

Bitesize KS3 Science – Biology

Bees and the food chain

Beekeeper Graham Royal on the importance of bees to the food chain

There are lots of different types of bees in the UK but only one species collects honey and stores it, so a lot of people are confused about the difference between honey bees and bumble bees. Bumble bees are the big furry ones that most people see in the garden but they don't make honey.

Bees are very important pollinators particularly of crops like apples and pears, early flowering fruits. You often hear this report that says if we lost all the bees the human race would starve but that's not actually true. What would happen is that we would have a lot less choice in the food that was available to us so cereals, and rice would grow without bees but the fruit – the apples, pears, plums we wouldn't have without bees.

The important role of bees in the environment is pollination, but in fact the bees aren't deliberately pollinating the plants, they are visiting plants because they want to get food. Bees are totally dependent on flowers for their food and it just so happens that when they visit flowers they transfer pollen from one plant to another causing them to be pollinated.

Flowers and plants have evolved to attract insects and so they have these very bright coloured structures that we call flowers, and they are there deliberately to attract insects – it is like the advertising sign saying "there is food here".

Bees are primary consumers of flowers in terms of the output from flowers, flowers produce nectar and pollen. The nectar that flowers produce is there solely to attract insects there is no other real purpose for it. The pollen is there to be transferred from one flower to another to pollinate the flower but bees also collect pollen and eat it because it provides them with protein.