

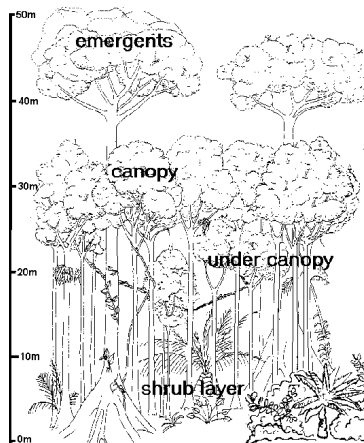


# Memory Geogger

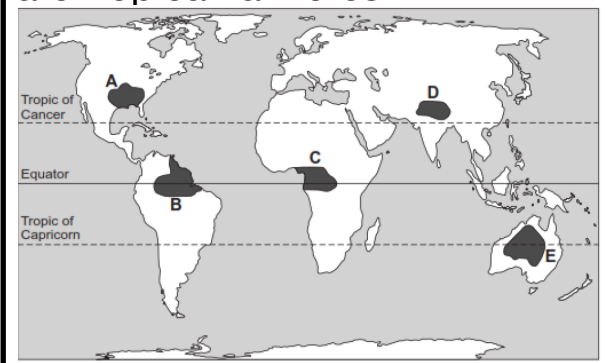
Define biodiversity

Explain why soils are infertile in the tropical rainforest

Describe the characteristics of each layer in the rainforest



Identify which areas on the map are tropical rainforest.



Describe and explain the features of the vegetation shown in the photograph





# Memory Geogger

## Define biodiversity

The variety of plants and animals that live within an area or ecosystem.

## Describe the characteristics of each layer in the rainforest

Emergents are the tallest trees and are usually over 50 metres tall. The Kapok tree is an example of an emergent.

The sea of leaves blocking out the sun from the lower layers is called the canopy. The canopy contains over 50% of the rainforest wildlife. This includes birds, snakes and monkeys.

Lianas (vines) climb to the canopy to reach this sun light.

Epiphytes, or air plants, are also found in this layer. An epiphyte is an organism that grows on the surface of a plant and gets its moisture and nutrients from the air, rain, water or from debris gathering around it.

The under canopy mainly contains bare tree trunks and lianas. Lianas are vines that climb the vegetation in a bid to reach sunlight.

The shrub layer has the densest plant growth. It contains shrubs and ferns and other plants needing less light. Saplings of emergents and canopy trees can also be found here.

The forest floor is usually dark and damp. It contains a layer of rotting leaves and dead animals called litter. This decomposes rapidly (within 6 weeks) to form a thin humus, rich in nutrients. Below the rich top soil the soil lacks nutrients. This is because nutrients are rapidly absorbed by vegetation.

## Explain why soils are infertile in the tropical rainforest

The high temperature and moisture of tropical rainforests cause dead organic matter in the soil to decompose more quickly than in other climates, thus releasing and losing its nutrients rapidly.

The high volume of rain in tropical rainforests washes nutrients out of the soil more quickly than in other climates.

## Identify which areas on the map are tropical rainforest.

B&C

## Describe and explain the features of the vegetation shown in the photograph

Responses should include description and explanation. There should be clear evidence that the photograph has been used, e.g. the buttress roots of the trees, limited undergrowth, straight trunks. No credit for features not observed in the photograph.

- Due to the high rainfall, leaves often have drip tips which allow the water to be channeled to the end and fall so the leaf does not break. Leaf stems are also flexible to allow leaves to move with the sun.
- The bark on the trees is thin and smooth to allow free flow of water and because the high temperatures mean that there is no need for protection against cold.
- The waxy upper surface of the leaves protects against the heat.
- Some plants, such as lianas, climb up the trees to reach sunlight for photosynthesis, while others live on branches in the canopy for the same reason i.e. epiphytes.
- Buttress roots support the trees as they grow incredibly tall (over 50 m in some cases) as there is great competition for sunlight.