘developed’ a country is.
* GDP, life Expectancy, literacy rate, people per doctor and average food intake are examples of development indicators.
* Saudi Arabia, Brazil, India and Afghanistan’s development can be ranked by using the development indicators in practice.
 | Inequality GDPLife Expectancy Development  | * Some countries are wealthier than others.
 |
| **How does development differ in Manchester and Mumbai?** | * Mumbai is located on the west coast of India, bordering the Arabian sea. Nearby cities include Purie and Daman.
* Manchester is located in North-West England. Nearby cities include Liverpool and Leeds.
* GDP per capita, life expectancy and literacy rate are all higher in Manchester than in Mumbai, suggesting it is more developed.
* Mumbai has a high literacy rate and life expectancy, suggesting that it is more developed than some viewpoints of India suggest.
 | GDP per capitaLiteracy Rate | * Development is a process of social and economic advancement, in terms of the quality of human life.
* A development indicator is a statistic that can be used to measure how ‘developed’ a country is.
* GDP, life Expectancy, literacy rate, people per doctor and average food intake are examples of development indicators**.**
 |
| **What is industrial structure, and how does it vary between Manchester and Mumbai?****.**  | * The economy: describes how a country or place is doing in producing and making goods, and how much money it has.
* Mumbai has a higher GDP than Manchester, but this is due to the higher population. Unemployment is lower in Manchester than in Mumbai.
* Industrial structure is the percentage of people working in each job type. This is split into primary, secondary, tertiary and quaternary.
* Generally, more developed countries have a higher % of tertiary and quaternary jobs compared to developing countries which have a higher % of primary and secondary industries.
* Mumbai has a higher % of primary and secondary industries than Manchester, which in turn has a higher % of tertiary and quaternary industries.
 | EconomyIndustrial Structure Primary SecondaryTertiary Quaternary  | * GDP per capita, life expectancy and literacy rate are all higher in Manchester than in Mumbai, suggesting it is more developed.
* Development is a process of social and economic advancement, in terms of the quality of human life.
 |
| **Dharavi slum: Poverty stricken or a thriving economic hub? Pt1** | * Slum: a densely populated usually urban area marked especially by poverty.
* Mumbai is home to Asia’s largest slum. It is also home to the world’s most expensive house ($1bn).
* In Dharavi, challenges include open sewers, health problems and squalid living condition.
* In Dharavi, the positives include a strong sense of community and ‘flexible spaces.
 | Slum Squalid  | * GDP per capita, life expectancy and literacy rate are all higher in Manchester than in Mumbai, suggesting it is more developed.
* GDP, life Expectancy, literacy rate, people per doctor and average food intake are examples of development indicators.
 |
| **Dharavi slum: Poverty stricken or a thriving economic hub? Pt 2** | * Dharavi is a hub for small-scale industries and exports goods across the globe with an estimated annual turnover of around $ 1 billion.
* 60% of Mumbai’s segregated waste comes to Dharavi for processing; indicating the vital role of waste recycling and processing units of Dharavi in maintaining and managing Mumbai’s solid waste management landscape.
* Jobs in the secondary industry dominate Dharavi, including leather making, recycling and metal casting.
 | Industries Secondary Industry  | * Slum: a densely populated usually urban area marked especially by poverty
* Industrial structure is the percentage of people working in each job type. This is split into primary, secondary, tertiary and quaternary.
* Generally, more developed countries have a higher % of tertiary and quaternary jobs compared to developing countries which have a higher % of primary and secondary industries.
 |
| **Did Manchester ever have slums?**  | * By the end of 1967 it was estimated there were five million people living in 1.8 million slums unfit for human habitation in England and Wales.
* Slums existed in Hulme, with residents sharing outside toilets and living in poverty
* To combat the problem, the British government introduced the policy of slum clearance across the UK.
* In Hulme, 4 crescent housing blocks were built which housed some 13,000 people.
* The blocks failed, leaving communities fragmented whilst also providing the ideal breeding grounds for gangs and antisocial behaviour.
 |  Poverty Fragmented  | * Slum: a densely populated usually urban area marked especially by poverty
* Development is a process of social and economic advancement, in terms of the quality of human life.
* In Dharavi, challenges include open sewers, health problems and squalid living condition.
 |
| **What is urban regeneration?**  | * Urban Regeneration: The long term upgrading of part of a town or city
* Examples of regeneration in Manchester include the £1bn invested in the airport and £3.5bn investment in the enterprise city.
* Salford required regeneration due to high unemployment rates, poor health and poor education levels in the area.
* Regeneration increased the number of jobs in Salford, attracted tourists and led to the area becoming a popular place to live in once again.
 | Urban Regeneration  | * Slums existed in Hulme, with residents sharing outside toilets and living in poverty
* To combat the problem, the British government introduced the policy of slum clearance across the UK.
* In Hulme, 4 crescent housing blocks were built which housed some 13,000 people.
* The blocks failed, leaving communities fragmented whilst also providing the ideal breeding grounds for gangs and antisocial behaviour.
 |
| **How has urban regeneration changed Eastland’s?**  | * Eastlands is located in the North-East of Manchester.
* Brownfield site is an area that has been used before and tends to be disused or derelict land.
* Job losses in the area led to 100,000 people leaving. This led to further unemployment. The impacts of this included a rise in crime and anti-social behaviour.
* Urban regeneration centred around building a sports complex around the Etihad stadium. The project was led in a coalition between Manchester City Fc and the local government.
