CHLOROPHYLLE
PARC FORESTIER RÉCRÉATIF de MANHAY à DOCHAMPS
RECREATIEBOS van MANHAY in DOCHAMPS

Welcome to Chlorophylle, the recreational and educational forest park of Dochamps-Manhay.

We are about to discover the secrets of the forest of the Ardennes. The informative signs and recreation stations to be found in the park allow us to glimpse into the forest as if through open windows. Together, let's respect this site to ensure it remains clean and in perfect condition.

Activity 1 : The organic tunnel

The forest is a universe where our senses are awoken. Bark, leaves, plants and flowers – each has its very own, unique perfume. Each time you visit the forest, something new and different awaits you…

- Fruit of the oak tree, the acorn is just as well known as the tree itself.
- Conifers are characterized by their unique leaves, called needles. In evergreen woods, the ground is covered with a carpet of these needles. They are coated in a natural lacquer that protects them from the winter cold and most conifers don't shed their leaves in winter.
- Moss sometimes covers the ground, as well as tree-trunks and rocks… It can absorb large quantities of water and plays an important role in the forest, by maintaining moisture balance in the air.
- Hazelnuts are one of the best known wild fruits…and the best-loved by many of the animals in our forests, like rodents and of course, squirrels.
- Coniferous forests give off a resinous odour. Resin is a type of very sticky syrup that oozes out, for example, of wounds in the tree-trunk. Our ancestors used resin, namely for lighting (torches). The layer of humus, or decomposing organic matter, can be up to several metres thick. The humus is richer in leafy forests than in conifer forests.
- Pinecones are the fruit of the conifer. They contain tiny seeds. When the weather is wet they close up, and they open in dry conditions.
- The linden tree flowers abundantly and its flowers attract swarms of insects, especially bees. Linden honey is delicious and the flowers from this tree are still widely used for infusions and home remedies.
- The deciduous trees of our forests, the leafy ones, generally have very hard, stiff bark. Their bark acts like a skin, keeping parasites from penetrating the trunk.

- Beechnuts, the fruit of the beech tree, are favourites for many forest animals like the wild boar.

Activity 2

Look closely to find out
Inside the forest, we are both dwarfs and giants… The trees make us look like dwarves but we are giants compared to the grass.

Buzzard
The buzzard is one of our most widespread birds of prey: It isn't rare to see its shape appear in the sky, circling slowly and lengthily, often at high altitude.

Poplar Admiral
Some butterflies spend a great deal of their adult lives in the treetops.

Black woodpecker
The hammering sound woodpeckers make is well-known.

Necrophagous
This completely black beetle feeds on all sorts of waste products, like dead animals and excrement.

A field mouse at the entrance to its hole
Small mammals such as field mice are common in the forest, but they spend most of their lives underground.

A red squirrel's head ducks behind a tree trunk
Timid, the squirrel hides behind trunks, but often its curiosity is stronger than its fear.

Activity 3 : Welcome to the underground world

Compost
Decomposing organic matter, consisting mostly of dead leaves, creates humus rich in basic nutritional elements.

Earthworms
Earthworms aerate the soil and release nutritional elements.

Roots
Through their roots, the trees drink up water from the soil.

Bones
These remain intact a very long time.

Rocks
Rocks and stones prevent roots from going too far down into the ground.

Activity 4 : A varied relief

The massif of the Ardennes stands above the sea, the result of tectonic movement. Glaciers did not invade the Ardennes. During the interglacial periods, the climate remained cold. The rivers with their fast-flowing and violent currents wore away deep valleys. At the end of the last ice-age, 10 000 to 15 000 years ago, the rain and ice continued to chip away or dissolve the rock. Particles of rock were blown away by the wind and carried away by the rivers.

Activity 5 : Earth swarming with life

A whole host of tiny beings live here permanently. 1m3 of forest soil can contain up to 180 million bacteria and several million nematodes (worms). A family of small rodents can dig galleries and build their nest there, but it's not even a big enough space to fit the burrow of one single fox or badger.

Activity 6 : Ephemeral Man

The life span of a tree such as a beech or an oak is measured in centuries. The world's oldest known trees, like certain sequoias or North American pine trees, have been standing for 3 or 4 000 years!

Activity 7

Underground hideouts

Certain animals use temporary or permanent underground lairs to rest, hide, give birth to their young or hibernate throughout the colder seasons. Mammals, like the fox or the badger, and insects, bury themselves in the ground.

Badger and Fox

Badger can have setts (burrows) that cover an area of nearly a hectare. Some of the oldest of these have been lived in for several hundred years.

Field Mice

Field mice spend a great deal of their time underground and dig numerous tunnels.

Ants' Nest

The underground part is home to a complex network of galleries and chambers that can host several million ants.

Activity 8
Solar Power

Leaves contain a large number of minute grains of chlorophyll, which transforms carbon gas from the air into sugars, which will ensure the tree's healthy growth all throughout its life. This chemical transformation of sunlight is called photosynthesis.

Flowers of light, Flowers of shade
The flowering plants found in the undergrowth are generally quite dwarfish, whereas those that grow in full sunlight are tall and slim.

