

GRASSHOPPER ANATOMY & DISSECTION

Introduction: In this lab, you will observe the external anatomy of a preserved grasshopper, locate structures and label a diagram. Internal anatomy is optional and can be observed after you have completed the external anatomy of the grasshopper.



PreLab Questions (use your book or other references.)

1. Grasshoppers belong to the Kingdom _____, the Phylum _____, the Subphylum _____, and the Class _____.
2. Use what you know about classification to determine which of the following pairs is MOST closely related. [Grasshopper & Crayfish] or [Grasshopper & Spider] or [Grasshopper & Housefly]
3. What kind of skeleton does a grasshopper have? _____

Anatomy of the Grasshopper - use specimens or pictures to examine a grasshopper. Check the boxes as you complete each step.

5. Locate the segments on the abdomen. How many segments does your grasshopper have? _____ Compare this number to other grasshoppers in the class. Do they all have the same number of segments? _____

6. Note the thorax. It is the center area to which all appendages attach. The hard covering of the thorax is called the carapace.

7. Locate the antenna. Is the antennae branched or unbranched? _____ How many antennae are there? _____

8. Locate the compound eyes. How many eyes does the grasshopper have? _____

9. Locate the grasshopper's legs.

To what part of the body are they attached? _____ (head, thorax, or abdomen).

How many pairs of legs does the grasshopper have? _____

How many jumping legs are there? _____ How many walking legs? _____

10. Notice the claws at the end of the legs. Do both sets of legs have these claws? _____

11. Locate the wings of the grasshopper. There are actually two sets of wings- one on the top and one underneath. The top wing is called the forewing and the bottom wing is called the hindwing. Which wing seems the most fragile? _____

12. Turn the grasshopper over and view the mouthparts.

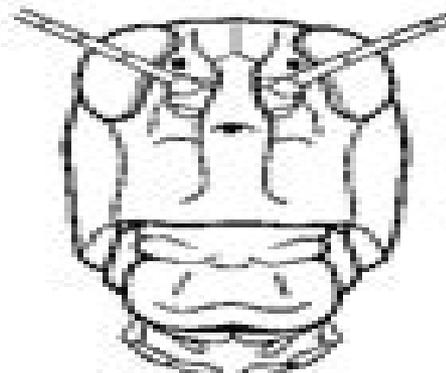
Find the outside most plate (like an upper lip) which is called the labrum, its opposite is the lower plate (lower lip) called the labium.

The moveable mouthparts that look like antennae are the maxilla. Locate them.

The mandible is located under the maxilla and is used for chewing.

Does the mandible open from top to bottom or from side to side? _____

Label the labrum, maxilla, and mandibles on the picture. Also label the compound eyes and antennae.



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Roman Wölfel



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