

A woodland is an area covered in trees and other plants. It provides a diverse habitat for life to grow and flourish. What sorts of plants and animals live in Ireland's woodlands? Let's go into the woods and find out!

Keywords species native chlorophyll sap cones habitat biodiversity nocturnal food chain canopy shrub field ground soil nutrients

Ireland's Trees

Thousands of years ago, most of Ireland was covered in woodland. Some of the trees in our woodlands today are the same **species** that our ancestors would recognise. These are called Ireland's **native** trees. How many do you recognise?



oak

alder

ash



hazel

willow

birch

rowan

Why Do Trees Have Leaves?

Leaves are essential for healthy trees. They contain a green chemical called **chlorophyll**. Chlorophyll uses water, sunlight and carbon dioxide in the air to make food. The food is then carried to every part of the tree in a sticky juice called **sap**. Have you ever wondered why some leaves change colour and die in autumn? It is because, when summer ends, there is not enough sunlight and the chlorophyll breaks down. Instead of green, we see red, orange and yellow leaves.

How Do New Trees Grow?

New trees grow from seeds. Seeds can be in **cones**, nuts, berries or fruits. They spread in different ways. Some seeds fly on the wind, some drop to the ground. Others are eaten by birds and animals. They then poo the seeds out on the ground ready to grow!

Natural environments: The local natural environment; Rocks and soils
Living things: Plant and animal life

What Lives in Woodlands?

Woodlands are a natural **habitat** for many plants and animals. Irish woodlands support **biodiversity**. That means that different kinds of living things can be found there.

Minibeasts

Many minibeasts find food and shelter in woodlands. Woodlice, snails, worms and slugs eat dead wood and leaves. Bees and butterflies feed off nectar from woodland flowers, and ants eat almost everything!

Birds

Birds build their nests in woodlands from materials such as twigs, leaves and small stones. Ireland's native birds include chaffinches, blackbirds, robins, wrens, woodpigeons, goldcrests and jays.

Mammals

Listen carefully in the woods and you will hear the rustling of small mammals. You may see squirrels running and jumping in the trees or fallow deer grazing on leaves. At night, **nocturnal** animals such as hedgehogs, stoats and bats are active.



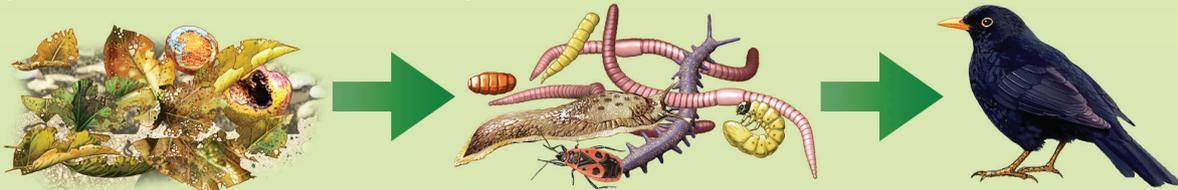
The tree creeper has adapted to live in woodland. It can creep up tree trunks, looking into holes in the bark for insects to eat.



Pine martens are rare mammals that live in some Irish woodlands. They live in dens in hollow trees.

Woodland Food Chains

Woodlands provide food for all the animals living there. Many insects eat plants. These insects are then eaten by birds or mammals. This type of connected relationship is called a **food chain**.



