

# Rainforests

## Where are the Rainforests?

- Definition of Temperate and Tropical rainforests.
- Location of the Equator and Tropics of Cancer and Capricorn.
- How the position of the rainforests affects its climate.
- Seasonal variation in rainfall.
- Water Cycle.

## Layers of the Rainforest

- Emergent Layer – (50m- tallest trees).
- Canopy – (30m – engine of the rainforest and captures most of the sunlight).
- Understorey (20m – younger trees).
- Shrub Layer – (2-5m -ferns, bushes etc).
- Forest floor – (0m – dark and quiet, decomposition, sometimes flooded).
- Plant life in different layers.
- Animal life in different layers
- Animal and plant adaptation to live in rainforests.

## The Amazon

- Where it is – South America. Spans Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, and Suriname—and French Guiana
- World's largest rainforest – 6.7 Million KM<sup>2</sup>.
- Impact of deforestation on life in the Amazon. Topographical features of South America and how this affects the Amazon basin.
- Economy using rainforest materials.
- Home to more than 400 tribes. The Yanomami tribe – largest tribe in South America.
- The Kayapo tribes – dress, culture, body paint, jobs, housing.

## Life in the Rainforest

- Symbiotic relationships between plants, animals and the climate.
- **Plants** - Trees grow tall in search of light (photosynthesis). Large buttress roots, thin bark, waxy leaves with drip tips. Forest floor plants adapt for flooding. Epiphytes grow on trees and steal hosts nutrients.
- **Animals** - Most live in canopy where the food is. Strong limbs for climbing / leaping – Howler Monkeys. Frogs – suction cups for climbing. Flaps of skin for gliding between branches – squirrels. Animals adapted to eat foods available: i.e. the toucan. Nocturnal animals. Increased sense of hearing and smell – carpet python.
- **Humans** – How indigenous tribes have adapted to life in the rainforest. Dangers of colonisation to the tribes. Rubber production.

## Protecting the Rainforest

**Deforestation** (rate of 300,000 km<sup>2</sup> per yr approx.)

**Causes of deforestation** - Ranching, logging, small-scale farming, large scale farming, road building, dam building, mining.

**Economic Impacts** - Farming contributes to economy \$6.9 billion a year, logging – 80% of Brazilian hardwood illegal logging, mining jobs, indigenous people loose farming and hunting lands.

**Environmental Impacts** - Fewer trees to absorb CO<sub>2</sub>, mining increases toxins in rivers and soil, reduction in earth's biodiversity as 80% of land animals live in tropical rainforests, soil erosion from exposure due to tree removal, water cycle affected – changes in weather patterns.

**Sustainability** - Education, reserves, policies, afforestation, reducing debt, selective logging, international agreements – Forest Stewardship Council.

## Mayan Civilisation

- When and where the civilisation was 2000BC – 1500AD. South America.
- Religion – Different Gods with good/bad sides.
- The upper, middle and underworlds.
- Writing and numbers.
- Food

## Vocabulary

**Equator** - divides the planet into a Northern Hemisphere and a Southern Hemisphere.

**Tropic of Capricorn** - an imaginary line of latitude going around the Earth, below the equator.

**Tropic of Cancer** - imaginary latitude line located above the equator that runs across the globe.

**Emergent Layer** - the tops of trees that poke up above the rainforest canopy.

**Canopy** - above the ground, is made up of the overlapping branches and leaves of rainforest trees.

**Understorey** - the warm, damp, and sheltered layer below the leafy tree canopy.

**Undergrowth** - growth on the floor of a forest that includes shrubs, herbs, and saplings.

**Flora** - collective noun used to describe all the plants, trees, fungi and bacteria.

**Fauna** - animal life.

**Nocturnal** - animals that are mainly active during the night.

**Camouflage** - a visual disguise.

**Ecosystem** - is made up of all of the living and non-living things in an area.

**Symbiotic** - living together.

**Deforestation** - the clearing, or cutting down, of forests.

**Tropical** - places near the equator.

**Temperate** - a temperate climate has four seasons: summer, autumn, winter and spring.

**Species** - a group of similar organisms that can breed with one another to produce fertile offspring.

**Buttress Roots** - roots that grow out from the tree trunk and which help to support the tree.

**Sustainability** - Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.