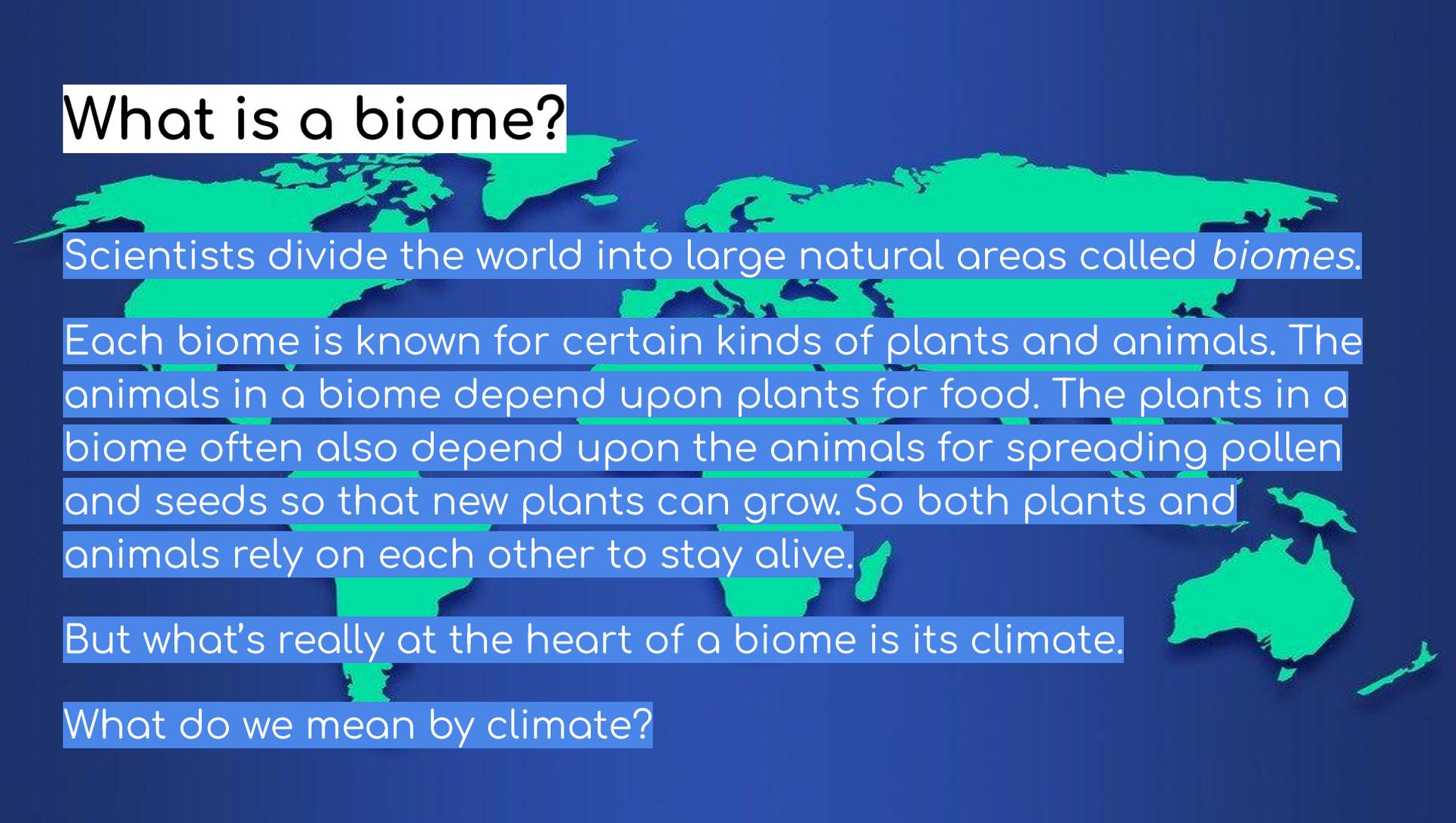


Biomes

What is a biome?



Scientists divide the world into large natural areas called *biomes*.

Each biome is known for certain kinds of plants and animals. The animals in a biome depend upon plants for food. The plants in a biome often also depend upon the animals for spreading pollen and seeds so that new plants can grow. So both plants and animals rely on each other to stay alive.

