

This term our exciting new topic is: **The Rainforest.**

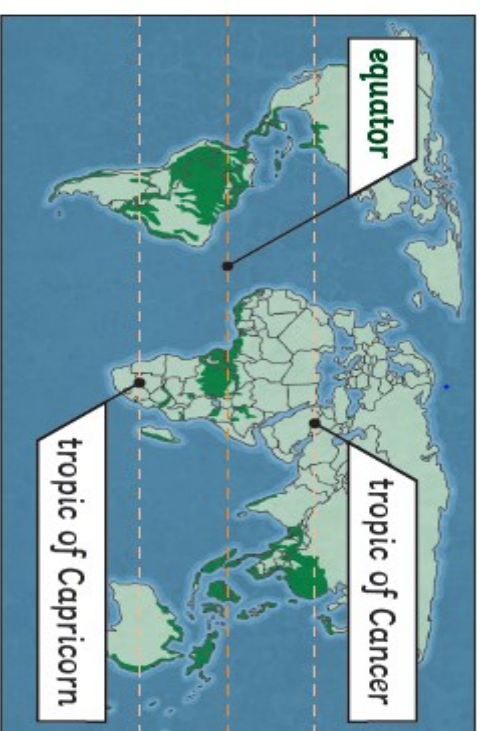
We will be learning about where the rainforest is, some of the animals that live there and the current threats to the rainforest. We will make links to the environment and investigate deforestation, sustainability and food trade.

Where in the World?

Rainforests are found near to the **equator** between the tropic of Cancer and the tropic of Capricorn.

They can be found in every continent except Antarctica.

They are located in countries such as Brazil, India, Peru, Mexico, Australia and Malaysia.



Climate

The **climate** in the rainforest is the same all year round.

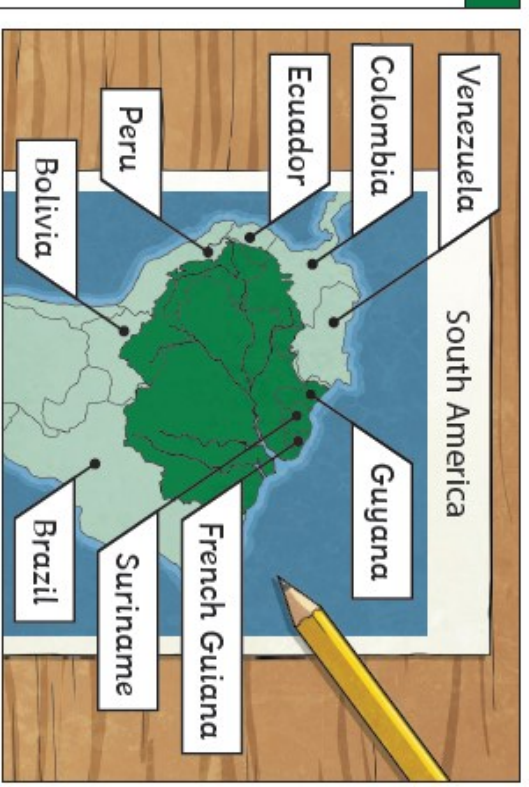
- Average rainfall of 6cm each month
- Usually rains every day
- Hot and **humid**

Key Vocabulary

climate	The average weather conditions over a long period of time.
deforestation	The cutting down and clearing of forests.
equator	An imaginary circle running round the centre of the earth.
humid	Feeling very damp due to water vapour in the air.
native tribes	The original settlers of an area.
species	A group of similar animals or plants
weather	The specific condition on a given day.

