Plant and Share

Buzzing about Bees

Bees are vital for producing the food we eat. Quite simply, they are the superhero of any allotment, garden or farm. Without them the food we love and eat to survive would be lost.

In this resource we will learn about some common species of bee in the UK, some of the jobs they have in our natural world and some simple things we can do to help them carry out their important role in the **biodiversity** of our planet. There are around 20,000 bee species worldwide. In the UK there are over 250 species of bee: 25 species of bumble bee, 224 species of solitary bee and 1 honey bee species.

What is biodiversity?

The word biodiversity is short for biological diversity. The planet needs a good and varied number of bacteria, genes, plants, animals, fungi and more to make a strong ecosystem.

We all rely on each other; from tiny cells and organisms you can't see without a microscope, to whales in the sea and the leaf mould and fungi on the forest floor.

Trees are a great way to explain why we need a strong and diverse ecosystem.

- Trees provide oxygen which humans rely on
- They provide shade from the weather for animals
- Trees provide food from nuts, berries and leaves
- They are used to build structures and furniture
- Trees are used to keep us warm and to heat fires
- Tree roots help prevent flooding
- Their leaves fall to the ground, decay and are used to keep soil fertile

It's amazing to think a tree can do so much!

As biodiversity weakens from intensive farming, pollution and global warming, the planet can lose species, become more likely to flood or have extreme weather, and crops can be lost. But we can all work together to play a part in increasing the biodiversity where we live. Bees are an important part of this, so by helping bees out we can also help other organisms, plants and animals thrive.

What is a pollinator?

When bees crawl over flowers to collect nectar to eat, bits of pollen get stuck all over their bodies. When the bees fly from flower to flower, some of the pollen falls onto the stigma, which is in the centre of the flower. This fertilises the plant so that it can reproduce. It also helps the plants create seeds which are harvested or drop to the ground and make the next generation of plants.

What do bees pollinate?

There are over 70 agricultural crops in the UK that benefit from pollination by bees, as well as thousands of our wildflowers, trees and garden plants.

In all, they are responsible for pollinating around one third of all the foods we eat and that farm animals eat.

Without bees many plant crops would no longer exist, so no apples or strawberries to eat, no cotton for t-shirts or bed covers and a lot less food for farm animals.

Busy bees

Wild meadows, flowers and pollinating plants are important for bees and other pollinators (butterflies, flies, wasps and moths), providing them with the nectar and pollen they need to thrive as well as places to nest. Nectar gives bees the energy they need to fly and find a nest, whilst pollen provides bees the protein they need to grow as they're out and about pollinating plants.

It isn't just bees who pollinate, although they are the superheroes of pollination. Wasps, hover flies, beetles and more are also pollinators and you can read about them in our Precious Pollinators resource.

Solitary, Bumble and Honey – the who's who of bees

Solitary bees aren't named because they fell out with their friends and chose to live alone! There are over 200 different types of solitary bee in the UK, meaning they don't live in hives or colonies, they don't have a queen and they don't produce honey, but they do help pollinate. In fact, they are the most effective pollinators.

Bumblebees are very sociable, living in nests with up to 400 others including a queen. Their nests last for just one year, compared to honeybee hives which remain active for several years. And yes, they create honey, but this is only for them to eat, so they aren't classed as a honeybees. They're larger and hairier, which makes them suited for colder climates like the UK.

Honey bees, of which there is just one species in the UK, make the honey we may have on our porridge or toast from nectar and pollen. Honey bees live in large colonies or hives and there are three roles:

Queen – she lays the eggs and runs the hive, she also produces chemicals that guide the behaviour of the other bees.

Worker – females who forage for food (pollen and nectar from flowers), build and protect the hive, and clean and circulate air by beating their wings. It is the worker bee you'll most likely meet.

Drones - Unlike the worker bee, drones do not sting. They don't gather honey or nectar and are unable to feed without assistance from worker bees. Their job is to mate with the queen so sadly, as there is only one queen per colony, many of them don't have a job to do!

Are you buzzing to learn more?

Then check out the other two resources in this pack:

- Identifying Bees
- Helping Bees

About this resource:

Got the gardening bug? Why not take part in our **Worm Hunt** next, or learn about more **bee-friendly flowers** and herbs, how to build a **DIY insect home**, and how to **fight climate change and biodiversity loss** – from home! Want another Plant and Share challenge? Try growing our **bee-friendly strawberry wellies**.

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