

RESOURCE MAKING HONEY



Honey bees make honey using a specific process. Only the worker bees leave the hive to collect nectar, store the nectar in the hive, and process it to make honey.

Worker bees that have reached the age of 3 weeks leave the hive to find sources of nectar and pollen. Scout bees communicate the location of good sources of nectar before the bees leave the hive on a nectar gathering trip. A bee may fly up to four miles to get to a good nectar source.

After the bee arrives at a flower, she sucks the nectar through her proboscis and into her honey stomach. The nectar is stored in her honey stomach as she moves on to more flowers. If the bee needs more energy as she works, she can eat some of the nectar by opening a special valve that allows some nectar to pass through to her stomach.

When her work is done, she flies back home. A honey bee may visit up to 100 flowers on one foraging trip. She'll also be collecting and transferring pollen while she is busy working.

Once the bee reaches the hive, she passes the nectar mouth-to-mouth to a bee whose current job is to make honey or she transfers the nectar directly into a honey comb cell.

Next, because nectar has a high water content, the bees need to dehydrate it to turn it into honey. Although some dehydration occurs in the transfer, worker bees also use their wings to fan the nectar in the cells. This causes evaporation. Nectar turns into honey when it's water content is reduced to 17%.

Finally, the worker bees use wax to cap the cell and store the honey for use in the future. Honey is used as food for bees during the winter and it is also mixed with pollen to make bee bread to feed to baby bees.

INFER: Why is it important to have scout bees finding good sources of nectar?

INFER: How is collaboration important to bee survival?

INFER: Is there one part of the honey-making process that is most important?