The Amazon Rainforest

- 5.5 million square km (previously covered a much larger area)
- Parts in Brazil, Peru, Colombia, Venezuela, Ecuador, Bolivia, Guyana, Suriname and French Guiana
- 2.5 million insect **species**
- 40 000+ plant **species**
- 3 000 edible fruits
- 2 000+ **species** of birds and mammals



- 2 million tourists per year
- 170 different languages spoken
- 250 000 **native tribes** currently live there

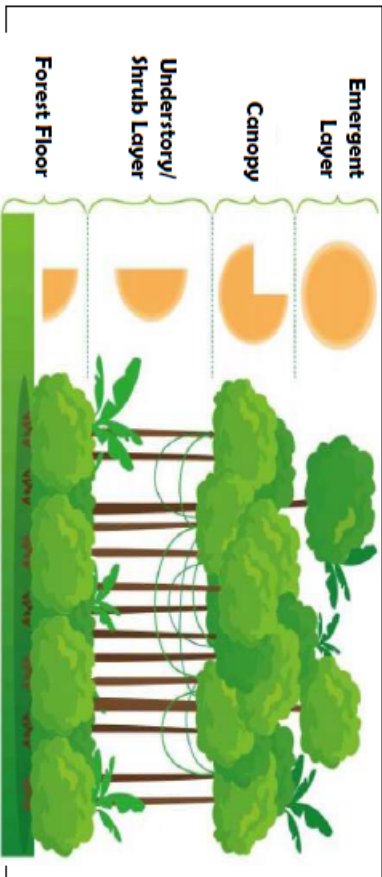








THE RAINFOREST KNOWLEDGE ORGANISER



Diagram – Layers of the Rainforest



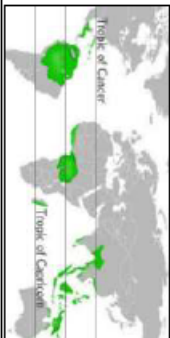
Layers of the Rainforest

Emergent Layer	Canopy
 <p>The emergent layer is the name given to the very tops of trees that grow above the canopy level. There is lots of sunshine and rainfall here, and only the strongest and tallest plants grow to this height. Anything above 45 metres (150 feet) are emergent, however some trees can grow to a massive 70 metres (230 feet)! Only some birds, bats, butterflies and small monkeys live here.</p>	 <p>The canopy is a dense layer of vegetation at around 30-45 metres (100-150 feet). It is sometimes called the 'ceiling' of the rainforest, as it blocks a great deal of sunlight with its thick, overlapping leaves. As a result, the layers below the canopy level are often quite shaded. Lots of animals, e.g. insects, bats, birds and monkeys can be found in the canopy layer.</p>
Understory/ Shrub Layer	Forest Floor
 <p>The understory level is a muddle of intertwining shrubs, young trees, vines, saplings, and palms. It is very hot and damp here, and the air is very still. Compared to the canopy, plants here receive little sunlight. This lack of light limits the growth of plants, and so they must have special adaptations in order to survive here. For example, leaves on plants here tend to be much broader. Snakes, lizards and birds are examples of animals living here.</p>	 <p>The forest floor is exceptionally hot and humid, due to the constant shade from the levels above. Despite this, the forest floor remains an important part of the rainforest's eco-system. The forest floor is where decomposition takes place – dead plants and animals are broken down and their nutrients recycled. Most of the largest animals of the rainforest live here, for example elephants, tigers, the tapir and the jaguar.</p>


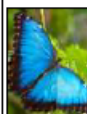





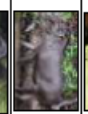




Where are the Rainforests?

Rainforests are usually found between the Tropic of Cancer and the Tropic of Capricorn (the tropics), where it is close to the Equator. It is very warm and there is lots of rainfall.

The biggest rainforest in the world is the Amazon rainforest in South America. These are the locations of the 10 largest rainforests in the world (not in order): Mexico, Venezuela, Bolivia, Brazil, Colombia, Suriname, Peru, Congo DRC, Indonesia, Papua New Guinea.



Animals of the Rainforest – including description, location, and key facts!

