Subject: Geography – Year 6, Unit 1, South America – The Amazon

Enquiry Question:

Why is the Amazon rainforest important locally and globally?
Why is the Amazon referred to as the 'Earth's Lungs?'

NC/POS:

Locational knowledge

- Locate the World's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities.
- Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night).

Place knowledge

- Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America.

Human and physical geography

- Describe and understand key aspects of:
  - Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.
  - Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.

Geographical skills and fieldwork

- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied.
- Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider World.
- Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.

Prior Learning (what pupils already know and can do):

- Children know the world is made up of 7 continents.
- They can name and locate the continents on a map.
- Can name and locate the words oceans.
- Can name types of settlements and land use.
- Know the features of mountains, volcanoes, earthquakes and rivers.
- Children have learnt about trade global trade and globalisation with specific reference to Northern and Central America.
- Children have been introduced to non-renewable and renewable energy so that the concept of climate change – its causes, consequences and solutions will be easier to understand when covering the impact of the Amazon and Antarctica.

End Points (what pupils MUST know and remember):

- Know that there are five imaginary lines around the Earth – Artic Circle, Tropic of Cancer, Equator, Tropic of Capricorn, Antarctic Circle.
- Locate South America on a map and its 12 countries.
- Know that a biome is an area with certain plants and animals that have adapted to the climate there.
- Know the biomes that can be found in South America – Temperate Grassland, Deciduous Forest, Mediterranean, Desert, Alpine, Tropical Rainforest, Savannah.

- Know that South America has different climate zones.
- Know that Brazil has different climate zones because of its vastness.
- Know that urbanisation of Brasilia is caused by push and pull factors
- Know push factors that encourage people to leave areas like the Caatinga.
- Know pull factors that encourage people to move to cities like Brasilia.
- Know the differences/similarities of the temperate and tropical forest biomes.
- Locate the Amazon rainforest on a map of South America.
- Know that the Amazon is the World's largest rainforest.
- Know that over half of the Amazon rainforest is situated in Brazil.
- Know that the Amazon is the most bio-diverse place on Earth.
- Know that the Amazon Rainforest is described as the Earth's lungs.
- Know that rainforests are a local and global resource.
- Know that burning fossil fuels for electricity production increases pollution and carbon dioxide levels in the Atmosphere.
- Know the impact of deforestation.
- Know ways in which rainforests can be protected.
- Know ways in which we can save energy.
- Know that using renewable energy sources will reduce carbon footprints.

Key Vocabulary: continent, equator, longitude, longitude, northern hemisphere, southern hemisphere, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antarctic Circle, climate zone, biome, biodiversity, climate diversity, rainfall, temperature, average, line/bar graph, spreadsheet, push factors, pull factors, urbanisation, economy, employment, prosperity, poverty, agriculture, drought, desertification, food production, infrastructure, services, Amazon rainforest, indigenous, temperate, tropical, flora, fauna, bio-diverse, local, global, resources, oxygen, carbon, medicinal, employment, deforestation, greenhouse effect, climate change, carbon dioxide, afforestation, reforestation, reduce, reuse, recycle, consumption.

SESSION 1: Where in the World is South America?	**End points covered in this session:**
Using a World map, recap the 7 continents and imaginary latitude lines of the World – the Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle and Antarctic Circle. Label the Northern and Southern Hemisphere. • Point out the location of South America. • Which lines run through it? The Tropic of Capricorn and Equator. • Which Hemisphere is South America in? Both the Northern and Southern. Recognise the location of South America on a World map: • Highlight its vast size. • Children locate the 12 countries that make up South America. • Use compass points to describe that it is to the West of the UK and Europe. • Label the surrounding oceans of South America: Atlantic and Pacific Ocean. • Use the GeoGuessr website to build recall of the location of the 12 countries.	Know that there are five imaginary lines around the Earth – Artic Circle, Tropic of Cancer, Equator, Tropic of Capricorn, Antarctic Circle. Locate South America on a map and the main countries. **Vocabulary: continent, equator, longitude, longitude, northern hemisphere, southern hemisphere, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antarctic Circle.**
SESSION 2: What is South America's climate like?	**End points covered in this session:**
Recap the meaning of a biome: an area with certain plants and animals that have adapted to the climate there. Look at various biomes of South America linking to the Science curriculum topic of Evolution – investigate South American destinations visited by Charles Darwin on his Voyage of the Beagle. • Look in depth at the biodiversity and climate diversity of the continent by comparing 4 key locations – the Amazon	Know that a biome is an area with certain plants and animals that have adapted to the climate there. Know various biomes form the journey of the Beagle.