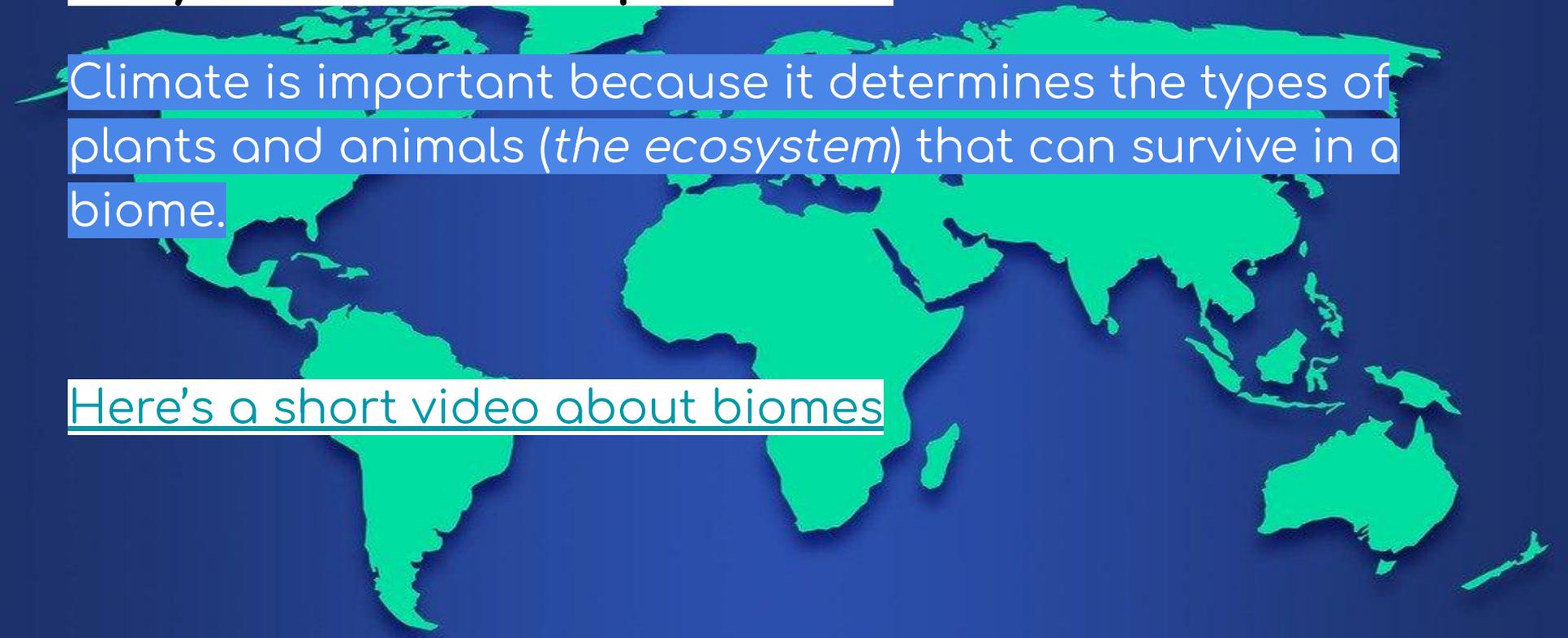
But what's really at the heart of a biome is its climate.

What do we mean by climate?