Harpy Eagle		Harpy eagles are the largest and most powerful raptors found in the rainforest. Harpy eagles perch on emergent trees scanning the canopy for prey, for example sloths and monkeys. They are occasionally eaten by snakes and jaguars.	South/Central America Emergent	Length: approx. 1m Weight: approx. 6kg
Morpho Butterfly		Morpho butterflies are several species that are known for their bright colours and large size. They live for about 15 days. Their low weight and ability to fly means that the emergent layer is perfectly safe for them.	South/Central America Emergent	Length: approx. 6cm Weight: approx. 15g
Howler Monkey		Howler monkeys are among the largest of the Central/South American monkeys. They are known for their exceptionally loud call, which can be heard 3 miles away! They mainly eat canopy leaves and fruits.	South/Central America Canopy	Length: approx. 1m Girth of this is tall! Weight: approx. 6kg
Flying Fox Bat		Flying fox bats are the largest bats in the world. They feed mainly on nectar, blossoms, pollen, and fruit. Unlike other bats, they don't have echolocation. Instead, their sense of smell and eyesight are well-developed.	Asia/Australia/Africa Canopy	Length: approx. 40cm Weight: approx. 0.6kg
Red-Eyed Tree Frog		The red-eyed tree frog lives in areas of rainforest near inland water, e.g. rivers and ponds. When threatened, it opens its eyes, in an attempt to startle predators before it escapes.	South/Central America Canopy	Length: approx. 6cm Weight: approx. 10g
Sloth		Sloths are known for their exceptionally slow movement and for hanging upside down in trees. Their slow speed has evolved as a result of their low energy diet.	South/Central America Canopy	Length: approx. 70cm Weight: approx. 6kg
Reticulated Python		The reticulated python is the world's longest snake and in the top 3 heaviest. They stalk the understory, looking both below and above for prey, such as small mammals and birds.	Asia Understory Layer	Length: approx. 4m Weight: approx. 50kg
Bullseye Ant		These ants are known for their exceptionally painful sting. They live in colonies of a few hundred, and spend their days foraging in the understory for nectar.	South/Central America Understory Layer	Length: approx. 20mm Weight: approx. 3mg
Tapir		Tapirs are large herbivores that are similar in shape to a pig, with a short nose trunk. Their diet consists of fruit, berries and leaves.	South/Central America/Africa Forest Floor	Length: approx. 2m Weight: approx. 200kg
Cerilla		Cerillas are herbivores that dwell in the forests of central Africa. They mostly eat the leaves, stems, and shoots of the forest. The DNA of gorillas is around 97% identical to humans.	Africa Forest Floor	Length: approx. 1.5m Weight: approx. 160kg
Jaguar		The jaguar is the largest carnivorous animal in South America. The jaguar enjoys swimming and is at the top of its food chain. They regularly eat deer, tapirs and small mammals.	South/Central America Forest Floor	Length: approx. 1.5m Weight: approx. 80kg
Bengal Tiger		The Bengal Tiger is one of the biggest tiger subspecies (tigers are the biggest cats in the world). It is a top carnivore, eating mainly chital, sambar and domestic livestock. There are approximately 2500 left in the wild.	Asia Forest Floor	Length: approx. 2.7m Weight: approx. 300kg

Amazon Rainforest Timeline

Before 1500 – Deforestation is a feature of Amazonian life long before Europeans arrive around 1500. Indigenous peoples maintained extensive areas of agriculture, and cleared areas for living.

1800 – The invention of the rubber tyre starts the Amazon Rubber Boom.

1900 – Rapid clearing in Brazil. Whole state of Parana cleared in 30 years.

1970 – Huge clearing for the Transamazon Highway.

Early 2000s – Amazon loses 43 million hectares per year.

Present Day – 269,000 sq miles of Amazon lost; 100 years predicted no rainforest left.



Emergent Layer	Canopy Layer	Understorey Layer	Forest Floor
			
Trees can be up to 60m tall	Trees form a roof over the plants below	Trees grow to less than 4m tall	Very few plants
Lots of sunlight	Lots of sunlight but also plenty of rain	Very little sunlight	Almost no sunlight
Cold and windy	Lots of food for animals	Warm and humid	Leaves and debris decompose quickly
Birds, bats, monkeys and butterflies	Snakes, toucans and tree frogs	Lots of insects	Gorillas, anteaters, leopards and tigers
			

What Can Be Done to Protect the Rainforest?

Use both sides of a piece of paper, and use pencils until they are stubs.	Use ebooks or a library rather than buying new books.
Turn off lights and electrical items when not in use.	Buy Fairtrade fruit, vegetables, chocolate and coffee.

