

A BIT ABOUT BEES!

Honey bees have been around for much longer than humans.
They have been producing honey for 150 million years!



Photo: Lindenberg Gomes.

▲ A human-made beehive allows beekeepers to care for bees and collect their honey.

Pollination:

At the same time as bees are drinking the nectar from flowers, they also collect pollen.

They carry the pollen in pollen baskets on their back legs. As they fly from flower to flower, they transfer the pollen allowing the plants to grow fruit.

Without pollination about a third of the food we eat would not exist!

Honeybees live in hives with between 20 000 and 80 000 bees living together in each colony. A colony has one **queen bee** and several hundred **drones** (males), the rest are all female **worker bees**.

Honey bees start life as eggs which hatch into larvae (also known as **brood**). It is the queen bee's job to lay all the eggs. In the summer queen bees can lay up to 2000 eggs a day. She can decide if they are male eggs (drones) or female eggs (workers). The main job of the **drones** is to mate with the queen bee. Female **worker**

bees keep the hive functioning and collect the nectar to make honey.

Every worker bee has a different job to do. For example, some bees gather **nectar** while others gather pollen. There are also worker bees that stay in the hive to look after the babies or guard the hive from intruders. They cooperate to make sure all the work in the hive gets done.

Worker bees only live four to eight weeks. Drones can live up to four months and the queen bee usually lives for two to three years.



Photo: Janey Newton.

► The queen bee is the largest bee in the hive.

◀ Bees carry pollen baskets on their back legs.



Photo: Lindenberg Gomes.

Photo: Wikimedia.



How you can help bees:

1. Plant bee-friendly plants each season so bees can feed all year. Rosemary, harakeke (flax) and sunflowers are all bee favourites.
2. Provide a saucer of clean water for bees. Put a few pebbles or sticks in the water so the bees have something to stand on.
3. Ask your parents to avoid using pesticides in your garden when plants are flowering.
4. Tell your parents to take a break from lawnmowing and let the clover flowers grow.

For more about bees visit: <https://apinz.org.nz/bee-aware-month/>


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HOW BEES MAKE HONEY

1

SUCK UP SOME YUMMY NECTAR

Honey bee workers gather nectar from flowers by sucking it up through their proboscis like a straw. They store the nectar in one of their two stomachs and take it back to the hive. They tell each other where the nectar is by doing a waggle dance (<https://youtu.be/LOZrNs22FAU>).

Bees will visit 50-100 flowers on each flight from the hive. Their antennae can detect nectar more than a kilometre away and they can fly at speeds of up to 24 kilometres an hour. To make one 500-

gram jar of honey, bees have to visit two million flowers. They seem to particularly like blue and purple flowers.



Photo: Peter Boutellje.

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◀ Bees prefer blue and purple flowers.

2

SHARE IT AROUND

The nectar is passed from bee to bee in the hive. The bees ripen the nectar by swallowing it and then regurgitating it into the mouth of the next bee. As it is passed from bee to bee, enzymes break down sugars and proteins in the nectar. This produces a watery 'honey'.



Photo: Peter Bray.

3

WAIT UNTIL IT'S JUUST RIGHT

Bees spread the honey out across the wax honeycomb in the hive and fan it with their wings to reduce the water content. How the bees know when the honey is ready is a bit of a mystery!

4

PUT THE LID ON

The honey is stored in the cells of the honeycomb. When the cells are full of honey the bees seal them with a lid of beeswax.

Photo: Hamish Pulley.



▲ Bees make wax honeycomb inside the hive to store honey, pollen and brood.

Glossary:

Brood: baby bees

Drone: male bee that stays in the hive and mates with the queen bee. They make up about 10 to 15 per cent of the hive.

Nectar: a sugary fluid in flowers to encourage pollination by insects and other animals, collected by bees to make into honey.

Pollen: a powdery substance that causes plants to form seeds.

Pollen basket: the part of the bee's back leg where pollen is carried.

Pollinator: an animal that moves pollen from the male part of a flower to the female part of a flower

Proboscis: a long, thin tube (like a straw) that

makes up part of the honey bee's mouth. They use it to drink nectar.

Queen bee: female bee that stays in the hive and lays eggs. There is only one queen bee in each hive.

Worker bee: female bee that collects nectar to make honey. There are thousands of worker bees in each hive.