

Brilliant Beech Trees Worksheet



What are we learning?

Beech trees are a native species to south Wales. They grow in woodland or as single trees, can grow up to 40 metres, and have a huge dome crown.

Open file in your web browser to click on the links.

Watch the video here:
<https://youtu.be/Sv7qr2SA5V0>

How to spot the common beech tree?

Leaves

Oval-shaped and pointed at the tip.
Leaves are wavy around the edges.
Young leaves are lime green with silky hairs. Older leaves are darker green with no hairs.



Beech leaves

Flowers

Monoecious - Have both male and female flowers. The male flowers are tassel-like and hang down from the branch. The female flowers grow in pairs, surrounded by a cup.



Beech flowers

Crown shyness

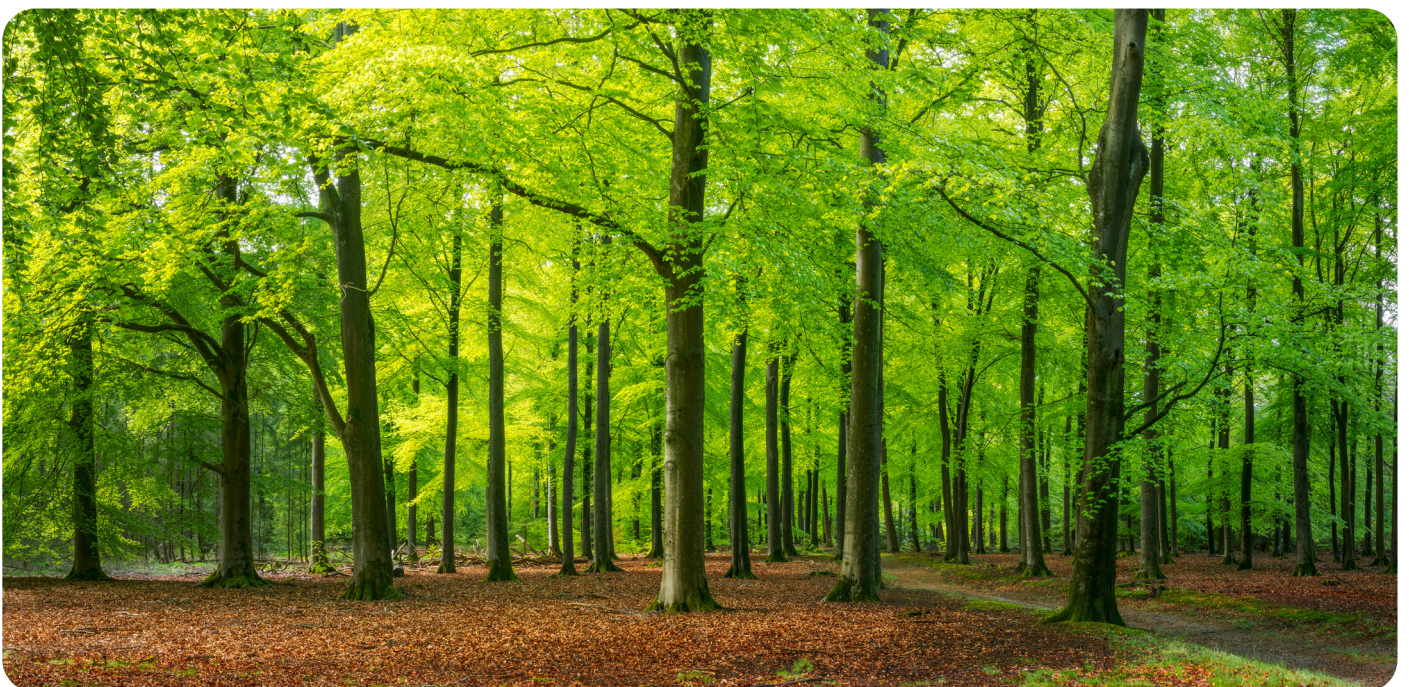
Beech woodland is very shady. If you look up at the canopy you will notice an odd pattern where the leaves stop just before they overlap, creating a puzzle-like design. This is caused by crown shyness. This happens so the trees don't overlap one another preventing access to sunlight.



Beech nuts

Another characteristic of beech woodland is a carpet of fallen leaves and beech nuts. These are the left-over husks of the tree fruit from the previous year that litter the forest floor.

As beech woodland is very shady, only specialized shade loving plants can thrive beneath the canopy. Also, due to its dense canopy, beech tree woodlands are very important habitats for a variety of native and rare species, making them important UK ecosystems.



Beech trees

Mycorrhizal networks & symbiosis

Sometimes different species rely on one another for survival. This important relationship is called **interdependence between organisms** and can take many different forms. This includes predator-prey relationships, decomposers, and symbiosis. Beech trees have a **mutually beneficial** relationship with a fungus called **root mycorrhizae**. The fungus is found wrapped around the outside of the tree roots. In return for giving the fungus a place to live and grow, the fungus will supply the tree with nutrients from the soil that the tree doesn't have the ability to get on its own.

This form of symbiosis is called **mutualism** as both species benefit from the relationship.



Root mycorrhizae

What are Ancient woodlands?

Ancient woodlands are areas of woodland that have been around since 1600 in England and Wales.

They take hundreds of years to develop, and over time these woodlands have become biodiverse ecosystems that are rich and complex, making them irreplaceable and in need of our protection. They are important for:

- Wildlife
- Soils
- Historical and cultural value
- Recreational value

Ancient woodlands are home to some of the rarest species in the UK. They contain centuries of undisturbed soil and decaying wood. This in turn make perfect homes for many specialised mammals, insects, and birds.

Ancient woodland indicators

There are several different ways to identify ancient woodland: one such indicator of an ancient woodland site is ancient woodland indicator plants.

Some indicator species are:



Wild garlic



Bluebell



Wood anemone



Herb paris

Activities



Q1. What are some special features of Beech trees & Beech tree woodlands?

Q2. Can you identify a beech tree in your local area? Draw the leaves and flowers below

Q3. What is crown shyness?

Q4. What are ancient woodlands and why are they important?

Q5. What is an ancient woodland indicator?

Q6. What is meant by interdependence of organisms?

Q7. What type of interspecies relationship is shown below?
Label the images using on of the following;

Predator-prey / Symbiosis / Decomposer / Pest control



Q8. What is mutualism?



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(S4) Funded by the European Social Fund and the Welsh Government.