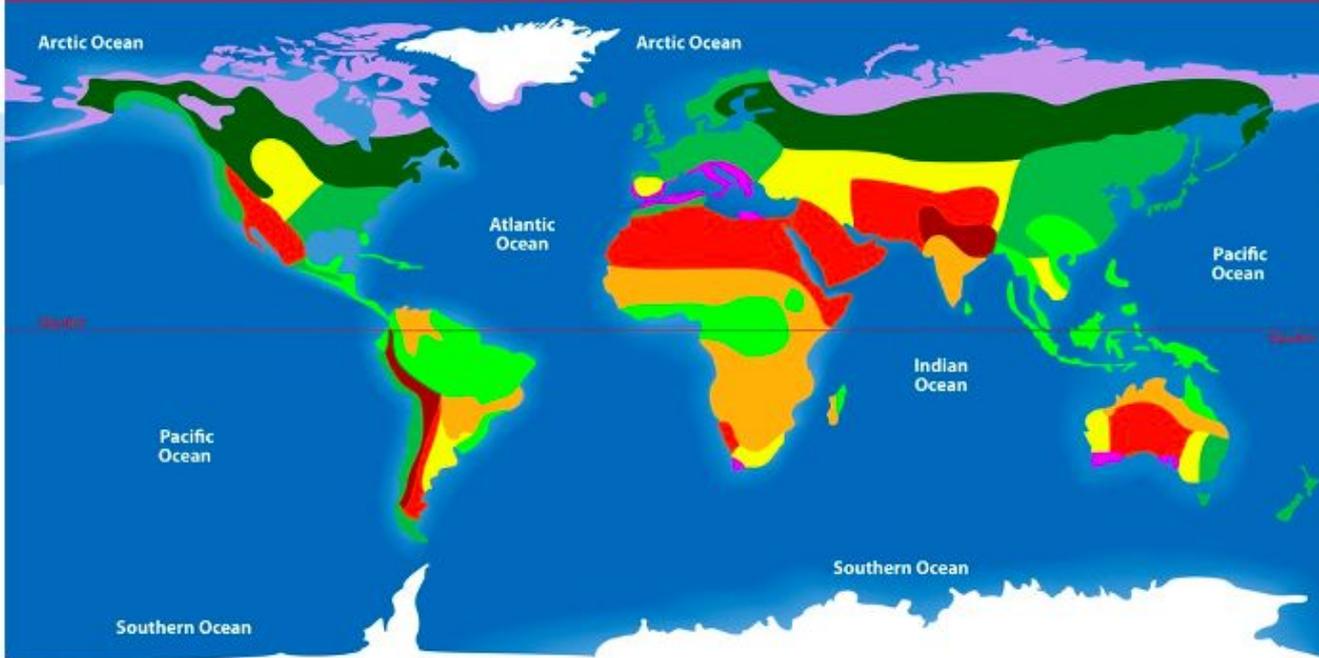
Why is climate important?

Climate is important because it determines the types of plants and animals (*the ecosystem*) that can survive in a biome.

[Here's a short video about biomes](#)



The main biomes in the world



What biome is the UK in?

Where do you find ice sheets?

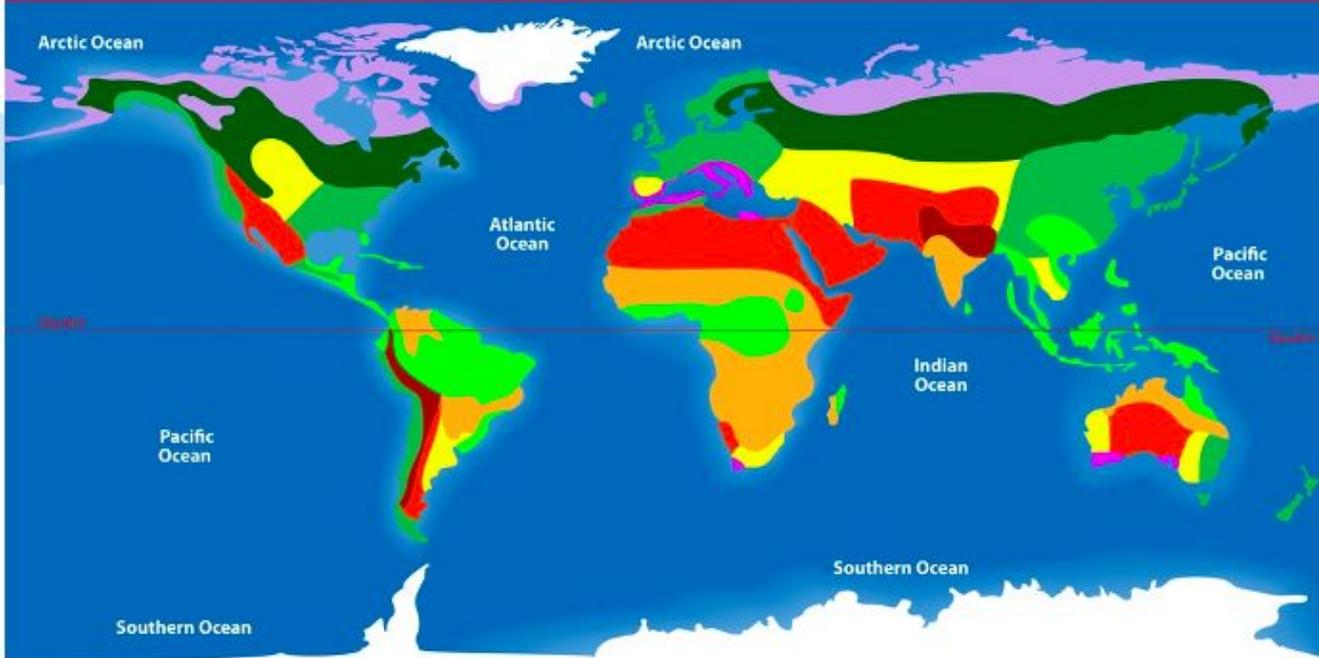
What biomes appear along the equator? Why?

