

Grade 5
Reading Science
The Marvelous World of Honeybees

Have you ever watched a honey bee buzzing around a garden and wondered about its life? Honeybees are fascinating creatures with complex behaviors and an essential role in our ecosystem. Let's dive into the world of honeybees and discover how they live, work, and contribute to our environment.

Honeybees live in colonies, and a single colony can house up to 60,000 bees! There are three types of bees in a colony: the queen, the workers, and the drones. The queen bee is the only female bee that lays eggs, and she can lay up to 2,000 eggs in a single day. The worker bees are females that do not lay eggs. They have various responsibilities, including cleaning the hive, caring for the young, guarding the hive, and foraging for food. The drones are male bees whose sole purpose is to mate with a queen from another hive.

Communication is vital in a bee colony. Bees communicate through a series of dances and pheromones. When a worker bee finds a good source of food, it performs a "waggle dance" to show the other bees the direction and distance to the food. Pheromones are chemical signals that bees release to communicate different messages. For example, the queen bee releases a pheromone that helps to keep the colony together and functioning smoothly.

Honeybees play a crucial role in pollination, which is the process of transferring pollen from one flower to another to fertilize them and allow them to produce fruit and seeds. About one-third of the food we eat depends on pollinators like honeybees. Without them, many of the fruits, vegetables, and nuts we enjoy would become scarce and expensive.

Apart from pollination, honeybees also produce honey, beeswax, royal jelly, and propolis. Honey is made from the nectar of flowers, and it is stored in the hive as a food source for

the winter months. Beeswax is used to build the honeycomb structure inside the hive. Royal jelly is a special food produced by worker bees that is fed to the queen and young bees. Propolis is a sticky substance collected from tree buds and used by bees to seal gaps in the hive.

Now that we have explored the incredible world of honeybees, it is evident that these tiny insects play a significant role in our lives. By understanding and appreciating their importance, we can take steps to protect them and ensure their survival for future generations.

Now, let's test your knowledge with some multiple-choice questions:

1. How many bees can a single colony house?
 - A) 600
 - B) 6,000
 - C) 60,000
 - D) 600,000

2. What is the primary responsibility of the queen bee?
 - A) Guarding the hive
 - B) Foraging for food
 - C) Laying eggs
 - D) Cleaning the hive

3. What do worker bees do?

- A) Lay eggs
- B) Mate with the queen
- C) Various responsibilities including cleaning the hive and foraging for food
- D) Perform waggle dances

4. What is the purpose of the drones in a bee colony?

- A) To lay eggs
- B) To mate with a queen from another hive
- C) To forage for food
- D) To perform waggle dances

5. How do bees communicate the location of food to each other?

- A) Through pheromones
- B) Through waggle dances
- C) By laying eggs
- D) By guarding the hive

6. What is the role of honeybees in pollination?

- A) To produce honey
- B) To transfer pollen from one flower to another
- C) To lay eggs
- D) To build honeycomb

7. What is made from the nectar of flowers?

- A) Beeswax
- B) Royal jelly
- C) Honey
- D) Propolis

8. What is beeswax used for?

- A) To build the honeycomb structure inside the hive
- B) To feed to the queen and young bees
- C) To seal gaps in the hive
- D) To lay eggs

9. What do bees use propolis for?

- A) To transfer pollen from one flower to another
- B) To perform waggle dances
- C) To seal gaps in the hive
- D) To make honey

10. What fraction of the food we eat depends on pollinators like honeybees?

- A) One-tenth
- B) One-quarter
- C) One-third
- D) One-half

1. Answer: C) 60,000. The passage states that a single colony can house up to 60,000 bees.
2. Answer: C) Laying eggs. The queen bee's main responsibility is to lay eggs. She is the only female in the colony that can lay eggs.
3. Answer: C) Various responsibilities including cleaning the hive and foraging for food. Worker bees are females that do not lay eggs. They have various responsibilities, including cleaning the hive, caring for the young, guarding the hive, and foraging for food.
4. Answer: B) To mate with a queen from another hive. Drones are male bees, and their sole purpose is to mate with a queen from another hive.
5. Answer: B) Through waggle dances. Bees perform a "waggle dance" to show other bees the direction and distance to a good food source.
6. Answer: B) To transfer pollen from one flower to another. Honeybees play a crucial role in pollination, which involves transferring pollen from one flower to another to fertilize them.
7. Answer: C) Honey. Honey is made from the nectar of flowers and is stored in the hive as a food source for the winter months.
8. Answer: A) To build the honeycomb structure inside the hive. Beeswax is used by bees to build the honeycomb structure inside the hive.

9. Answer: C) To seal gaps in the hive. Propolis is a sticky substance collected from tree buds and used by bees to seal gaps in the hive.

10. Answer: C) One-third. About one-third of the food we eat depends on pollinators like honeybees. Without them, many of the fruits, vegetables, and nuts we enjoy would become scarce and expensive.