

KS3 Geography: Ecosystems and biomes

The different layers of a deciduous forest

The world is made up of some amazing ecosystems that make the perfect travel destinations. But sometimes there is no place better than home! The UK has some beautiful *deciduous forests*. One of these is the New Forest in Hampshire.

By definition deciduous forests are located at roughly 40 to 60 degrees north and south of the equator, throughout much of Europe and in countries such as the USA, Mexico, Canada, Chile, Japan, New Zealand and Australia.

The weather in the UK is described as *temperate maritime* - meaning that it's mild and wet most of the year. This helps the plants and trees to flourish.

Similar to a tropical rainforest, deciduous woodland is made up of four different layers. The bottom layer is the *ground layer* and then - going upwards - you have the *herb layer*, the *sub-canopy* and the *canopy*.

Depending how wet it is on the ground, you may find mosses, fungi, leaf litter and decaying wood. The herb layer is made up of plants like brambles, bluebells and wild garlic. You can really smell wild garlic when it's in season! The pretty bluebells will flower in the early spring sunshine, before the forest floor becomes shaded when the leaves will have grown on the trees. The more open the canopy, the more diverse the herb layer will be.

The next layer, the sub-canopy, is made up of small trees and bushes, such as holly and hawthorn.

And this, final layer, is the canopy. This will typically be made up of the taller and older trees, like oak and horse chestnut. Their leaves form a layer that blocks out light and acts like a giant umbrella, intercepting rain.

Deciduous forests are rich in wildlife. The smaller birds tend to nest in the sub-canopy, feeding off the insects and berries in this layer. There are many species of bird within the forest, each has evolved differently to survive. They have varying beaks, from finches with short robust beaks - well adapted to eating seeds - through to buzzards, with their sharp hooked beaks. Buzzards are excellent hunters with their eagle eyes, sharp talons and wide wingspan making them predators of small mammals.

This red fox is part of this ecosystem and in common with this species it typically lives in a den, like this one. These dens go deep underground, which keeps it warm in the winter and it also deters predators from trying to kill the pups.

This fox's reddy-brown fur coat is ideal camouflage against the dried bracken. In winter its coat will get thicker to help it survive the cold. Foxes have large front-facing ears that give them excellent hearing, allowing them the chance to stalk their prey. Foxes are not fussy, they'll eat almost anything! They are omnivores - meaning they eat both fruits and seeds as well as other animals such as voles, birds and insects.

Other mammals that inhabit deciduous forests like this are deer. It is hard to spot a deer in the woods as they are shy and fast moving animals. Smaller mammals here include squirrels, badgers and the rare pine marten.

The New Forest is also not short of reptiles and amphibians. There are even venomous adders!