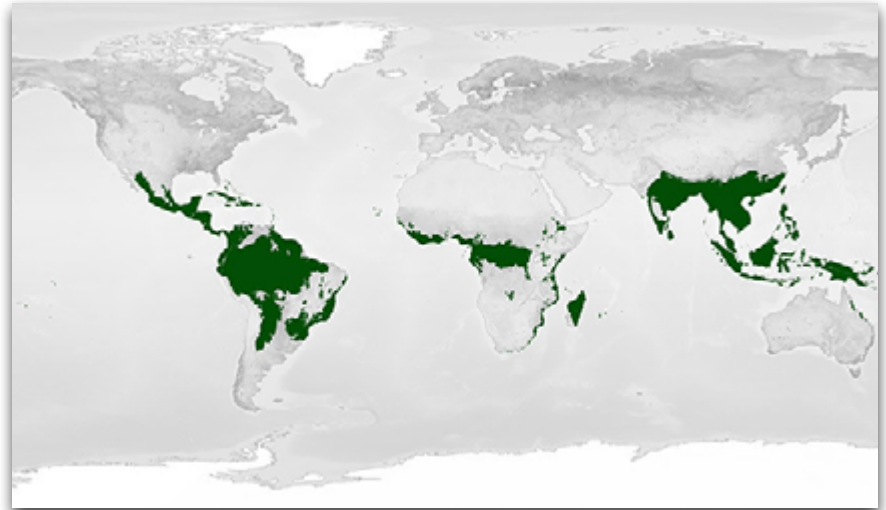


Rainforest Layers

Rainforests are found all over the world; we even have them in the UK!

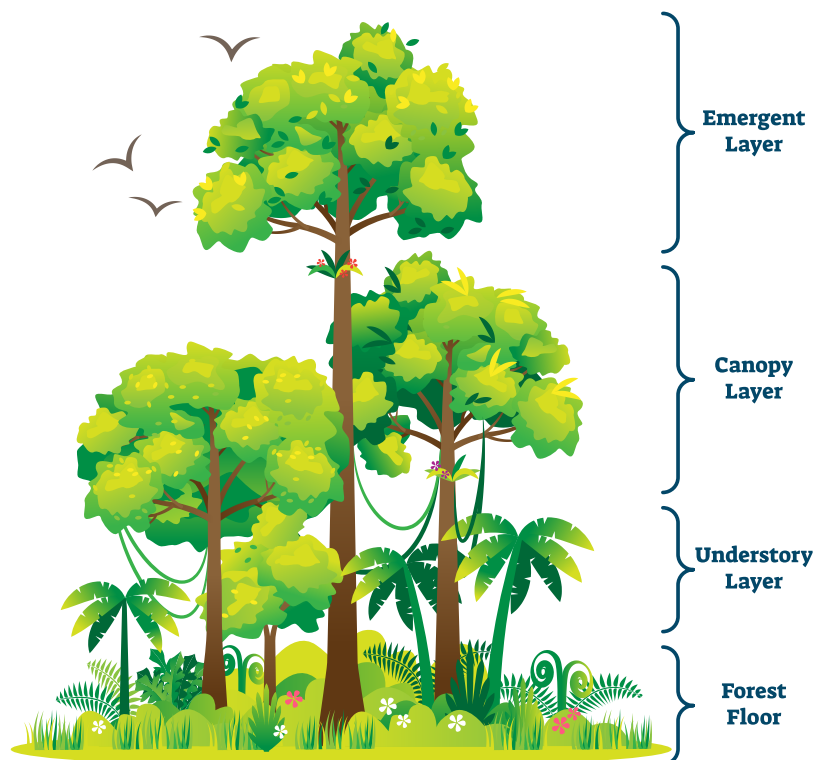
They can be temperate (like the UK ones) or tropical. Tropical rainforests are located near to the equator in places like central Africa, Southeast Asia, Central and South America, and parts of Australia.

All rainforests have a similar structure of layers: emergent, canopy, understory, and forest floor layers. We'll focus on tropical rainforests in this resource. Read on to learn more about each layer and what lives there!