Where are the deserts?



- | | | |
|--|----------------------------|--------------------------|
| Ice sheet and polar desert | Mixed and deciduous forest | Savanna |
| Tundra | Tropical rainforest | Desert |
| Taiga | Grassland | Mediterranean vegetation |
| Montane (alpine tundra and montane forest) | | |

The main biomes in the world

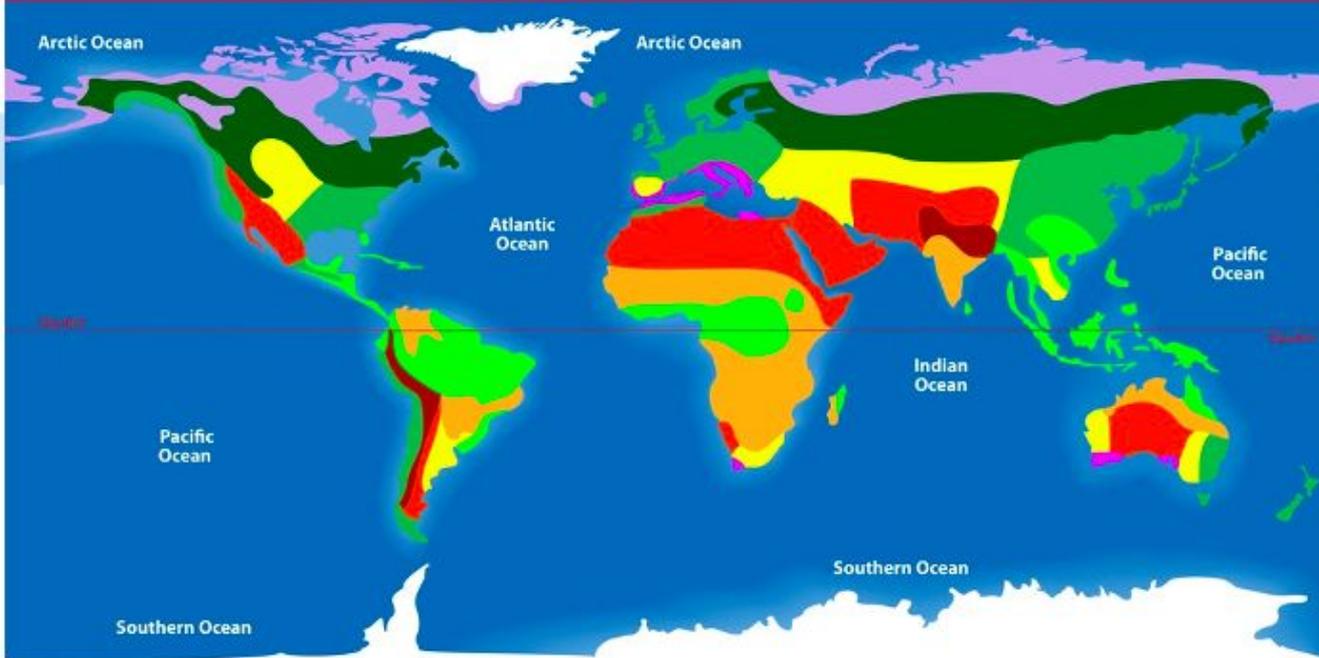


The UK is part of the 'mixed and deciduous forest' biome. About 1000 years ago, Britain was still 25% forest. But this has now been cleared to build on and we have only 3% forest. But we are still part of that biome.



