

# HONEY BEE ANATOMY LESSON



## SUMMARY/BIG IDEA:

Students will dissect a honey bee to learn more about the bee body.

## MATERIALS & RESOURCES:

- Bee anatomy image copied for each student or group of students
- Dead bees (collected the day before from around the observation hive entrance) or purchased from [Dead organic honey bees](#)
- Scotch tape, magnifying glasses, tweezers, and scissors
- [Magnifying glass and tweezer set](#)
- [Magnifying glasses set of 15](#)
- [Set of 12 Tweezers for kids](#)
- [Printable bee with parts labeled](#)
- [Bee for Students to label](#)
- [Bee for Students to label \(younger ages\)](#)
- [Video of Honey Bees flying and in the hive](#)
- [Bee Bits: Parts of a Honey Bee Video](#)
- [Song for Kids about Honey Bees](#)



## STEPS:

### PART ONE:

1. Tell students that they will dissect a honey bee today to learn more about the bee body.
2. Begin by reminding students that one of the worker bees jobs is to take the dead bees out of the hive and since bees only live six weeks there are a lot of dead bees under the entrance of the observation hive.
3. Give each student a dead bee and a magnifying glass. Ask students to use the magnifying glass to observe the outside of the bee.
4. What parts do they recognize? (head, thorax, abdomen, 6 legs, wings, antennae, 2 compound eyes, tongue sticking out).
5. Ask students to stand up and sing, “Head, Thorax, Abdomen” to the tune of “Head, Shoulders, Knees, and Toes”. Instead of “eyes, and ears, and mouth, and nose” sing “compound eyes, antennae, and 6 legs”.
6. Pass out the Bee Anatomy page and label the bee body parts as a group.
7. Allow students to use tweezers and scissors to cut off the bee parts and tape them in the appropriate spot on the Bee Anatomy page. Be sure to COMPLETELY cover the bee part with scotch tape to keep it from decomposing.
8. Explain that it will be hard to get every single bee part because honey bees are so small. Encourage students to get the basic parts (head, thorax, abdomen, stinger, wings, tongue, and antennae).

### ASSESSMENT/REFLECTION:

**No Live Bees Required:** use [this link](#) to observe a live feed bee hive.

Bring small groups over to the observation hive to point out bee anatomy on the living bees. Compare body size, shape, and coloring. See if they can point out a worker and a drone. Ask students why some worker bees are larger than others (younger bees are smaller). Ask students why the coloring is not exactly the same on each worker bee (all have same queen as a mom but some have different dads). Teacher may also want to use resource links provided to have students label their own bee.

**Bee Journal Entry-** Compare your body to a honey bee body. What is similar? What is different? Why? Include illustrations to accompany your writing.

## BEE BIOLOGY IN BRIEF

Honey bee Anatomy (scientific name, *Apis mellifera*)- Honey bees have two antennae, two compound eyes, two pairs of wings (4), three pairs of legs (6), a nectar pouch or honey sac, and a segmented abdomen. At the end of the abdomen is the stinger with a barb, which anchors the stinger in the victim's body. The bee leaves its stinger and venom pouch behind and soon dies from abdominal rupture.

### HEAD

The head of the bee contains the brain, the eyes, the proboscis, & the mandibles - the 2 antennae are attached to the head.

### COMPOUND EYE

One of two large eyes that are made up of many hexagonal lenses.

### ANTENNAE

### UPPER LIP JAW LOWER LIP

### MANDIBLES

A pair of plier-like jaws - located on the lower sides of the head. They are used to carry things, construct and clean the hive, hold enemies, and release pollen from flowers.

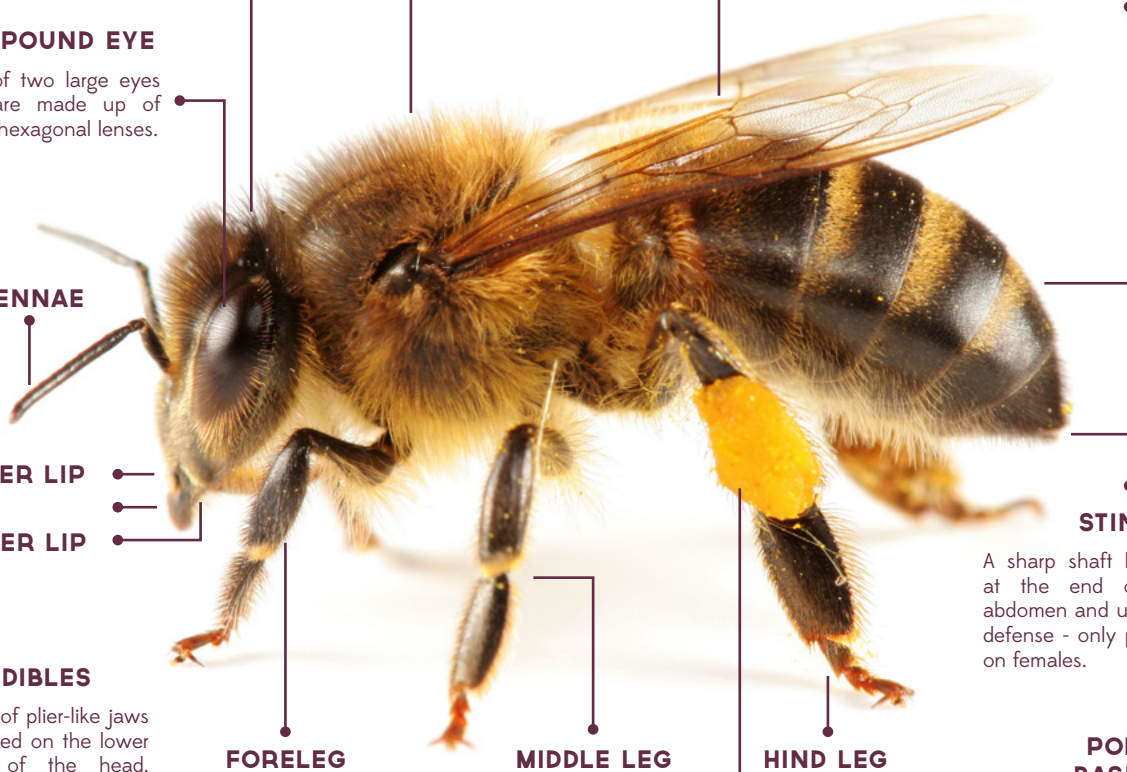
### THORAX

Body section between the head and abdomen - the legs and wings attach to the thorax.

### FORE WING

### ABDOMEN

Segmented tail area of a bee, that contains the heart, reproductive organs, wax glands, & most of the bee's digestive system.



### STINGER

A sharp shaft located at the end of the abdomen and used for defense - only present on females.

### POLLEN BASKETS

Areas located on the hind legs. Used for carrying pollen back to the hive.

## HONEY BEE ANATOMY LESSON STANDARDS

### NEXT GENERATION SCIENCE

3-LS4-2

4-LS1-1

### ELA COMMON CORE

W.3.2; W.4.2; W.5.2