

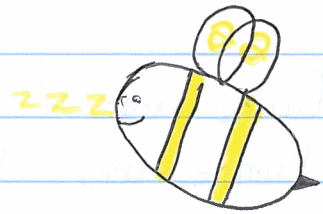
Bees



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Gr. 6

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Did you know that there are over 20,000 species of bees? We're just going to focus on the four main types: bumble bees, carpenter bees, honey bees and killer bees.

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The four main types

As we already know, there are four main types of bees that we are going to be discussing, as they all have an important role to play in the eco-system.

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Scientific Classifications

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Each type of bee has a scientific classification.

There are so many diverse species of bees, that scientists actually put them into groups, called "families".

Bumblebee's classification: Kingdom - Animalia; Phylum - Arthropoda; Class - Insecta; Order - Hymenoptera; Family - Apidae; Tribe - Bombini;

Genus - Latreille. The only thing that changes for a honeybee is that it has a subfamily, which is Apinae,

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Tribe - Apini and Genus - Apis. The only thing that changes for a killer bee is that it has a variety of species (Apis mellifera).

Carpenter bees are just species in the genus Xylocopa of the subfamily Xylocopinae.

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How to prevent bees

To prevent bees, you must try to avoid sweet scented fragrances, hairspray, soaps, lotions and oils. Don't wear bright floral patterns. You are able to prevent bees, so don't kill them for no reason. They do provide us with a natural anesthetic, honey. So in conclusion, we have discovered that bees are important to us as humans.

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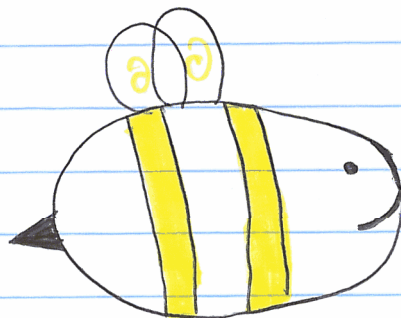
THANK

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YOU!

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Mrs. Botha

Grade 5

16 February 2017

Bees

Hey! Pssst! Ever wonder where bees come from? These tiny little honey makers range from two millimetres to four centimetres. These insects are helping us in ways we do not even imagine. From curing HIV, to catching serial killers, they might be the only reason some of us are still alive.

The ancestors of bees are predictably wasps. The earliest incarnation of the bee was found on October, 25 2006 in New Jersey, amber. This bee appeared to be 100 million years old. Before bees ate other insects and animals like beetles pollinated plants. Scientists have not yet discovered why bees begun to pollinate plants, but it would make sense, as it is easier to locate unpollinated plants. All bees are classified as phylum Arthropoda, class Insecta, order Hymenoptera. There are more than 20 000 species of bees. (e.g. Honey bee, Bumblebee, Carpenter bee, Leafcutter bee etc.)

Bees create honey from the nectar that they collect. Normal worker bees, drones, cleaners, nurses, builders, foragers, guards, and undertakers eat honey but the future queen bee has the privilege to eat royal jelly. Royal jelly has all the nutrients a bee needs, and because of that, queen bees grow twice the size of a normal bees and can live for five years while a worker bee only lives for about six weeks. Honey bees work hectically to produce enough

honey for the winter months, and need at least 100 pounds of honey to survive the winter months or they will be forced to cannibalize (eat larvae, eggs etc.).

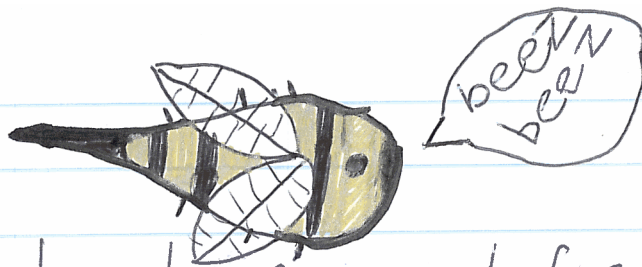
The Honey bee anatomy consists of a stinger, four legs, antennae, three parts of the thorax and six visible segments of the abdomen. The head comprises of the eyes and the antenna. The eye is divided into the compound eye and the simple eye. The compound eye helps the bee to understand colour, light and directional information from the sun's UV rays; while the simple eye is used to establish how light is present. The antennae are used to sense scents to figure out flight speed. The thorax includes wings, muscles and legs for control in movement.

Bees are very co-operative insects. They live in thousands in a bee hive. Worker bees construct the hive from wax, which they discharge from their abdominal glands. Male drones are escorted from the hive to die in autumn. Most bees in Africa, Asia, Europe, and other countries are similar. Unlike other bees, Honey bees do not hibernate, but instead feed on stored food and huddle together for warmth. Honey bees need to regulate temperatures in the hive from ninety to ninety-five degrees Fahrenheit. Adventurers believe that the original habitat for the Honey bee are in tropical areas.