* Benefits of the scheme included new sports opportunities for locals, increased employment and investment in the nearby Phillips Park.
 | Regeneration Opportunities  | * Urban Regeneration: The long term upgrading of part of a town or city
* Examples of regeneration in Manchester include the £1bn invested in the airport and £3.5bn investment in the enterprise city.
* Salford required regeneration due to high unemployment rates, poor health and poor education levels in the area.
* Regeneration increased the number of jobs in Salford, attracted tourists and led to the area becoming a popular place to live in once again.
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| **Unit 6: Tectonic Theory**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **What is the structure of planet Earth?**  | * Students will know that the earth is split into 4 layers: The crust, mantle, outer core and inner core.
* Students will know that the crust is the thinnest, coldest and outermost layer.
* Students will know that the mantle is the thickest layer and that it is composed of semi-molten rock.
* Students will know that the outer core is hot and liquid.
* Students will know that the inner core is the warmest layer (5000+) and is solid metal.
 | Crust Mantle | * Students will know that igneous rock is created by volcanic processes.
* A volcano may erupt lava.
 |
| **Why do plates move?**  | * Students will know that Alfred Wegner proposed the theory of continental drift, which has now given birth to tectonic theory.
* Tectonic theory argues that the Earth’s crust is split into tectonic plates.
* These plates are moving.
* The plates movement is caused by convection currents in the mantle. As hot rock rises from the core, it cools, sticks to the plate and falls.
* The falling movement drags the plate above it, causing it to move.
 | Tectonic Theory Convection Current | * Students will know that the earth is split into 4 layers: The crust, mantle, outer core and inner core.
* Students will know that the mantle is the thickest layer and that it is composed of semi-molten rock.
* Students will know that the outer core is hot and liquid.
* Students will know that the inner core is the warmest layer (5000+) and is solid metal.
 |
| **What happens when plates move apart?**  | * Within Geography, there are four potential plate margins. These include the plates moving away from each other, moving towards each other, and moving side by side. Each creates different forms of volcanoes and earthquakes.
* Convection currents in the mantle drive the plates to move apart.
* Two oceanic plates move apart. As they move, they create friction which can trigger powerful earthquakes
* Fissures (gaps) in the crust results in lava erupting in the form of volcanoes. This results in new land being built up.
* As the plates move away from the lava source, ridges are created. These are underwater mountain chains.
* Over time, the lava can build up underwater to create large islands that emerge from the seafloor. One example of this would be Iceland.
* An example of a place at this margin is Iceland.
 | Constructive | * Tectonic theory argues that the Earth’s crust is split into tectonic plates.
* These plates are moving.
* The plates movement is caused by convection currents in the mantle. As hot rock rises from the core, it cools, sticks to the plate and falls.
* The falling movement drags the plate above it, causing it to move.
 |
| **What happens when plates collide?** **Oceanic-Continental** **Link diagrams to name**  | * The Earth’s crust can be split in two. Continental and oceanic.
* Oceanic crust is denser, as it has been compressed by the ocean above.
* When oceanic and continental crust meets, oceanic is denser and is therefore subducted underneath the continental plate.
* As the oceanic crust melts in the mantle, it releases gases and materials such as silica.
* These materials combine to form the basis of volcanic eruptions.
* Volcanoes at destructive plate margins are highly explosive as a result of this.
 | Subducted | • Within Geography, there are four potential plate margins. These include the plates moving away from each other, moving towards each other, and moving side by side. Each creates different forms of volcanoes and earthquakes.• Convection currents in the mantle drive the plates to move apart. |
| **How did plate tectonics form Mt Everest?**  | * When two continental plates meet, no subduction occurs.
* The two plates meet which causes crust fracturing.
* As the crust fractures, it rises upwards giving birth to fold mountains.
* An example of this is the Himalayas.
 | Crustal Fracturing | * The Earth’s crust can be split in two. Continental and oceanic.
* Oceanic crust is denser, as it has been compressed by the ocean above.
* When oceanic and continental crust meets, oceanic is denser and is therefore subducted underneath the continental plate.
 |
| **Why does Los Angeles get earthquakes?** | * At some plate boundaries, the plates are neither moving towards or away from each other.
* This creates a conservative plate margin, for example the San Andreas Fault in California.
* As the plates rub against each other, the rocks cause a build up in friction.
* This energy is released in the form of earthquakes.
* An example of this occurred in the San Francisco in 1989.
 | ConservativeFriction  | •Two oceanic plates move apart. As they move, they create friction which can trigger powerful earthquakes |
| **Comparing two eruptions****Supervolcanoes!**  | * Magnitude: The comparative strength and size of an event.
* The Icelandic eruption of Fagradalsfjall was a low magnitude event, which produced fast running lava flows as its main hazard. This is due to it being created on a constructive plate margin.
* The Nevado Del Ruiz eruption in Columbia was an explosive eruption, which caused pyroclastic flows and explosive volcanic bombs. This is due to it being located on a destructive plate margin.
* The impact of each volcano is influenced by magnitude but also level of development.
 | MagnitudePyroclastic flow | * Oceanic crust is denser, as it has been compressed by the ocean above.
* When oceanic and continental crust meets, oceanic is denser and is therefore subducted underneath the continental plate.
* As the oceanic crust melts in the mantle, it releases gases and materials such as silica.
* These materials combine to form the basis of volcanic eruptions.
* Volcanoes at destructive plate margins are highly explosive as a result of this.
* Development refers to the wealth, health and education of an area.
* Mumbai is less developed than Manchester.
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