'Bringing Learning to Life: No Limits. No Barriers.'

Ocean Academy Poole
an Aspirations Academy
Self-Worth | Engagement | Purpose

Learning Journey Map

Year: **5** Term: **AUTUMN 1**
Subject: **GEOGRAPHY** Topic: **SOUTH AMERICA**

Driving Question: Can we use evidence to clearly debate our opinions about deforestation in the Amazon Rainforest?
Power Skill: Communication: Debate about deforestation and global warming.

National Curriculum Learning Objectives

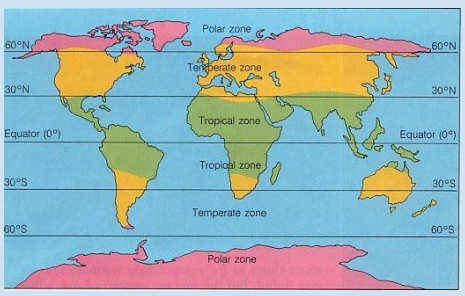
- locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities
- identify the position and significance of latitude, longitude, 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)
- Human and physical geography describe and understand key aspects of: physical geography, including: climate zones and biomes

Key Vocabulary

Climate	Biome	Emergent layer	Canopy	Understorey
Forest floor	Deforestation	Logging		

Key Learning

REVISIT AND REVISE: Year 4 Climate



What does the location of rainforests around the world tell you about their climate?

All of the world's rainforests sit on the equator and between the Tropics of Cancer and Capricorn. This area of the world is the tropical climate zone. Other climate zones include temperate and polar. In a tropical climate zone, the temperatures are high all year around and it can also be very wet and humid all year round (although it can also be very dry in some areas). If you were to visit a rainforest anywhere in the world, you would expect the weather to be very hot and very wet.

Location of Amazon Rainforest
The Amazon rainforest sits across 9 countries/territories:
1. Brazil
2. Bolivia
3. Peru
4. Ecuador
5. Colombia
6. Venezuela
7. Guyana
8. Suriname
9. French Guiana

Thinking Point
Why do you think the world's tropical rainforests are all within the tropical climate zone?



What is a Biome?
A biome is a large region of earth that has a certain climate and certain types of living things. The plants have traits that help them survive that biome.



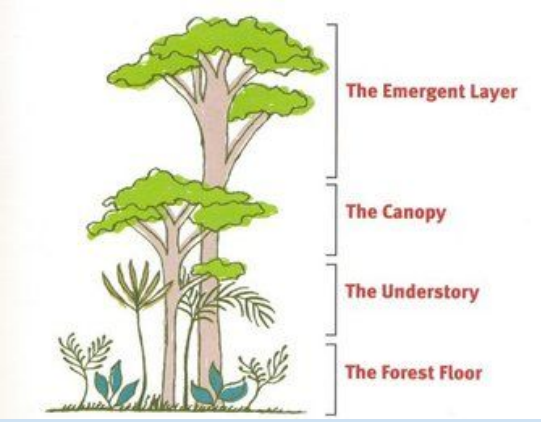
- Aquatic
- Desert - These biomes extremes of temperature - hot during the day, cold during the night. Plants and animals have evolved over time to adapt to the harsh environments.
- Forest - Temperature/Boreal/Tropical - Forest biomes are home to a variety of trees and other plants. Rainforest biomes are host to a variety of tropical plants and animals and found in the regions that are warm all year round.
- Grassland - The majority of this biome is made up of a variety of grasses with very few trees or large plants. This biome is very popular for farming due to the rich soil.
- Tundra - These are cold habitats where the soil is permanently frozen (permafrost). Very little grows here.

Fieldwork
Eco-survey of the school, linked to conserving energy and eliminating waste products to reduce climate change and deforestation.

Resources:
Atlases, Google Earth,

Key Learning

What are the layers of the rainforest?



Different animals and plants live in different parts of the rainforest. Scientists divide the rainforest into strata (zones) based on the living environment.

The emergent layer: Giant trees (between 60m-80m) that are much higher than the average canopy height. It houses many birds and insects.

The canopy: The upper parts of the trees (between 20m-60m).
This leafy environment is full of life in a tropical rainforest and includes: insects, birds, reptiles and mammals.

The understory: A dark, cool environment under the leaves but over the ground.
Most of the understory of a rainforest has so little light that plant growth is limited.
There are short, leafy, mostly non-flowering shrubs, small trees, ferns, and vines (lianas) that have adapted to filtered light and poor soil.
Animals in the understory include insects, arachnids, snakes, lizards and small mammals.

The forest floor: At the bottom is the forest floor. There is lots of shade, pools of water, very little sunlight and a carpet of dead leaves covering the ground. Teeming with animal life, especially insects and arachnids.
The largest animals in the rainforest generally live here including gorillas, anteaters, wild boars, tapirs, jaguars and humans.

Due to the thickness of the canopy, the Amazon floor is in permanent darkness. In fact, it's so thick that when it rains, it takes around ten minutes for the water to reach the ground.

Thinking Point
Why do you think the canopy is often called 'the habitat zone'?



