

# The rainforest and their importance

Life



**ASSIGN  
BUSTER**

As part of my geography coursework, I writing a piece on the rainforest, it's ecosystems and it's relevance to the world as a whole. I will produce a piece which is informative and helps to highlight the rainforest and I will demonstrate my knowledge and understanding of it's workings, and greater implications for the wider world. We are all familiar with the rainforests, but do we really understand them or have any real knowledge of them? These questions I will seek to answer in this piece of work.

Rainforest form an integral part of the earth's biosphere, covering around 2% of the earth's surface and being present in every continent except Antarctica. A rainforest is a forest characterized by its extremely heavy rainfall (which is usually a mammoth 1750 to 2000mm each year! ). These rainforests form two common subtypes; the temperate and the tropical rainforests. Over a fifth of the world's water can be found within the boundaries of the rainforest, and similarly, so can a large chunk of the world's wildlife. The rainforest is estimated as being home to around 50% of the world's plants and animals.

If you were to take a sample of a 4 mile patch in the rainforest, then you would probably find around 1, 500 flowering plants, 150 species of butterflies, 400 species of birds, and of course 750 species of trees- which just goes to highlight how expansive the forest's flora and fauna is. Most people will commonly associate the rainforest with its vast abundance of trees, and indeed, this is true. As with all forests, the rainforest's trees are the very base of its ecosystems, and form a structure of layers based on height and shared characteristics.

At the base of the rainforest is the forest floor, this is a dark and damp area-receiving only 2% of the forest's sunlight, and a large amount of collected water. It is dark, warm and humid; and it is difficult for common plants and animals to survive in; so it is only really a habitat to specially adapted organisms. Just above the forest floor comes the shrub layer, it is very dark-covered by the canopy, but can provide a habitat to specially adapted plants which are usually small, but with large leaves so that they can catch as much of the minimal light which shines through as possible.

Above this is comes the understorey. It is a lot darker than the layers above, but has a larger amount of sunlight than the layers beneath (though it still only claims a mediocre 5% of the forest's sunlight). It hosts quite a large array of lizards, snakes, wild cats and birds who have adapted to its environment, and there are plenty of insects to be found there, too. Also, many of the infant trees on the understorey layer may grow to reach the canopy. Above this again, is the canopy layer.

This layer has by far the greatest biodiversity, and hosts the largest amount of trees, plants, animals and other wildlife (it is estimated as housing a quarter of the world's insect population! ). The trees are very tall here; usually ranging from 30 meters to 24 meters in height, but some can grow even taller and reach into the emergent layer. And the emergent layers are the tallest trees which surpass the canopy and form a new layer. These trees can often reach up to 70 m in height!

This air is usually very sunny and hot, as there are no other layers to keep out the heat and light. Animals must be specially adapted to this very high,

light and hot layer; and animals such as monkeys, birds and butterflies are usually best suited to it. It's no surprise that the rainforest's plants have many human uses too. Everyday things which we consume come from the rainforests. Some of these include coffee, cocoa, hardwoods, rubber and latex.

No doubt the rainforest is a huge source of income for Brazil and contributes a substantial amount to its Gross National Product. The plants of the rainforest also have great scientific and medicinal qualities. Indigenous peoples of the rainforest have utilized the health properties of the plants for thousands of years, and modern western medicine often originates in the rainforest. It is estimated that around 2, 000 different plant species have anti-cancer properties, and indeed many of them are being used in anti-cancer treatment today.

Less than 1% of rainforest plants have been tested for medicinal applications though- so who knows what answers the rainforest may hold for future medicine. It is impossible to overestimate the importance of the rainforest to both the whole world's geography and human society, and difficult to imagine just how different our lives would be without products derived from the rainforest. And in conclusion, I can't think of anything more vital to the earth's ecosystem than the rainforest.