

HOW BEES MAKE BEESWAX





LET'S LEARN
HOW BEES MAKE
BEESWAX
AND WHY THEY
MAKE IT!



HOW DO BEES MAKE
BEESWAX?



THERE ARE THREE TYPES OF HONEY BEES THAT LIVE IN THE HIVE.



DRONE BEE

The drone bees job is to mate with the queen so she can produce eggs.



QUEEN BEE

The queen bee is the largest bee in the colony and is in charge of laying eggs.



WORKER BEE

The worker bees are the ones that make beeswax, and other jobs. **Worker bees that are between 12 - 20 days old produce wax.**



HONEY BEES HAVE EIGHT WAX SECRETING GLANDS

The glands are located on the **ventral** or front of their **abdomens**.

They secrete liquified **wax** which hardens into thin scales when exposed to air.

MAKING WAX REQUIRES A LOT OF ENERGY!

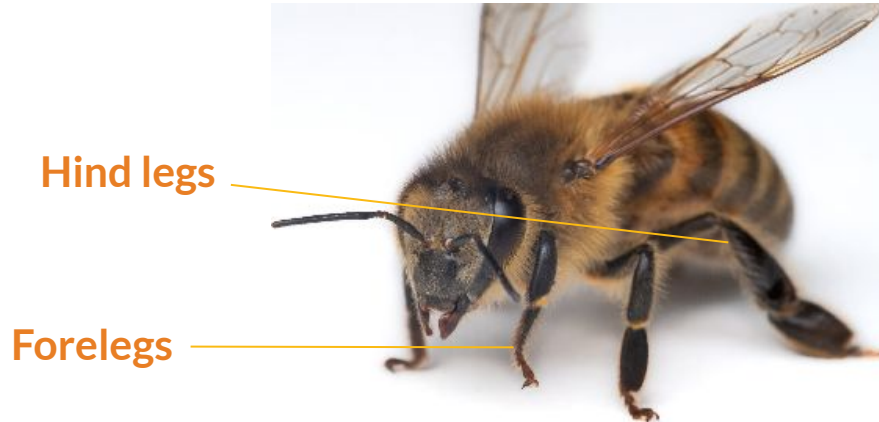
To make one ounce of wax, a bee must eat eight ounces of honey. That's a lot of energy!