 Ice sheet and polar desert	 Mixed and deciduous forest	 Savanna
 Tundra	 Tropical rainforest	 Desert
 Taiga	 Grassland	 Mediterranean vegetation
 Montane (alpine tundra and montane forest)		

The main biomes in the world



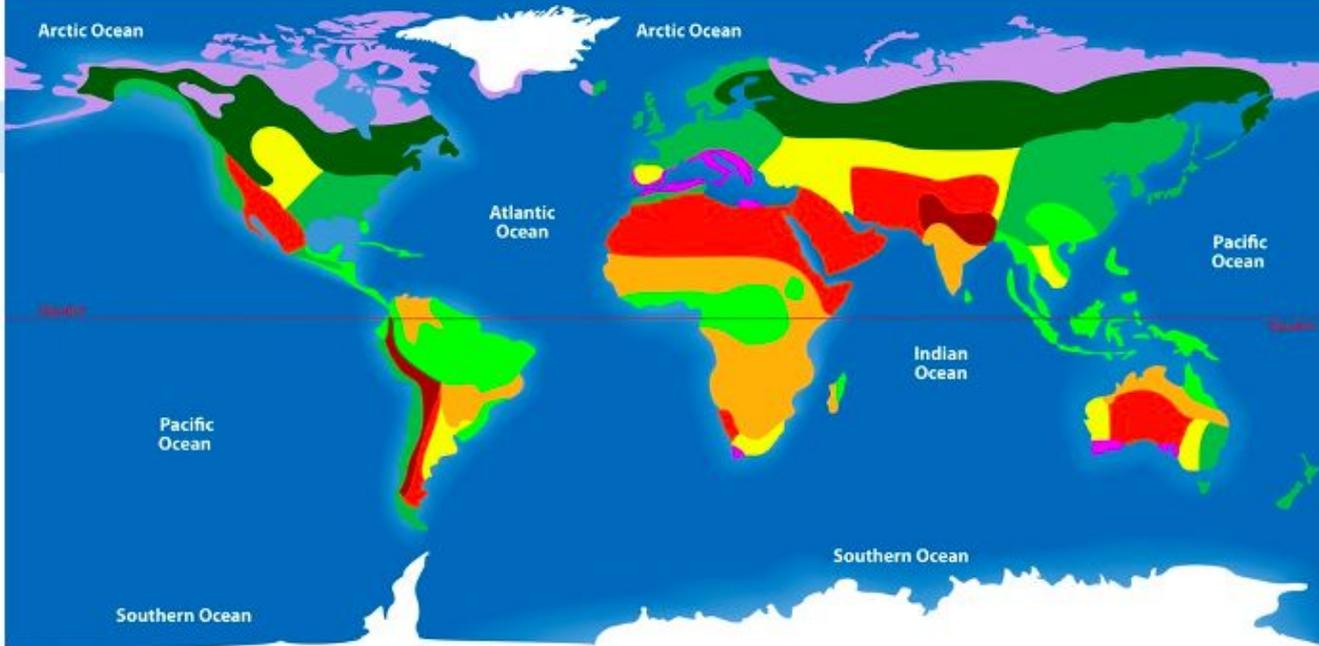
The 'Ice Sheet and polar deserts' are found at both North and South poles.

There is also a band of *tundra*. Tundra is a flat, tree-less landscape where the ground remains frozen solid all year round (called *permafrost*).



 Ice sheet and polar desert	 Mixed and deciduous forest	 Savanna
 Tundra	 Tropical rainforest	 Desert
 Taiga	 Grassland	 Mediterranean vegetation
 Montane (alpine tundra and montane forest)		