Deforestation

Trees are cut down:	
<ul style="list-style-type: none"> • to create fields for farming cattle and growing crops, • to produce timber and wood pulp to make furniture and paper, • to create space for housing. 	
Positive Impacts	Negative Impacts
<ul style="list-style-type: none"> • Jobs are created in logging and transporting timber and manufacturing products. • Selling land raises money for local people. 	<ul style="list-style-type: none"> • People's homes are destroyed. • Animals and plants may become extinct through habitat loss. • Plants that may have been useful could be lost.



Places to visit to enhance your learning

- The **Botanical Gardens in Birmingham** has an amazing variety of plants that grow in the Rainforest.
- **West Midland Safari Park** has many different animals has many different animals including animals whose natural habitat is the rainforest.
- Discover the link that **Stratford Butterfly Farm** has to the Rainforests of Belize and the ancient Ma-ya civilisation.

Websites to support school & class and home learning

[Fun Rainforest Facts for Kids \(easyscienceforkids.com\)](http://easyscienceforkids.com)

[Amazon Rainforest | WWF](http://www.amazon.com/rainforest)

[rainforest - Kids | Britannica Kids | Homework Help](http://www.britannica.com/kids)

[Rainforest Animals List With Pictures & Facts, Free Printable Worksheet \(activewild.com\)](http://www.activewild.com)

<https://www.dkfindout.com/uk/animals-andnature/>

[habitats-and-ecosystems/rainforest-layers/](http://www.habitats-and-ecosystems.com/rainforest-layers/)

<https://www.rainforestanimals.net/>

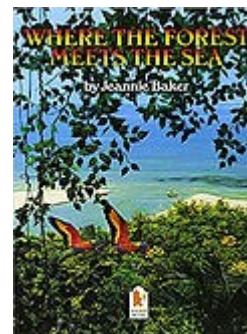
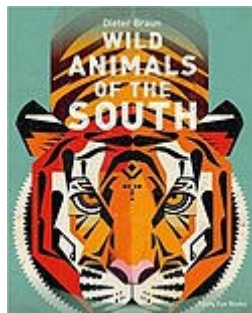
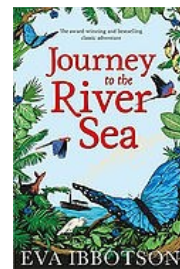
<https://www.natgeokids.com/uk/discover/geography/physical-geography/amazon-facts/>

The BBC also has programmes such as Deadly 60, and Planet Earth that children may

Books linked to the Rainforest

There are so many amazing books linked to the rainforest. These are just a selection that will enhance your learning further. The Hive library/Droitwich library will have many that you can borrow to read.

What facts will your learn that you will be able to share with the class?



Science: Our Science Unit links very closely our topic on The Rainforest. This term we will be focusing on Living Things and Their Habitats. We will investigate the habitats living in not only our local environment but the environment in the rainforest.

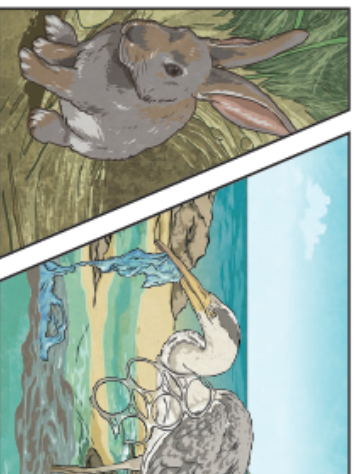
Key Vocabulary

organisms	This is another word that can be used to mean 'living things'.
life processes	The things living things do to stay alive.
respiration	A process where plants and animals use oxygen gas from the air to help turn their food into energy.
sensitivity	The way living things react to changes in their environment .
reproduction	The process through which young are produced.
excretion	The process by which living things get rid of waste products.
nutrition	The process of obtaining food to provide living things with energy to live and stay healthy.
habitat	The specific area or place in which particular animals or plants may live.
environment	An environment contains many habitats and these include areas where there are both living and non-living things.
endangered species	A plant or animal where there are not many of their species left and scientists are concerned that the species may become extinct .
extinct	When a species has no more members alive on the planet, it is extinct .

