



Central England Co-operative

In the summer, worker honeybees go outside and visit flowers to collect nectar, the nectar is then turned into honey for the hive to eat in the winter. If the weather is poor, some hives can be short on nectar and may starve during the winter when they cannot forage for food. This is why some beekeepers feed bees honey or a mixture of sugar and water. A water source is also very important to bees, it dilutes the honey and is used to feed the colony and cool down the hive in the hot weather.

Where do honeybees live?



A **colony** lives in a **Hive**

How many honeybees live in a hive?

60,000



Advantages of a modern hive:



Frames can be easily extracted and the hive can be visited without damage



Honey can be extracted with out breaking the frames, which can be restored to the bees



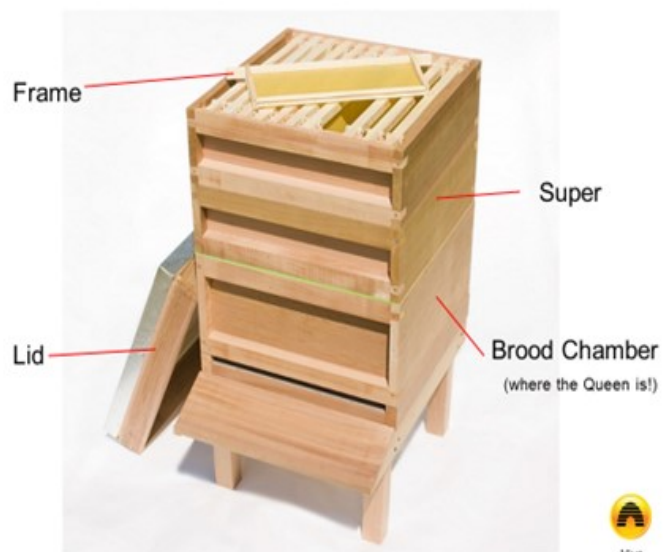
The honey is clearer and cleaner



Hives can be doubled by simply distributing frames between two hives



A bee swarm can be placed inside a modern hive more easily.



How is a bee colony structured?

There are male and female honeybees in a hive. The male bees are called drones and the female bees are worker bees and the queen. A hive has one queen and roughly 10,000 - 60,000 worker bees, and depending on the time of year, between 300 to 800 drone bees.



(left - Drone, middle - Queen, right - Worker)



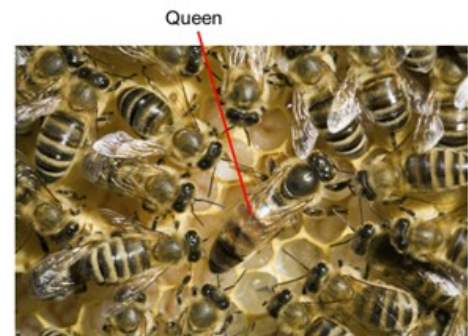
There are three types of honeybee

Queen - The queen has a long body and is the largest bee in the hive. Queens are the only type of honeybee that can lay eggs. Worker bees feed and look after queens.

Drones are male bees - Drones have larger bodies than worker bees but are smaller than the queen. They also have larger eyes than the worker bees. Their role is to mate with a queen. Worker bees feed and look after the drones.

Worker bee - Most honeybees seen are the female worker bees. They have different jobs:

- Collect nectar and pollen
- Feed the queen bee, drones and babies
- Look after the larvae and honey
- Build the honeycomb
- Keep the hive cool or warm it up
- Clean and repair the hive





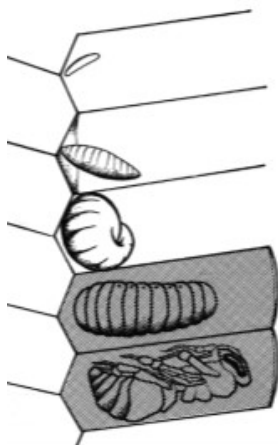
The Queen Bee lays eggs in the individual chambers.

The bees hive comprises of vertical wax combs made of hexagonal cells.

These cells can be of two types; small ones are where worker bees are hatched, while drones are born in the bigger ones. They both store honey and pollen collected by bees.



The workers feed the growing larva.



Worker bees act as nurses to the larvae and young drones. They feed them on royal jelly, which they secrete from a gland beneath their mouths, topped up with honey and pollen.



The larva turn into pupa inside the chamber (this one is a Queen) until they finally emerge through the wax as a new-born bee



Bees make honeycomb-using hexagons. Honeycombs are networks of hexagonal Cells. Bees mix nectar with chemicals in their stomach to form honey, which they store in the hexagonal cells of the honeycomb. The honeycomb is used to seal off cells of the comb once filled with honey

What patterns or pictures can you create using only hexagons?