The main biomes in the world



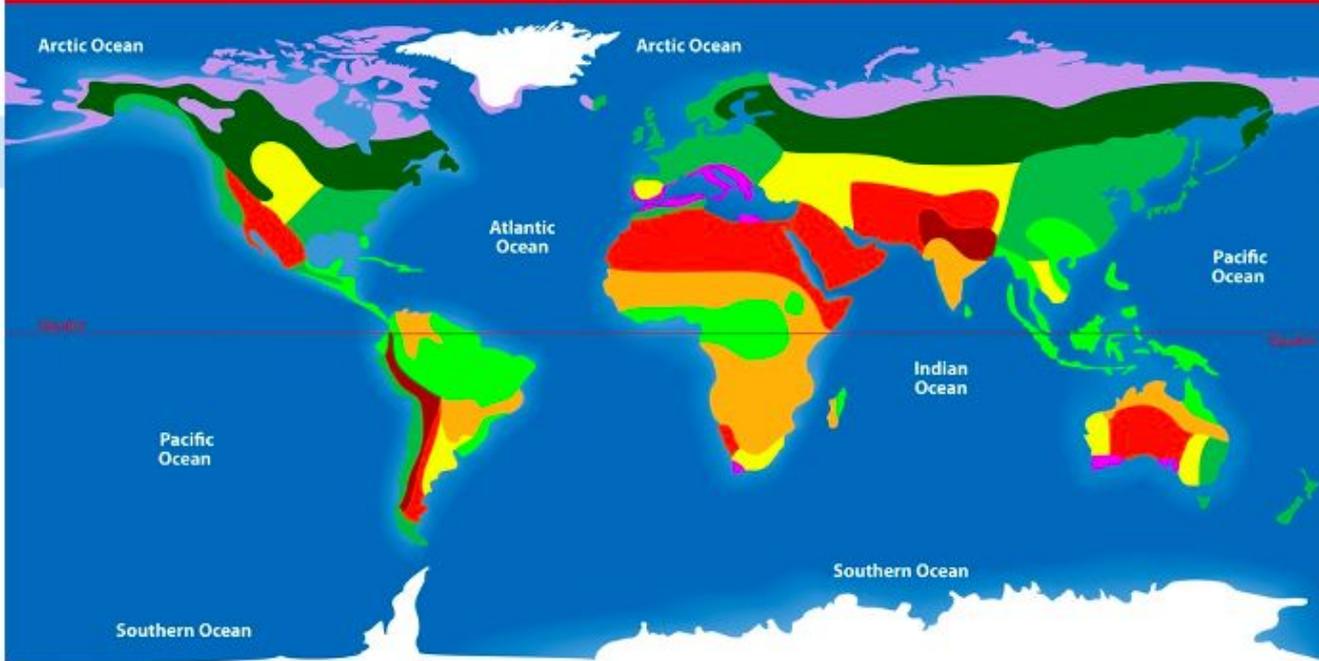
The equator is the band around the middle of the earth where the hottest temperatures are found.

Most of the equatorial biome is *tropical rain forest* with a hot and wet climate.

In equatorial South America, there is the Amazon rain forest but also some *savanna*. This is an area with fewer trees and more grasses due to less rainfall.

Ice sheet and polar desert	Mixed and deciduous forest	Savanna
Tundra	Tropical rainforest	Desert
Taiga	Grassland	Mediterranean vegetation
Montane (alpine tundra and montane forest)		

The main biomes in the world



The desert biomes run either side of the equator in both the Northern and Southern hemispheres.

The largest deserts are in North Africa (the Sahara) and the Arabian Peninsula (Saudi Arabia is nearly entirely desert), Australia and Asia. There are also deserts in California on the west coast of American.

Ice sheet and polar desert	Mixed and deciduous forest	Savanna
Tundra	Tropical rainforest	Desert
Taiga	Grassland	Mediterranean vegetation
Montane (alpine tundra and montane forest)		

We are going to look at 6 biomes in more detail

Rainforest

Desert

Savannah

Woodlands

Grasslands

Tundra



Rainforest



Tropical rainforests are found along the equator. They are hot and wet all year round.

All that rain is perfect for growing plants and rainforests have thick, dense vegetation. It is dark and damp inside a rainforest.

Tropical rainforests are home to half of all the different types of plants and animals on the planet.

Most animals live in the *canopy* (top of trees) so they can get maximum sunlight, e.g. monkeys. But there are small mammals like deer adapted to living on the ground in rainforests.

Desert



Deserts are found about 20° north and south of the equator. They are very hot (up to 50°C in the day) and very dry.

The few plants that grow have adapted to dry conditions. Cacti store water in their stems and other plants have long roots to find water deep underground.