Life Processes

To stay alive and healthy, all living things need certain conditions that let them carry out the seven **life processes**:

- | | |
|-------------|--------------|
| Movement | Growth |
| Respiration | Reproduction |
| Sensitivity | Excretion |
| | Nutrition |



Changes to an **environment** can be natural or caused by humans. Changes to an **environment** can have positive as well as negative effects. Here are some examples of things that can change an **environment**.

- Natural**
- earthquakes
 - storms
 - floods
 - droughts
 - wildfires
 - the seasons

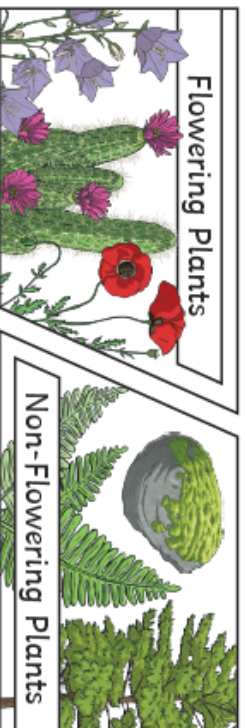
- Human-Made**
- deforestation
 - pollution
 - urbanisation
 - the introduction of new animal or plant species to an **environment**
 - creating new nature reserves

Plants and animals rely on the **environment** to give them everything they need. Therefore, when **habitats** change, it can be very dangerous to the plants and animals that live there.

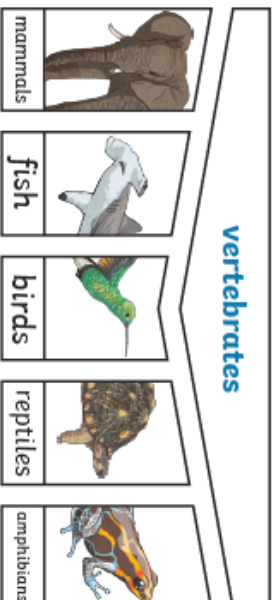
Key Vocabulary

classification	This is where plants or animals are placed into groups according to their similarities.
vertebrates	Animals with a backbone.
invertebrates	Animals without a backbone.
specimen	A particular plant or animal that scientists study to find out about its species.
characteristics	The distinguishing features or qualities that are specific to a species.

Plants can be sorted into many different groups.
For example:

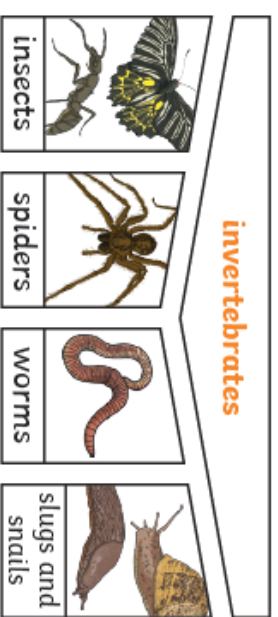


Animals can be grouped in lots of different ways based upon their **characteristics**.



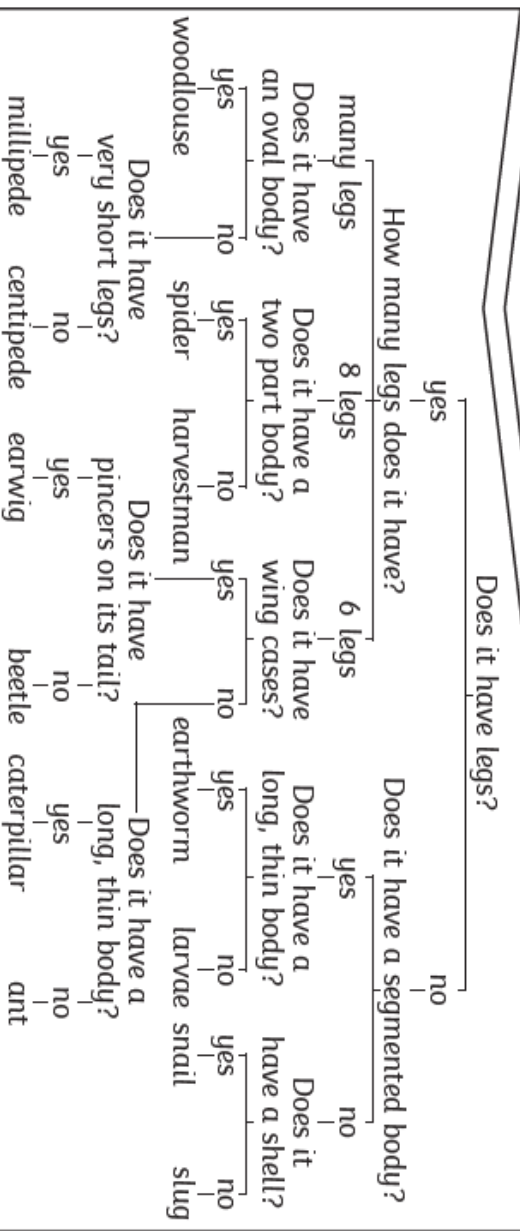
Vertebrates can be separated into five broad groups.

