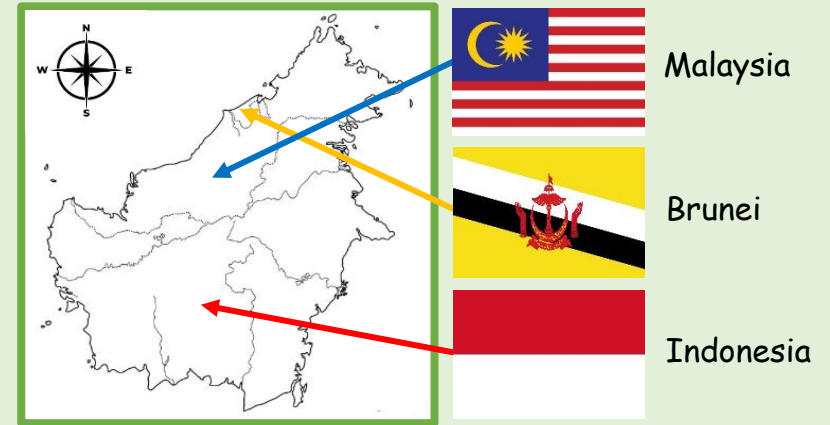


## YEAR 3: GEOGRAPHY SPRING 2: BORNEO RAINFOREST

### Location

Borneo is the third largest island in the world with an area of 748,168 km<sup>2</sup>. It is part of the Asian continent and lies along the Equator. Due to its position on the Equator, it is in the **tropical** climate zone and has a rainforest **biome**. There are three countries that make up the island of Borneo: Malaysia, Brunei and Indonesia. The rainforest in Borneo is home to over 15,000 plant species and around 1,400 **amphibians**, mammals, birds, fish, reptiles and insects. It is estimated to be around 140 million years old, making it one of the oldest rainforests in the world!



Key Vocabulary	
<b>tropical</b>	Hot and wet all year round.
<b>biome</b>	Naturally occurring communities of plants growing in the same place.
<b>amphibians</b>	Cold-blooded four-legged vertebrates, including frogs.
<b>emergent</b>	A plant or tree that is taller than the other plants around it.
<b>evaporate</b>	Turn from liquid to gas.
<b>condense</b>	Turn from gas to liquid.
<b>precipitation</b>	Rain, sleet, snow, hail.
<b>endemic</b>	Only found in a certain place.
<b>deforestation</b>	Cutting down of trees.
<b>endangered</b>	Seriously at risk of extinction.
<b>plantation</b>	A large piece of land where the same crop is grown in large numbers.

### Layers of the Rainforest

The vegetation in a rainforest grows in distinct layers:

**Emergent layer:** Receives the most sunlight and plenty of rain. Trees can reach 70m in height. Animals in this layer include: scarlet macaws, harpy eagles, capuchins.

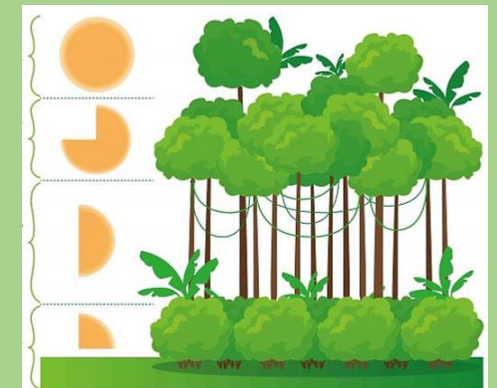
**Upper canopy:** Gets plenty of rain and sunlight but is less windy than the **emergent** layer. Wide leaves and thicker branches create a roof which stops light getting to lower layers. Animals here include: toucans, sloths, howler monkeys, iguanas.

**Understory:** This layer only gets a small amount of sunlight. It is a damp, warm environment filled with smaller shrubs and trees.

Animals here include: tree frogs, jaguars, praying mantis.

**Forest floor:** This layer is dark, damp and very warm with virtually no sunlight reaching the floor.

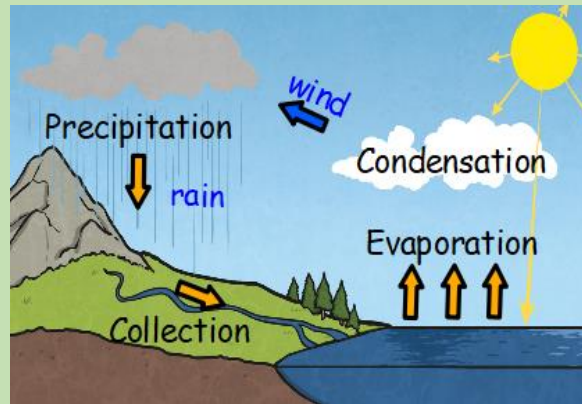
Leaves fall to the floor and start to rot. Animals here include: worms, giant centipedes, giant anteaters, leaf-cutter ants.



## YEAR 3: GEOGRAPHY SPRING 2: BORNEO RAINFOREST

### The Water Cycle

Heat from the Sun causes water from seas, lakes and rivers to **evaporate**. Water vapour rises, cools and **condenses**, forming clouds. As more water vapour condenses, clouds become heavier and the water falls back to Earth as **precipitation** where it is collected by seas, lakes, rivers or the ground. The cycle begins again.



### Biodiversity

The word biodiversity refers to the variety of living things in a particular area. Rainforests have high biodiversity; lots of plant and animal species live in this biome. Lots of the animals found in Borneo are **endemic**. One single Dipterocarp tree can be home to up to 1,000 different insects! On average, around three new species are discovered every month in the Borneo rainforest. Plants discovered here help scientists to make medicines that treat illness and disease.



### Palm Oil

Palm oil is an edible vegetable oil that comes from the fruit of oil palm trees. Palm oil is in nearly everything; from pizza and chocolate to toothpaste and shampoo. Indonesia and Malaysia grow 85% of the palm oil used around the world.



### Deforestation

Palm oil is a major driver of **deforestation**, destroying habitats belonging to **endangered** animals such as the orangutan, pygmy elephant and Sumatran elephant. One third of the natural Borneo rainforest has been lost in the last 50 years.

Beautifully biodiverse rainforests are destroyed to make room for palm oil **plantations**. Consequences of deforestation include:

- Reduced biodiversity: hundreds of different species of trees and plants are destroyed and animals lose their homes.
- Reduced ability to tackle pollution: trees absorb CO<sub>2</sub> which is a greenhouse gas that contributes to global warming.