*Tropical rainforest distribution across the world in green
Image Credit: NASA*

RAINFOREST LAYERS



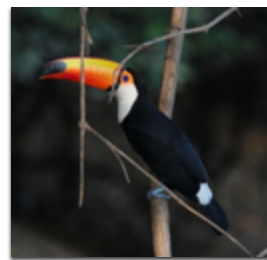
Match-up game!

Before you get the answers on the next few pages, test your knowledge on what lives where in a tropical rainforest! Match the organism to the layer it lives in.

Emergent



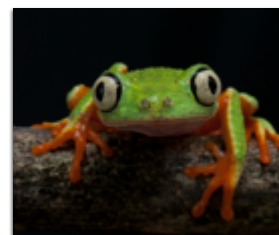
Canopy



Understory



Forest Floor



Emergent

The topmost layer of the rainforest is the emergent layer. Trees can grow up to 60m and a few will stick up above the canopy. Trees in the emergent layer include the huge Brazil nut tree and the kapok tree.



*Buttress roots of a giant kapok tree in Ecuador.
Image by Dick Culbert via Wikipedia*



*Brazil nut tree.
Image by Nando Cunha via Wikipedia*

Animals up here usually get between trees by flying or gliding, like birds, bats, flying insects, and gliders.



Left: Vampire bat, image by Acatenazzi via Wikipedia; Middle: Sugar glider, image by Dawson via Wikipedia; Right: Blue Morpho butterfly, image by Thomas Bresson via Wikipedia



Canopy

The canopy is the next layer down. It is a really dense layer of leaves and vegetation that can be up to 6m thick!

This is where most animals in the rainforest live, because it's easy to get around and the plants here spread their seeds in the form of fruit, so there's lots of food available. It's in the canopy that you would find animals like toucans, spider monkeys, sloths, lizards, and loads of insect species.



Left: Two-toed sloth in Costa Rica By Geoff Gallice via Wikipedia; Left middle: Spider monkey from Colombia By Petruss via Wikipedia; Right middle: Toucan from Brazil by Charles J. Sharp via Wikipedia; Right: Gliding Draco Lizard in Indonesia by A.S.Kono via Wikipedia

The canopy is like the roof of the rainforest. It blocks most of the light and rainwater as well as wind from the layers below, making it dark and humid below.

Understory

Down below the canopy is the dark, still, humid understory. Down here plants have large leaves to maximise the amount of sunlight they can get for photosynthesis.

Because it's mainly trunks of trees that reach up to the canopy and emergent layer, and some large leaved plants, there is much more air space in the understory for flying creatures to move around. Bats, bugs, and birds all like to fly around in the understory.

The air has so much moisture down here that animals with porous skin, like amphibians, are able to keep their skin moist. This layer is where you can find most tree frogs and lots of lizards.



Left: Western Green Mamba By Patrick Coin; Middle: Rough leaf tree frog, Brazil by Renato Augusto Martins; Right: Jaguar by USFWS

Also found down in the understory are bigger mammals which are not specialised to swing from the trees, like jaguars, forest elephants and gorillas, as well as big reptiles like pythons. Because of the low and dappled light, it's easy for animals like jaguars, green mambas, and pythons to camouflage themselves.

Forest Floor

The bottom-most layer of a rainforest is the forest floor. This is where dead leaves, dead trees, and even dead animals fall and decay.

It's very dark down here, under so many layers of light-filtering plants, that almost no plants grow on the forest floor itself.

Some life does still thrive down here, and in fact it's essential to the survival of even the biggest trees! Decomposers like fungi, bacteria, and some insects break down the dead leaves, wood, and animals to recycle their nutrients for the plants and animals in the upper layers. There are also larger animals that feed on the decomposers, like wild pigs, anteaters, armadillos, and rodents.



Left: *Laternea pusilla* fungus in Costa Rica by Daniel Jimenez via Wikipedia; Middle: Nine banded armadillo in Mexico by Ereenegeevia Wikipedia; Right: Amazon river dolphin By Nortondefeis via Wikipedia

Down on the forest floor is also where you would find freshwater bodies like rivers or lakes, which can have their own diversity of plants and animals surviving in and on them, like fresh water dolphins!

For more information about rainforest structure click [here](https://www.dynamicearthonline.co.uk).