You can use **classification** keys to help group, identify and name a variety of living things. Here is an example of a **classification** key:



You could sort **invertebrates** you might see around school in different ways, such as in this example. The vast majority of living things on the planet are **invertebrates**.

Invertebrate Classification Key



Homework menu- ORANGE CLASS

AUTUMN TERM—THE RAINFOREST

To reinforce and enhance the learning during our topic, the children are invited to complete various activities. These activities can be selected from the menu below and will be shared with their classmates and teachers during the week before half term. House points and certificates will be awarded as a celebration of the tasks the children have completed. In previous years, the children are very proud to show their friends what they have learnt and created and Mr Uren and Mr Gromski love to drop by to see what the children have been doing at home.

Please do not bring in any of the tasks until **21st October 2021** as we have limited space in school.

<p style="text-align: center;"><u>Create</u></p> <p>Make a shoe box 3D model of a rainforest showing the four levels. Can you add and label some different animals and plants that live in the rainforest? Make a 3-D model of an Amazonian animal out of recycled materials. Make a collage using paint, scraps of material and paper showing the rainforest foliage and flowers.</p>	<p style="text-align: center;"><u>English</u></p> <p>Write a poem about the rainforest or an animal that can be found in the rainforest. It does not have to rhyme. Try to include poetry features such as: similes, metaphors, alliteration, personification and a set structure.</p>	<p style="text-align: center;"><u>Maths</u></p> <p>Write your own Maths word problems related to the rainforest with answers, e.g. In a group of 12 parrots, 6 are blue, 3 are red and 3 are green. What fraction are blue?</p>
<p style="text-align: center;"><u>Citizenship & Responsibility 1</u></p> <p>An area of rainforest the size of a football field is being destroyed each second. Create a poster or a leaflet to persuade people to help protect the Rainforest. Think about: - Why are they cutting down the rainforests? Who is doing this? Who does it affect? What can we do to help?</p>	<p style="text-align: center;"><u>Research & Computing</u></p> <p>Create a PowerPoint about the Amazon Rainforest. What interesting facts could you include that others may not know? Try using images and facts. There are lots of great techniques on PowerPoint. We will then share these PowerPoints in class. Pick one rainforest animal and describe how that animal is adapted to life in a rainforest.</p>	<p style="text-align: center;"><u>Research 2</u></p> <p>Use the internet to produce a quiz of 10 questions about the Amazon Rainforest & include answers. We could complete your quiz in school with your friends.</p>
<p style="text-align: center;"><u>Citizenship & Responsibility 2</u></p> <p>Write a letter to our Prime Minister explaining why we need to save rainforests and suggest ways in which we can help e.g. only buying rainforest friendly/Fairtrade products.</p>	<p style="text-align: center;"><u>Research & Diagram</u></p> <p>Invent your own rainforest creature. Draw or make your animal and write a description of it. This must be at least half a side of A4. Think about: - what it is like; - where it lives (which layer of the forest); - what it looks like; - what it eats (diet) -who hunts it (predators).</p>	<p style="text-align: center;"><u>Survival</u></p> <p>Create a Rainforest Survival Guide: If you were dropped in the rainforest, how would you survive? What would you need to know? What tools would you need? You might want to include a kit list, a 'dangerous animals to watch out for' list, health and safety instructions and any other images and diagrams you want.</p>