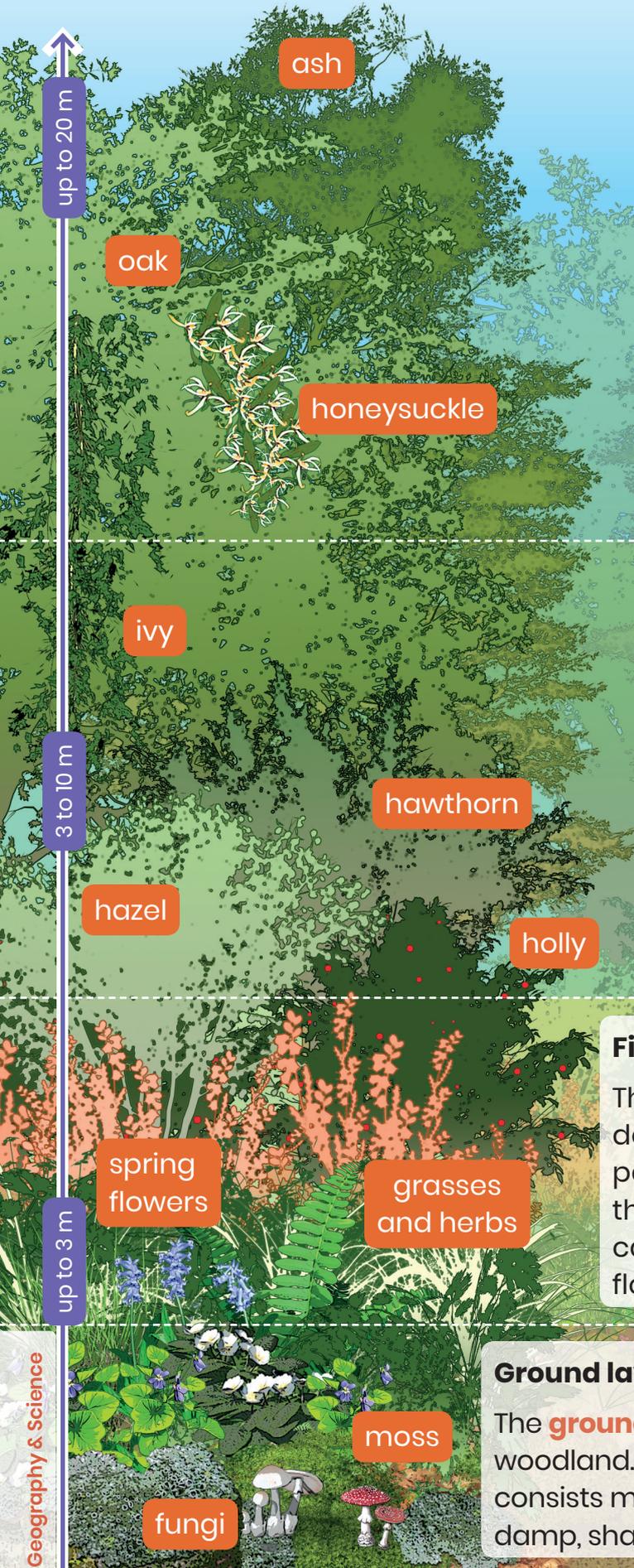
Woodland Homes

You can work out who lives in the woods by spotting their homes. Turn over a dead log and you will find minibeasts who like darkness and cool temperatures – such as snails and woodlice. A football-size nest of twigs and leaves tucked into a tree is probably home to a squirrel. A hole in a tree with a streak of black under it? That's where bats live – the black streak is their poo!

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Woodland Layers

Ireland's native woodlands have different layers.



Canopy layer

The **canopy** layer is the topmost layer of a woodland. It is formed by the tallest, most mature trees. These trees create shelter for the younger, smaller trees below. It protects them from strong winds and storms. The canopy layer gets a lot of sunlight, while the layers underneath are shaded from the sun.

Shrub layer

The **shrub** layer consists of smaller and younger trees. These trees are adapted to survive with less sunlight. Trees in the shrub layer often grow sideways or outward to catch more light coming through the canopy.

Field layer

The type of plants found in the **field** layer depends on the amount of light that passes through the canopy. The field layer thrives in areas where plenty of sunlight can reach the woodland floor. Here, spring flowers such as bluebells and violets grow.

Ground layer

The **ground** layer is the lowest layer of the woodland. This layer receives very little light. It consists mostly of moss and fungi, which grow in the damp, shaded conditions on the woodland floor.

Investigating Soil

Soil is a mixture of rock, dead plants and animals, air and water. Plants grow in soil. They use their roots to draw up water and **nutrients** from the soil. Different woodland plants can grow best in different types of soil.

