



Bees & Honey

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Have you ever wondered what life would be like without bees? While you might just think of bees as an insect that stings, bees are very important to the environment for many reasons. To understand why they are important, we must first learn about bees. Bees are insects that live in colonies of 30,000-60,000 individuals. A colony of bees includes one queen bee, workers, and drones. The drones are the male bees within the colony. They do not have a job within the hive and will often leave the hive to find a new queen bee to start a new colony with. The queen bee is the largest bee in the colony and her job is to lay eggs to maintain the colony. The other female bees in the colony are the worker bees. The workers are responsible for building the wax comb inside the hive, taking care of the queen and the young larvae, and foraging for nectar, pollen, and water. When a worker bee visits a flower to collect nectar the pollen from the flower sticks to the hairy legs of the bee. When the bee visits another flower some of the pollen from the first flower gets left behind at the second flower. This process is called pollination. When a worker bee returns to the colony after collecting nectar or water, she will communicate the location of the resource by dancing to tell the other workers how far the resource is and in what direction. Once the nectar has been collected by the worker bees it is deposited in the combs in the hive. The water in the nectar is then evaporated off by the bees fanning their wings inside the hive. The bees also add gland secretions that break down some of the sugars in the nectar. Once this occurs the honey is ready to be stored and used by the colony as a food source during the winter when there are no flowers. Extra honey that the colony produces is collected and bottled.



Now that we know more about the life of bees let us explore why they are so important. If we did not have bees many of the items that you like to eat that are made directly by the bees or that rely on pollination by the bees would not exist. Food items that we get directly from bees includes honey and pollen. Foods that rely on the bees for pollination include apples, peaches, oranges, tomatoes, and many more flowering plants that produce fruits, vegetables, seeds, and nuts. It is estimated that every third bite of food that you take is made possible by bees. Bees also produce wax that is used in many different products. Not only are bees important to humans, they are also important for the survival of many of the plants and animals on this planet. If bees did not exist, many of the plants that rely on pollination would not be able to reproduce so they would no longer exist. With out these plants the animals that rely on the plants as their food source would also no longer exist. Next time you see a bee, think about how many foods you ate or products you used that day that bees help to make.

Activities to Try:

Did you know that the color and flavor of honey depends on what flowers the bees collected the nectar from? Next time you are at the store see how many different kinds of honey you can find. If you have different kinds of honey at home, can you taste the difference between the different kinds?

Learn more

about how bees communicate and test your skills playing [The Way of the Waggle Dance.](#)



Plant bee friendly plants

in your garden to help the bees in your community.



Explore the inside of a beehive!

by visiting <https://askabiologist.asu.edu/virtual-beehive>



CCSS.ELA.Reading:
Informational Text:
K-5.2, K-5.3, K-5.8,
1.7, 2.1



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