



## The 'Bee' a Detective Scavenger Hunt

**Team Name:** \_\_\_\_\_

'Bee' careful as you try to locate the answers to the following questions. The answers might be hanging up, hidden underneath something or in a very obvious location. You must leave the answer where it is. Listen as the apiarist explains your boundaries. Do not run or hurry. You do not have to answer in complete sentences and spelling doesn't count. There are several activities to do and your group will get a chance to do them all.

1. What is the weight of an average worker bee? \_\_\_\_\_
2. What is the maximum number of eggs laid daily by a Queen bee? \_\_\_\_\_
3. What is the average number of trips a worker bee makes outside the hive each day? \_\_\_\_\_
4. What do honey bees use to make honey? \_\_\_\_\_
5. How many flowers do bees visit per day? \_\_\_\_\_
6. How many bees are there in a single hive? \_\_\_\_\_
7. How fast do bees fly? \_\_\_\_\_
8. During honey production periods how long is a bees' lifetime? \_\_\_\_\_
9. What is the average hive temperature? \_\_\_\_\_
10. How far would bees travel to produce 2 pounds of honey? \_\_\_\_\_
11. Name 3 benefits to eating honey. \_\_\_\_\_  
\_\_\_\_\_
12. Why could bees be in danger of disappearing from our environment? \_\_\_\_\_
13. What is pollination? \_\_\_\_\_  
\_\_\_\_\_
14. How many sides are there in a beeswax cell? \_\_\_\_\_
15. What are the four life cycle stages of a honeybee?  
\_\_\_\_\_

## Answers for Apiarists or Teachers:

1. What is the weight of an average worker bee? **80 milligrams.** (You can extend the learning to include weighing activities studied in math. Example: What weighs as much as a worker bee?)
2. What is the maximum number of eggs laid daily by a queen bee? **2000 eggs.** (Again math problem solving comes to mind. Example: How many eggs would a Queen bee lay in one week, one month and one year?)
3. What is the average number of trips a worker bee makes outside the hive each day? **10 trips.** (Potential journal exercise. How many trips do you make in a day? Example: from school to home, to appointments, to play, to extra curricular activities etc. How far do you travel?)
4. What do honey bees use to make honey? **nectar** (What can you make with honey? Good time to introduce lessons in nutrition. Example: Healthy snacks, cooking with honey.)
5. How many flowers do bees visit per day? **Bees from the same hive visit about 225,000 flowers per day. One single bee visits between 50 and 1000 flowers in one day.**
6. How many bees are there in a single hive? **40,000-45,000 bees.**
7. How fast do bees fly? **24 km. per hour**
8. During honey production periods how long is a bees' lifetime? **About 6 weeks.**
9. What is the average hive temperature? **36-37C**
10. How far would bees travel to produce 4 ½ kg. (2 pounds) of honey? **To produce 4½ kg. of honey, bees travel a distance equal to four times around the earth.**
11. Name 3 benefits to eating honey. **It keeps bad bacteria away; it gives you energy because it is quickly absorbed into the bloodstream; it contains lots of vitamins.**
12. Why could bees be in danger of disappearing from our environment? **Due to environmental change, mites, and disease.**
13. What is pollination? **Pollination is the transfer of pollen from the anther of one plant to the stigma of that plant or another.**
14. How many sides are there in a beeswax cell? **6 hexagonal sides**
15. What are the four life cycle stages of a honeybee?  
**Egg, larva, pupa and young adult.** (This lends itself to compare life cycles of other insects or animals.)

## Info Cards Needed to be Hidden for the Scavenger Hunt

Copy these cards onto heavy stock paper and hide them in areas where you don't mind if kids go searching. Part of the fun in this is the search. They can go in pairs or teams-whatever works. Make sure that the kids leave the info cards where they found them. If they bring them in then the next group won't be able to find the answers. Hide these clues in an area big enough that the kids have room to explore, without worrying about breaking anything. They'll need one "Bee a Detective Scavenger Hunt" activity sheet with them attached to a clipboard and a pencil with an eraser.

Honeybees are very helpful to our society. For such small insects they certainly are important. As a matter of fact the average worker bee only weighs about 80 milligrams. When you get back to school you need to determine just how small 80 milligrams is. What else can you find that weighs 80 milligrams? A worker bee takes about 10 trips outside of the hive each day to find nectar. One single bee can visit 50-1000 flowers per day. Bees from the same hive can visit up to 225,000 flowers in one day. Wow!



This is a Queen bee. You know the Queen because she is bigger than any of the other bees. A Queen bee is very busy. She can lay up to 2000 eggs per day. There is usually only one Queen per colony. She is an egg laying machine.



A large wooden box called a 'super' holds ten frames of comb. Beekeepers build their own beehives made up of a bottom board, frames and foundation and covers. These beehives must be cut to standard dimensions. In an apiary you will see these hives. In a single hive there could be 40,000-45,000 bees. The average hive temperature is 36-37 C. One beeswax cell has 6 sides. Anything with six sides is called a hexagon.



Honey bees fly about 24 km. per hour. The next time you are in a car, ask the driver to go 24km and see how fast that is. Remember that one bee weighs only 80 milligrams. That's fast for such a tiny insect. These bees are searching for nectar to make honey. Honey is good for you because it gives you lots of energy since it is absorbed into the bloodstream so quickly. It is filled with vitamins that are good for you and it keeps bacteria away. Take a spoonful of honey every day to stay healthy.



A bee flies from plant to plant or even within the same plant to collect pollen. Pollination is the fertilization of a flowering plant. Bees collect the pollen on their legs when they land to feed on a flower. Bees transfer pollen from the anther of one plant to the stigma of the other. A bee starts as an egg, then a larva, pupa and young adult before it can pollinate. Do you know that every third bite of food we eat depends on bees for pollination?



A bee must tap about 2 million flowers to make 454g (one pound) of honey. Bees fly more than once around the world to collect enough nectar to produce a pound of honey. To produce 4½ kg. of honey, bees travel a distance equal to four times around the earth. A bee's lifetime may be as short as six weeks. Now that's a long flight. Some of the reasons bees are disappearing may be due to mites (varroa), climate change or other diseases.