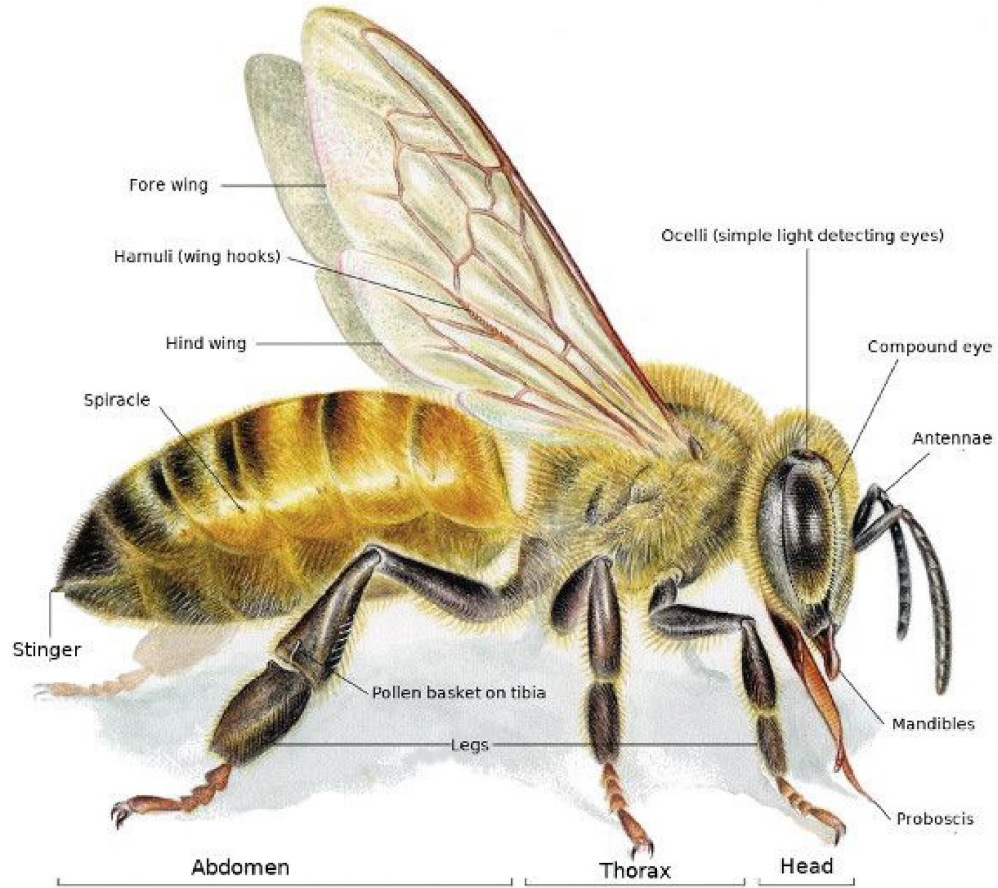


THE PROCESS

A bee uses their hind legs to move a wax scale to their forelegs and then to their **mandibles**.

They use their mandibles to chew the wax and form it into the six-sided honeycomb shape.





SOMETIMES
OTHER
WORKER BEES
HELP REMOVE
SCALES FROM
EACH OTHER.





Watch as this worker bee moves the wax scale up to her mandibles to chew it up and add it to the cell.



WAX IS USED BY
HONEY BEES TO
BUILD THE
INDIVIDUAL **CELLS**
THAT MAKE UP
THE **HONEYCOMB.**

BEESWAX FOUNDATION

The beeswax foundation is considered one of the most important inventions in modern beekeeping. It allows bees to have a base to build the walls of cells.



BEES WILL
ALSO BUILD
CELLS
WITHOUT A
FOUNDATION
FOUNDATION
ON A FRAME.



QUESTION



What gets stored
in the **cells**?

ANSWER



HONEY



POLLEN



BABY BEES

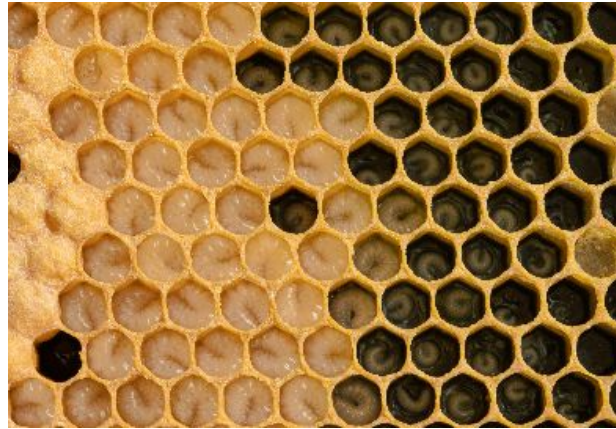
The individual cells that make up the honeycomb are used to store **honey, pollen and baby bees.**

CELLS

Cells are where eggs are laid and where larvae and pupae develop.



EGGS



LARVA



PUPA



UNCAPPED HONEY

IT'S LIKE A LID ON A JAR!

A layer of wax is added over the honeycomb, so that the honey may be stored and ready for when the bees need it during the winter.

CAPPED HONEY

WHAT IS BEESWAX USED FOR?

Humans have been using beeswax in a variety of ways for many years. Beeswax is known to have antibacterial and antifungal properties. Here are some of the ways beeswax can be used:

- Lip balm and lip gloss
- Soap and deodorant
- An alternative to Neosporin
- Lotion
- Hand creams and salves
- Candles
- Wood and leather polish
- Reusable food wraps



BEESWAX CANDLES BURN CLEANER AND BRIGHTER

Candles made from beeswax emit negative ions which are known to purify the air.



ASSESSMENT QUESTIONS

- Which honey bee makes beeswax?
- Where do honey bees get beeswax?
- What do the bees use beeswax for?
- What is stored in waxcombed cells?
- What things can be made from beeswax?





THANK YOU

FOR LEARNING
WITH US!



PHOTO SOURCES

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