Soil	What it's like	What it looks like	What can grow in it
sandy	pale, dry, large particles, lots of air		scots pine, oak, gorse
clay	sticky, wet, small particles, not much air		birch, hawthorn, pine
chalky	light, dry, rocks		herbs, honeysuckle
peaty	dark, wet, rotten plant materials, no rock		alder, birch, ferns, heather

Investigate: Local Soil

You will need:

- trowel or spoon for digging
- waterproof container
- old newspapers
- transparent (clear) bottle
- water

Tip: Investigate safely! Wash your hands after touching soil.

Part 1 - Steps:

Gather a soil sample:

- Dig up soil from a place where plants grow.
- Put the soil in your container and seal it.
- Take the soil to your classroom and spread it on the old newspaper.

Part 2 - Steps:

Study the layers of the soil:

- Put the soil in the bottle and fill it halfway with water.
- Put the lid back on and shake. Leave it to settle.
- When it has settled, the contents of the soil will be in this order:



Part 1 - Results:

Observe the soil. Is it a light or dark colour? Is it dry, or wet and sticky? Is there anything in it (e.g. leaves, rocks)?

Part 2 - Results:

Draw the layers that you can see and label them.

Conclusion:

Use the table above to work out what soil you have and what could grow in it.

How Are Woodlands Changing?

Ireland has far less native woodland now than it did in the past. Over the centuries, our natural woodlands have been cleared to create space for farming and homes. Many trees were cut down for their wood, and not enough were left to regrow into new woodlands. This was not good for our wildlife, who lost their home. Sometimes trees are damaged by animals or by weather events such as storms. In recent times, new forests have been made up of non-native spruce trees. They are planted and cut down to be sold as wood, after a short time. Some of these are sold on as Christmas trees. These spruce forests are not as good for wildlife as our native natural woodlands.

Case Study: Woodland Projects

The good news is that some people are working hard for Ireland's native woodlands.

- **The People's Millennium Forest Project:** In 2000, a native tree was planted for every household in Ireland – that's 1.2 million trees! People got a certificate to tell them where their tree was planted.
- **The Woodland League 'Forest in a Box':** Primary schools receive tree seed boxes with a 'Know Your Native Trees' lesson. Inside the box is a natural forest floor habitat. Children collect native tree seeds and plant them in the box. When the seeds have grown into young native trees, they are planted to restore our native woodlands. Each box can grow up to 200 trees!



The Woodland League
www.woodlandleague.com

Your Woodlands Need You!

Everyone can do something for woodlands. You could:

Build birdboxes
to support
woodland wildlife

Clear rubbish
from local
woodlands

Contact the
Woodland League
for other ideas

Plant native
trees



Think About It:

Why do you think
it's important to
protect Ireland's
woodlands?

Ireland's woodlands are home to a rich variety of life. Next time you go down to the woods, see if you can spot any of the plants and animals you learned about in this unit!

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Activities

Fact Finding

1. Name three species of native Irish trees.
2. What are trees that keep their leaves all year round called?
3. Name a minibeast, a bird and a mammal that live in Ireland's woodlands.
4. What might you find if you turned over a dead log in a woodland?
5. Give an example of something that lives in each layer of a native Irish woodland.

Explore More

1. What is biodiversity? How do Ireland's native woodlands support biodiversity?
2. Explain in your own words why plants need soil.
3. Why have Ireland's native woodlands changed?
4. Imagine you are sitting in a native Irish woodland. What can you see, hear, smell and touch?
5. Explain one reason why animals need trees and one reason why trees need animals. Use examples from Ireland's native woodlands.

Working as a Scientist: Recording and Communicating

Create a poster persuading people to support native woodlands. Include facts about woodlands. Also include ideas for what people can do to help. Decorate your poster with woodland pictures. This could be trees, minibeasts, leaves or something else related to woodlands. You could put your posters up in your classroom, the library or on the school website!

Working as a Geographer: Observing

Observe the trees in your local natural environment. For each type of tree you see:

1. Draw one of its leaves. Record its shape and colour. Make a rubbing to show its pattern.
2. Make a rubbing of its bark.
3. Draw its seeds. Is it a berry, nut or other type of seed?
4. Count and record the number of trees of the same type in the area.
5. Use the guide on page 22 to identify the tree. If it does not match any of those trees, search images of native Irish trees online to identify it.
6. Draw or make notes about any minibeasts, birds or mammals you see on or near the tree.