The constantly changing forest
The clearing is the first stage in the redevelopment of the forest. The eagle fern has multiplied and little by little trees begin to fill up the edges of the clearing. For instance, the Sorb tree and the Birch, which improve soil quality.

Activity: The tree's « blood »
From its roots right to the tips of its leaves, the tree is covered in a network of channels that transport the sap. In many ways, this can be compared to the blood of mammals.

Activity: Deciduous or evergreen
Most trees (resinous or coniferous trees) lose their leaves in autumn.

Activity 9

- The yew: This shrub can grow to a height of 10 to 15 metres. It is slow-growing and can live to be a thousand years old. Its bark is reddish-brown.

- The green Douglas pine: conifer of North American origin, it makes a substitute for the spruce. 40 to 50m in height.

- The common spruce: the most common conifer to be found in the Ardennes. Scaly bark of a regular brown colour.

- The Larch tree: one of the conifers to lose its needles in autumn, just like broad-leaved trees. 40 m in height.

- The black pine: quite rare in the Ardennes. Blackish coloured bark. 40m in height.

- The Beech: one of the most common broad-leaved trees of our regions. Grey bark. The fruit of the Beech (beechnuts) appear in October-November and are eaten by a great many wild animals (wild boars for example). In the past, the cattle that grazed in the forest also fed on beechnuts.

- The Oak: often called the "king of our forests". A robust tree, 30 to 40 m in height with vast, spreading branches. The bark is grey, then blackish-coloured and usually very cracked. Acorns are an important food source for a number of forest-dwelling animals in autumn.

- The Birch tree: easily recognizable thanks to its characteristic silvery bark. The Birch is a colonizing tree; it is often among the first to take root in untilled soil. It grows rapidly to a height of 20 to 25 m.

- The Hornbeam: less common in the forests of the Ardennes. 25 to 30 m high.

- The Sorb tree: a shrub found frequently in our forests. 15 to 20 m in height, it is easy to spot, especially in autumn, thanks to its bunches of red fruit, a favourite for many species of birds.

Activity 10: The floating world of the treetops

We are now entering another dimension. Some animals spend most of their lives in the treetops. We are walking on bark towards the footbridge. The black stork, like the cuckoo, returns from Africa in mid-April. Be careful not to confuse the black stork and the heron. The marten is a natural predator of the squirrel. The jay is a handsome, intelligent bird of the same family as the black crow and the raven.

Activity 11: Growth rings

Each concentric line stands for one year of growth. This chestnut tree was 80 years old when it was cut down in the year 2000.

After we come back down to earth, we can take a look at the initial stage of a clearing!

Activity 12: Water, source of life

How much water is present often determines the real possibilities for development. This explains why, in arid regions, no forests can be found.

Activity 13: On dry land or soggy-footed

Poplars and willow trees are typical of wet soil, while pine trees prefer drier conditions. The roots hold onto water and soil, preventing erosion caused by heavy rain, for example.

The changing forest
The afforestation found along the side of the path here is essentially made up of oak.

Activity 14: Eat or be eaten

It's the implacable law of nature. Plants take in nutrients from the soil and transform solar energy. Animals eat either plant or animal food, sometimes both.

The food pyramid

There are many more species of herbivores than carnivores. Plant food is abundant and easy to find. Carnivores have to hunt actively to capture their prey for food. On the pyramid, each species on the lower rungs can serve as food for one or more of the species on the rung above, and so on.

Activity 15: A school of patience

The forest is a closed environment and it is therefore harder to observe the animals here than in the African plains, for example. So you have to be silent and attentive if you want to catch sight of the animals of the forest.

Activity 16: The « Olympic champion » animals

Nature has given animals surprising capacities that enable them to find food or to escape their enemies. Only thanks to our exceptional intelligence has man been able to evolve rapidly throughout the ages and to dominate the majority of other living species on earth.

Activity: The roe deer, long jump champion
By leaping and bounding like this, the deer is able to escape the attacks of carnivores (wolves).

Activity: The ant, a miniature Hercules
These insects are capable of lifting several times their own weight. On the scale of an adult man, that's the equivalent of lifting 4000kg.

Activity: The black stork belongs to the family of waders

Activity: Some forest birds have a remarkable ability to walk along tree trunks.

Activity: The buzzard's piercing eye

Birds of prey possess exceptional vision. The buzzards of our regions can often be seen swirling around in the sky, at an altitude of more than 100m, in search of small rodents moving about in the grass.

The forests' tightrope walkers

The squirrel and the marten are champions of equilibrium, perfectly at home in the branches of the tallest trees. They never get dizzy.

Prestigious headwear
Only the males wear such antlers. They are shed each year, to grow back the next.

Activity 17 : On the trace of invisible animals

Most of our forest animals are discreet but all leave tracks that are more or less visible.

- Male stags lose their antlers (moult). It is rare to find these when walking in the forest.
- Wild boars often forage for roots and bulbs in loose soil and dig up the earth using their muzzle just like a plough. Sometimes they leave behind quite spectacular furrows.
- Foxes often leave their excrement out in the open, on a rock or a tree stump.
- The badger is a true omnivore, devouring earthworms with delight. In search of this delicacy, they dig up the earth to catch them.