I conclude that bees are useful but also very dangerous. They have a lot of uses and are very intelligent animals. They went from eating insects to eating nectar from plants. When you see a bee remember they might be the reason your still alive.

End

The honey bee



The honey bee has been around for millions of years.

Honey bees, scientifically ~~is~~ also known as *Apis mellifera*, which means "honey carrying bee".

The honey bee is the only insect that produces food eaten by man.

DID you know:

The honey bee's wings stroke incredibly fast, about 200 beats per second and it can fly for up to six miles, and as fast as 15 miles per hour.

A hive of bees can fly 90,000 miles, equivalent of three orbits around the earth to collect 1 kg of honey.

A honey bee visits 50 to 100 flowers during a collection trip.

DID You know:

it takes one ounce of honey ~~at~~ ^{to} fuel a bee's flight around the world.

The honey bee's brain is oval shaped and only about the size of a sesame seed.

A colony of bees consists of 20,000 - 60,000 honey bees and one queen bee.

DID You know:

Male bees have stinger and the ^(workers) female has a stinger.

The Queen bee The queen bee has contrroll over whether she lays male or female eggs.

Honey bees have 6 legs, 2 compound eyes made up of thousand of tiny lenses (one on each side of the head), 3 simple eyes on the top of the head, 2 ~~pair~~ pairs of wings, a nectar pouch, and a stomach.

The queen bee can ~~tk~~ live up to 5 years.

The queen bee lays ~~2500~~ two thousand five eggs per day.

Honey is the only food that includes all the substances necessary to ~~sustian~~ sustain life, including vitamins, ~~me~~ minerals, and water, and it's the only food that contains "Pinocembrin", an antioxidant associated with improved brain functioning.

by: Abdullah Moola Grade: 6

Final draft

14 February

Bees are very important to earth, they pollinate crops and vegetables. They gather pollen on their legs and fly around spreading it, but though they are so important to the planet bees are in danger all 20,000 are in trouble. Their biggest threat, humans farmers and companies are invading their natural homes, forcing them to live in domestic areas which then leads to conflicts.

Three bees that you might find:

Bumble bee (*Bombus dahlbomii*)

Large, fuzzy with short stubby wings but they are larger than honey bees. The queen bee is 1.6 inches, while the colony dies in winter she hibernates. Instead of flapping their wings up and down bumble bees flap their wings back and forth, the angle of the wing creates a vortice that eases the air pressure around them.

Bumble bees are found all over the world, largest are found in Chile and Argentina, nests are found close to the ground under piles of wood and dead leaves. The colony contains 50 to 500 bees and are one of the most social creatures in the animal kingdom. The bumblebee diet includes nectar and pollen made by flowers which provide them with energy and protein. Bees produce honey by chewing pollen and mixing it with saliva and feed it to the queen and larvae.

Fact: Bumble bees have a favourite colour "violet" because violet flowers produce far more nectar than the favourite flower colour "blue."

Carpenter bees (found in USA)

Large - Xylocopa, 12-25 mm long similar to bumble bees
Small - ~~Certi~~ Ceratina, 8 mm long

Xylocopa - Black, greenish black, metallic blue and purple blue in colour, males have yellow sections on the face. Males / Females yellowish hairs on legs thorax and abdomen, not as numerous as bumble bees which means to a glossy look

Ceratina - dark in colour with ~~not~~ metallic and scant body hairs

Xylocopa feed on pollen and nectar and excavate dry unpainted weathered wooden objects. Females inhabit existing nests, she places a food ball in the chamber and lays egg then blocks the chamber with chewed wood pulp, after laying eggs she dies, it takes seven weeks for the bee to reach adult hood. In the Northern States they have one generation per year but in Florida they have one or two broods per year

Fact: Ceratina females can reproduce without a male and males don't sting.

Honey bee facts:

- Males don't have a father but do have a grandfather
- Queen bees can sting but stay close to the hive.
- Honey bees cannot see red.
- A honey bee has five eyes three on its head and two compound eyes with numerous hexagonal facets.
- If the queen is removed from the hive, the colony will know within fifteen minutes

Bee life cycle

Honey bee

Queen bee: lives up to four or five years, she stays in the hive almost all her life, laying eggs until she produces a replacement queen. The original queen takes off with a part of the hive colony to start a new nest.

Bumble bee

Queen bumble bee lives for nine to twelve months. The workers and drones don't live that long like honey bees, but the queen won't live longer than a year it's the new queens that start future generations.

Solitary bees

Some species over-winter as adults and others as fully grown larvae and mature into adults the following spring.

In conclusion the information about bees I shared with you, should have expanded your knowledge, so if you see a bee buzzing around somewhere close to you, don't hit it out of the air...rather try not to provoke it and just walk away.