The animals of the desert tend to be nocturnal (sleep in the day) or come out at dusk when it is cooler. They are often very small animals (e.g. gerbils or mice) who can burrow underground for shade. Camels store fat in their humps in case of famine.

Savannah



The savannah biome is found either side of the equator in South America, Africa, India and northern Australia.

The savannah is hot all year round with a long, dry season. There is a single rainy season in the summer.

Mainly grasses and shrubs grow but there are scattered trees adapted to the infrequent rain.

The savannah is home to lots of different types of animals such as elephants, zebras and wildebeest who roam in herds.

Woodlands



Deciduous woodlands are woods full of trees that lose their leaves over winter (i.e. not conifers or fir trees). They are found north of the equator. The UK is in this biome.

Plant life includes trees such as oak, lime and ash as well as smaller trees such as rowan. The ground is covered in mosses, ferns, lichen and flowering plants such as bluebells.

The climate is warm and mild with more rain falling in the winter than the summer.

Animals include insects, birds, foxes and small mammals.

Grasslands



Grasslands (or *Steppe*) are dry, grassy plains. They occur in areas with a seasonal climate or cold winters and warm summers.

Not much rain falls on a steppe which means that plant life is limited to short grasses. There is not enough water for trees to grow.

Animals that have adapted to life on these grasslands include grazing animals such as horses and gazelles as well as predators such as wolves and foxes.

Tundra



The tundra is the coldest of all the biomes with freezing temperatures and very little rain or snow. Winters are long and summers are short.

Part of the soil remains frozen all year round (*permafrost*) so plants with roots, such as trees, cannot grow. Most of the plants found in the tundra are low shrubs and mosses.

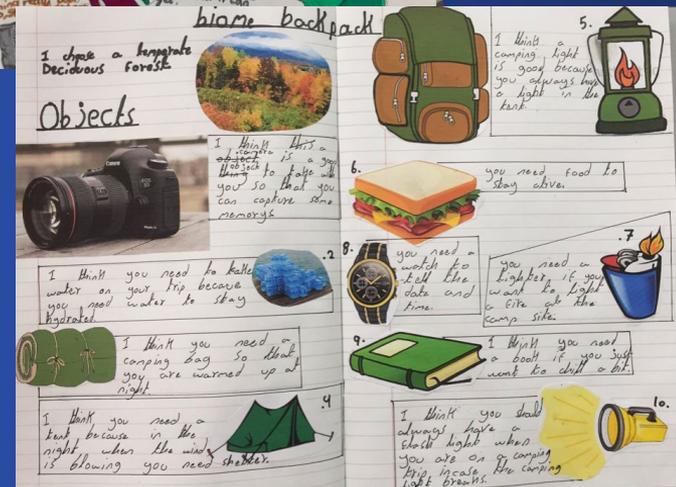
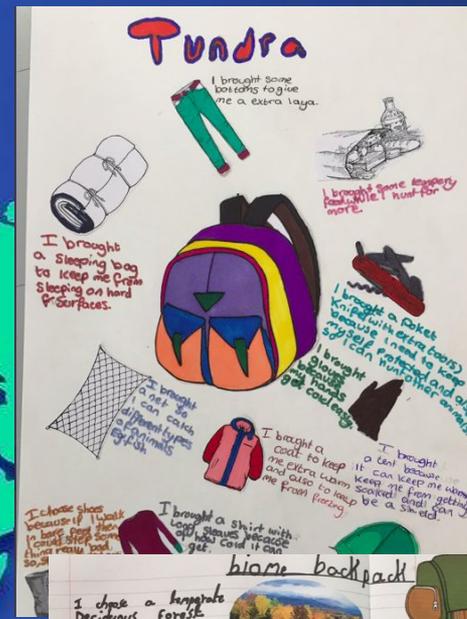
Animals in tundra have adapted to the cold climate such as polar bears, penguins, caribou (reindeer) and wolves.

Your task

Choose a biome to visit.

Decide what items you would need to pack in your backpack in order to be prepared for the weather in your chosen biome. Think about what animals and plants you might find there.

You can draw your items and upload it here or write a list but you need to explain why you've packed each item.



Extension

Which biome would you choose to live in?

Why?