- Hikers: Man, too, is a regular visitor to the forest.

The changing forest

The forest is colonized by broom bushes, which attract a great number of insects, including butterflies and their predators (birds). The zones taken over by broom are perfect as litter for large game animals, and provide refuge for them as well.

Activity 18: The observation tower

Up here we are at an altitude of about 530m. Behind the wooded hills on the horizon is the Condroz region, stretching out to the north. In clear weather, it is possible to catch sight of steam from the cooling towers at the electricity plant in Tihange, about 40km away on the banks of the Meuse.

And the sky

The dominant winds here in the Ardennes blow in from the West (left of the window), bringing with them moist sea air. Rain is therefore frequent.

Cirro-stratus: horizontal clouds formed from ice crystals, at between 6 000 and 10 000m
They signal an atmospheric disturbance

Cirro-cumulus : horizontal clouds at more than 6 000m, no rain.

Nimbo-stratus: vertical and horizontal clouds at between 2 000 and 6 000 m, rain or snow

Altocumulus: horizontal clouds resembling white sheep, at between 2 000 and 6 000m, often signal a change in weather.

Cumulus: vertical clouds resembling cauliflower, greyer and more distinct at their base, brief showers.

Cumulo-nimbus: the most menacing, vertical clouds at between 2 000 and 10 000m, storm, heavy rain, hail.

Activity: Shapes in the sky
Birds of prey are a common sight in the Ardennes sky.

Activity 19: A new landscape
From the middle ages, man began clearing woodland on a large scale. From the mid-19th Century, wooded areas began to increase considerably in the Ardennes and continue to do so today. The Walloon territory is covered by 51% forest, in other words around 530 000 ha. Luxembourg is 51% forest, or 210 000 ha. Flanders has around 8% wooded area. The district of Manhay owns 3 190 ha of forests. The largest, measuring 7 176 ha, is at Bouillon.

The forest, man's precious ally
Man has always made use of the forest's resources.

With the rise of the coal industry, from the end of the 19th Century on, “mine wood”, which was used to hold up underground galleries in mines, was an important market. Today we talk about the “green gold” of the region. For many of the districts in our beautiful province, the forestry heritage represents a significant source of income. And the Park Chlorophylle is a fine example of the development of forestry tourism.

Activity:

- Grazing: keepers were designated from each village to take the cattle out into the forest.
- Affouage: This practice consisted of authorizing the inhabitants of a village or district to exploit the forest’s timber for heating. This continued until after the Second World War.
- The first inhabitants of the forest: were probably hunter-gatherers living in nomadic kin groups.
- The first sedentary settlers: thanks to agriculture and cattle breeding, they began to open up artificial clearings in the forest.
- For a long time, charcoal was the main combustion fuel in the Ardennes. It was produced by burning wood pressed into moulds and covered by a thick layer of dirt.
- Forges were set up along the riverbanks. The water kept the hydraulic wheels turning.

Activity 20: Railway and timber

A mere hundred years ago, few inhabitants of the Ardennes owned a car or travelled by tram. The majority of these tramways have now disappeared. Take the tourist Tramway of the Aisne, for example, which travelled the length of the valley below the forest park at Dochamps. The number of sleepers you see here was sufficient to lay 43 m of railway track.

Activity 21: The marvellous imaginary world

Even if they are only a figment of our imaginations, gnomes, elves, brownies, fairies, witches, dragons and werewolves are an integral, if immaterial, part of the forest atmosphere. Some of the best known of these legends are hiding nearby: take a look around and see what you can find.

Activity: Just turn the crank of this « fairy-tale well » and you’ll discover all sorts of magical creatures…

Activity 22: What becomes of modern-day timber?

This noble, natural material by excellence is still highly valued by many. It is used to make furniture, as the framework for houses, even entire houses, and musical instruments, to name just a few examples.

Activity 23: Exploitation is more intensive in the coniferous forests that make up more than half the area of Wallonia's forests, than in the broad-leaf forests. Conifers grow quickly.

For over a decade, foresters in the Ardennes have been reforesting with broad-leaved trees such as oak and beech, so as to obtain bio-diversity in the forest environment.

They select the trees that are the least likely to grow well and get rid of them. In this way, the more promising and important trees have better growth chances.

Activity:

- Branding: the foresters make a notch in the bark of the trunk, where they etch the seal of the forestry service.
- Logging: The trees are felled by forestry workers who have purchased logging rights.
- Pruning: Once the tree has been felled, all the branches must be stripped away so that the trunk can be cleaned. The thick branches are used for firewood.
- Unloading: The trunk is taken to a trail or a road, with the help of big mechanical machines or horses, a method that respects the forest better.
- Sawing: The trunks are then taken to the sawmill to be sawn into planks or logs, depending on the uses they are destined for.
- Seasoning: The planks (or sometimes the trunks themselves) often have to be stored for months in order to dry out completely.

Activity: Timber, a natural, noble material, has come back into fashion in recent years, especially where interior design is concerned.