Rainforest, the Falklands, the Atacama Desert and the Galapagos. Children use ClassVRs to 'visit' several places around South America • Explore diversity and commonality within the continent. • Dispel the misconception that South America is just a big rainforest. • This task will give the children the opportunity to study a range of diverse places and what they are like; the processes, both physical and human that interconnect to shape 'place, space and environment'. • This will also give students the opportunity to understand that multiple stories can be told from a single place. *In the Science Evolution topic, the children will learn about the biodiversity and natural selection of the animals at the Galapagos.*	Know that South America has different climate zones. **Vocabulary: climate zone, biome, biodiversity, climate diversity.**
SESSION 3: How is Brazil's climate so diverse? Investigate data of Brazil's climate by looking at annual rainfall and temperatures of regions/cities across Brazil. • Create spreadsheets using Excel compiling the data. • Create line/bar graphs *(linked to Computing unit of Spreadsheets).* • Analyse the data using the charts – children should recognise how diverse the climate is in Brazil. They should understand that this is due to the vastness of the country. • Learn that 35 UK's could fit inside of Brazil to help understand the scale of the country. *(Once grasping the diversity of Brazil and understanding the importance of the rainforest in controlling World carbon dioxide levels, the children will go on to study the importance of the Poles when studying Antarctica and how it relates to climate change.)*	**End points covered in this session:** Know that Brazil has different climate zones because of its vastness. **Vocabulary: rainfall, temperature, average, line/bar graph, spreadsheet.**
SESSION 4: What is urbanisation? Recap the meaning of rural vs urban. Investigate 2 contrasting areas of Brazil – the rural Caatinga and the city of Brasilia. • Look at factors pushing people to leave the Caatinga and pull factors encouraging people to move Brasilia. • Learn what urbanisation is and why it was happening on such a massive scale in South America. Ask children to empathise with the people of the Caatinga, looking at why they would choose to migrate to Brasilia. • Write like a geographer – write letters, as if they were young adults, writing to their family about why they have made the choice to leave the Caatinga for a new life in the city. *The children will go on to explore the Amazon rainforest, looking at why it is a local and global resource and why it is so important in the phenomenon of climate change.*	**End points covered in this session:** Know that urbanisation of Brasilia is caused by push and pull factors Describe push factors that encourage people to leave areas like the Caatinga. Describe pull factors that encourage people to move to cities like Brasilia. **Vocabulary: push factors, pull factors, urbanisation, economy, employment, prosperity, poverty, agriculture, drought, desertification, food production, infrastructure, services.**
SESSION 5: Where is the Amazon rainforest? What is it like here?	**End points covered in this session:**

Locate the Amazon Rainforest on a map of South America – highlight the size of the rainforest. See that over half of the rainforest is situated in Brazil. Learn that it is the largest rainforest in the World. Children explore indigenous population of the rainforest and what their experience would be like if they were to encounter people from the outside World.	Locate the Amazon rainforest on a map of South America. Know that the Amazon is the World's largest rainforest. Know that over half of the Amazon rainforest is situated in Brazil. **Vocabulary: Amazon rainforest, indigenous.**
SESSION 6: How does the Amazon rainforest compare to a local forest? Recap and compare the difference between the temperate forest biome and tropical rainforests. Look in depth at the similarities and differences of temperate forests and tropical rainforests. • *In the next topic – Climate Change – the children will carry out a full investigation of our vast school grounds to find out whether the grounds consisted mainly of deciduous or evergreen plants with a vision to plant more in the future to reduce carbon dioxide in the Atmosphere.* Compare the school forest and Amazon rainforest's flora and fauna. • Explore the school forest looking at the flora and fauna – draw sketches and complete lists of what they see. • Using the ClassVRs, 'visit' the Amazon rainforest to compare the flora and fauna of this to that found in the school forest. • Learn that the Amazon rainforest is the most bio-diverse place in the World. Analyse average rainfall and temperature of a temperate and tropical forest – compare the two.	**End points covered in this session:** Know the differences/similarities of the temperate and tropical forest biomes. Know that the Amazon is the most bio-diverse place on Earth. **Vocabulary: temperate, tropical, flora, fauna, bio-diverse.**
SESSION 7: Why is the Amazon rainforest important locally and globally? ENQUIRY QUESTION: Why is the Amazon referred to as the 'Earth's Lungs?' Explain that the Amazon is described as the 'Earth's lungs' – ask the children why they think this is the case. *Link to Science topic (Light) – the children look at the importance of leaves in producing energy using the sun – photosynthesis.* ENQUIRY QUESTION: Why is the Amazon rainforest important locally and globally? Begin to look at global warming as a concept and how burning fossil fuels leads to increases of carbon in the Earth's atmosphere. Look at the importance of the Amazon as a local and global resource, including key themes such as: global oxygen and carbon cycle, fresh water, medicinal plants, food, employment.	**End points covered in this session:** Know that the Amazon Rainforest is described as the Earth's lungs. Know that rainforests are a local and global resource. Know that burning fossil fuels for electricity production increases pollution and carbon dioxide levels in the Atmosphere. **Vocabulary: local, global, resources, oxygen, carbon, medicinal, employment.**
SESSION 8: What is the impact of deforestation?	**End points covered in this session:**

Explore the negative impact that deforestation may have locally and globally – explore the greenhouse effect, climate change, carbon dioxide, impact on animals and wildlife. CHESTER ZOO LINK: Link to biodiversity loss and the detrimental impact this has across the globe. Link to endangerment of elephants and how the illegal wildlife trade and habitat loss affects them.	Know the impact of deforestation. **Vocabulary: deforestation, greenhouse effect, climate change, carbon dioxide.**
SESSION 9: How could the rainforest be protected? Look at the possibility of afforestation and reforestation. Reduce, reuse and recycle – oil, gas, coal consumption, beef, paper. Look at renewable energy production. Brazil is the largest producer of petroleum and other liquids in South America and the ninth biggest in the world. Investigate ways in which energy can be saved to reduce our usage of fossil fuels.	**End points covered in this session:** Know ways in which rainforests can be protected. Know ways in which we can save energy. Know that using renewable energy sources will reduce carbon footprints. **Vocabulary: afforestation, reforestation, reduce, reuse, recycle, consumption.**
Future learning this content supports: This content will also support future learning on World continents, climate change and global trade.	