



A dragonfly is an example of an insect



The sap-sucking aphid is an example of a true bug

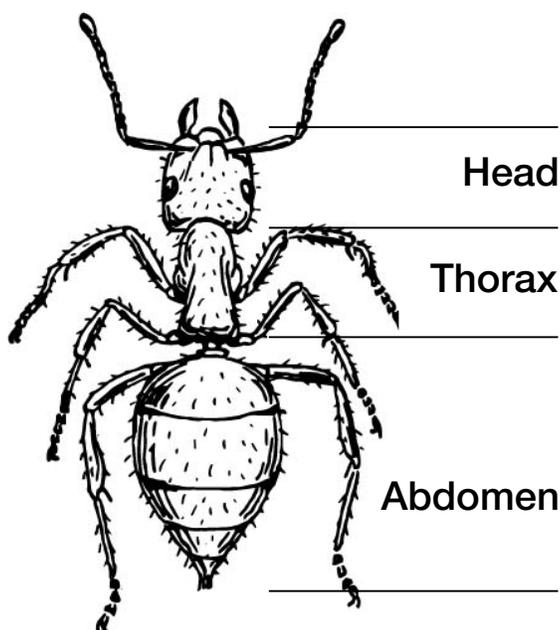
What is a bug?

Although we tend to refer to all creepy crawly critters that we see as bugs, most of these animals are in a group called arthropods. This very large group of animals all have an exoskeleton, a body that is divided into parts (segments), and legs that have joints and come in pairs. The number of body parts and pairs of legs can help us tell what subgroup of arthropods these critters belong to.

Insects

Insects are a subgroup, or class of arthropods that have a 3-part body and six legs (3 pairs). Many insects (but not all) have one or two pairs of wings.

Insects sense the world through compound eyes and a pair of antennae.



This ant is an example of an insect. The diagram shows its three body parts, or segments: the head, thorax and abdomen.

Insects include beetles, ants, mosquitoes, dragonflies, butterflies, bees, grasshoppers and may more! There have been about 900,000 species of insects identified, with potentially as many more yet to be identified. Insects represent approximately 80% of all the world's species of living things.

When entomologists, or scientists who study insects, talk about bugs, they are actually referring to a particular group of insects, from the order Hemiptera, which include cicadas, aphids, planthoppers, leafhoppers and shield bugs. These kinds of insects all share similar kinds of sucking mouthparts.

Some insects, such as June bugs and lady bugs, are not actually true bugs at all, but beetles!



Above: Ladybugs are actually beetles



Left: An insect's compound eyes



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This spider is an example of an arachnid.



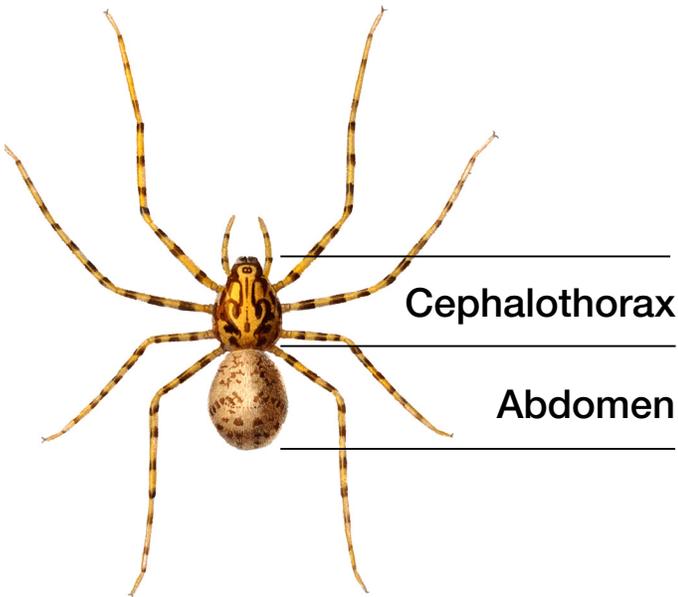
Arachnids

Spiders and other eight-legged arthropods are not insects. They are in a group called arachnids. This group also includes ticks, mites, harvestmen (also known as daddy longlegs) and even scorpions!

Arachnids have two body segments: the cephalothorax and the abdomen.

The cephalothorax is the first of 2 body parts on a spider, a combination of the head and thorax, and on it are found the legs, eyes, pedipalps, chelicerae, and other mouthparts.

Besides the four pairs of legs, many also have some other appendages, like chelicerae and pedipalps, that might look like legs, but are used for feeding, defense and even sensing their environment.



This spider is an example of an arachnid. The diagram shows its two body parts, or segments: the cephalothorax and the abdomen.



This centipede is an example of a myriapod.

Myriapods

Other arthropods include millipedes and centipedes. These are known as myriapods because they have myriad, or many, feet. The actual number, depending on the species, can be from 10-750 legs.



Crustaceans

Yet another kind of “creepy crawly” that belong in the arthropod group are crustaceans. Although many of these such as crabs, lobsters, shrimps, prawns and barnacles are found in the ocean, you might find woodlice while on a bug hunt.



These crustaceans, also known as “pill bugs” are often found in dead wood.



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