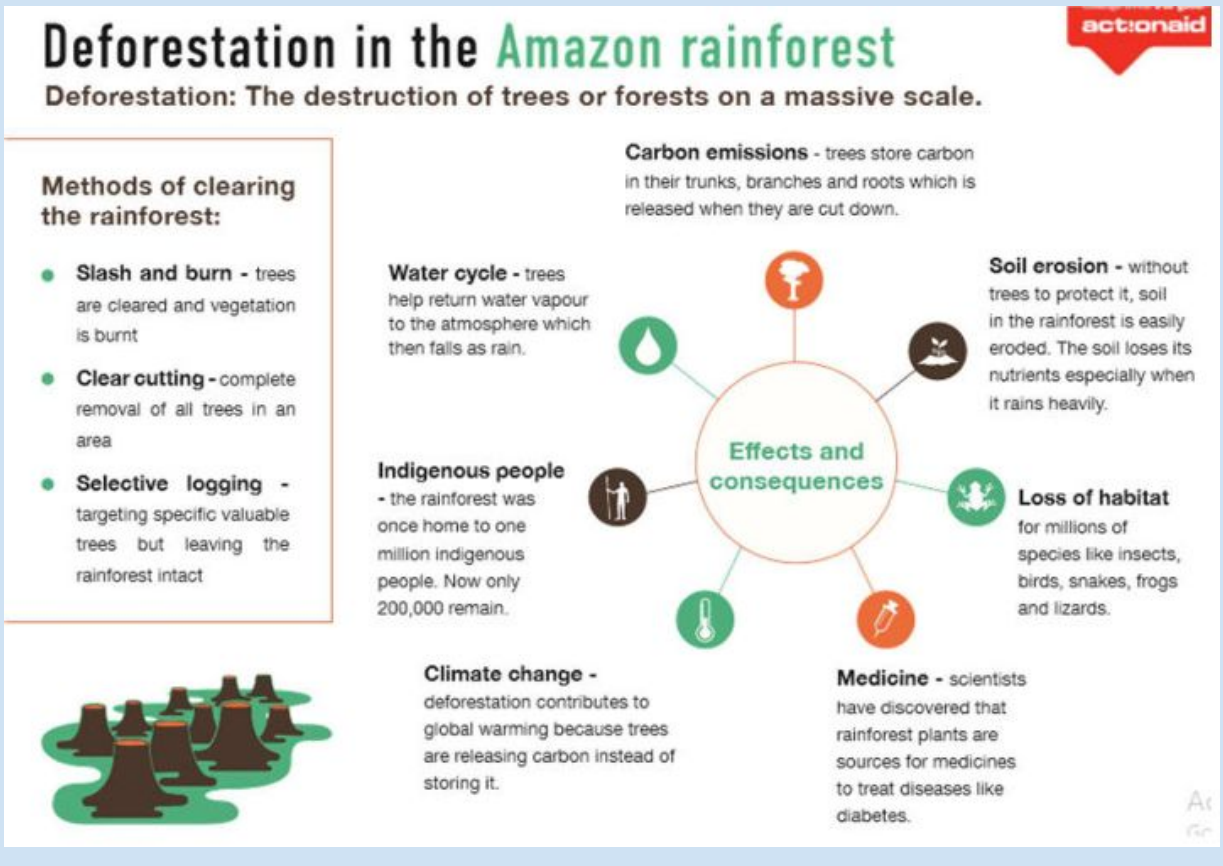
Deforestation:
Every year, an area of rainforest the size of Wales is cut down and destroyed. The plants and animals that used to live in these forests either die or must find a new forest to call their home.

Why are rainforests being destroyed?
Humans are the main cause of rainforest deforestation. We are cutting down rainforests for many reasons:

- Wood for both timber and making fires
- Space for agriculture for both small and large farms
- Land for farmers who don't have anywhere else to live
- Grazing land for cattle
- Pulp for making paper
- Road construction
- Extraction of minerals and energy.



Rainforests are also threatened by climate change, which is contributing to droughts in parts of the Amazon and Southeast Asia. Drought causes die-offs of trees and dries out leaf litter, increasing the risk of forest fires, which are often set by land developers, ranchers, plantation owners, and loggers. In 2005 and 2010, the Amazon experienced the worst droughts ever recorded. Rivers dried up, isolating communities, and millions of acres burned. The smoke caused widespread health problems, interfered with transportation, and blocked the formation of rain clouds, while the burning contributed huge amounts of carbon dioxide to the atmosphere, worsening the effects of climate change.



Thinking Point
If humans know that deforestation is harmful to our planet, why do we still do it?



Power Skills

	Design maps, diagrams, and layered models of the Amazon Rainforest and other biomes; visually represent comparisons with UK temperate forests.
	Analyse and compare biomes, climate zones, and vegetation belts; evaluate causes and impacts of deforestation and human activity.
	Develop responsibility, curiosity, and environmental awareness when studying global issues like deforestation and climate change.
	Work in pairs or groups to research countries, biomes, and the effects of human activity; share ideas and findings.
	Explain biome features, environmental impacts, and comparisons clearly using geographical vocabulary, maps, digital tools, and diagrams.