

Types of Legs

Scientific Background

Arthropod means *jointed foot*. All arthropod legs are covered with a hard exoskeleton and are jointed to allow for motion. Over millions of years, arthropods' legs have become adapted for a wide variety of functions, such as grasping, jumping, digging, and swimming. In some insects the legs may perform two or more of these functions. The tip of an arthropod's leg is frequently modified to form a claw for grasping prey or a sticky pad allowing the insect to walk upside down. An arthropod's legs can give clues about the environment where it is found and the food it eats.

Vocabulary

- adaptation
- appendage
- camouflage
- coxa
- grasping
- jointed
- prolegs
- tarsus
- aerodynamic
- aquatic
- claw
- fore legs
- hind legs
- paddle-like
- slender
- true legs

*Vocabulary definitions can be found in the **Backyard Bugs** Glossary.*

Thinking Question

Select two **Backyard Bugs** to compare, such as the hickory horned devil and the centipede. These two bugs' legs may look similar, but the bugs use them very differently. How are the legs of those two bugs alike? How are they different?

Exploratory and Extension Activities

Additional Exploratory and Extension activities are available in the *Backyard Bugs Teacher's Guide*.

Centipede Fossils

Smear earth tones of paint on finger painting paper. Have students use their fingers to create the impression of a centipede fossil.






<http://www.psi-az.com/Schur/azpaleo/cocotr.html>

Cockroach Conga

Obtain the CD *Spinning Tails* by Steve Pullara and His Cool Beans Band ([Released](#) 2001, ASIN B00005Q6ZT). Teach the song *Cockroach Conga*. Students can also put this song into a Conga dance.





Name: _____

Types of Legs, Part 1

| Legs | Describe the leg in the picture. How does the arthropod use its legs? |
|---|--|
|  <p>Monarch Larva Prolegs</p> | |
|  <p>Mantis Foreleg</p> | |
|  <p>Whirligig Beetle Legs</p> | |
|  <p>Cockroach Hind Leg</p> | |
|  <p>Millipede Legs</p> | |

Name: _____

Types of Legs, Part 2

| Legs | Describe the leg in the picture. How does the arthropod use its legs? |
|--|--|
|  <p>1 2 3 4 5</p> <p>Worker Bee Hind Leg</p> | |
|  <p>Centipede Legs</p> | |
|  <p>Giant Water Bug Hind Leg</p> | |
|  <p>Tarantula Legs</p> | |




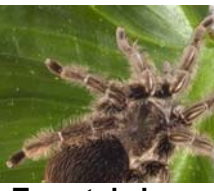
Answer Key

Types of Legs, Part 1

| Legs | Describe the leg in the picture. How does the arthropod use its legs? |
|---|---|
|  <p>Monarch Larva Prolegs</p> | <p><i>The prolegs of the Monarch caterpillar allow the bug to hold on to plants while eating and walking. The prolegs are used to hold onto the milkweed plant during feeding. The three pairs of true legs are used for holding and manipulating the leaves, stems, buds, and flowers as the caterpillar eats them.</i></p> |
|  <p>Mantis Foreleg</p> | <p><i>A mantids' forelegs have sharp spines on them. These rows of spines are used to grasp their prey. When prey comes close, the mantis flips out its strong, spiny front legs to catch it in its sharp spines.</i></p> |
|  <p>Whirligig Beetle Legs</p> | <p><i>Whirligig beetles' short, paddle-like back legs that help them swim. They can move their hind legs very quickly to propel themselves over the surface of the water. Their long, slender front legs are used for grasping and gathering prey.</i></p> |
|  <p>Cockroach Hind Leg</p> | <p><i>Cockroaches have three pairs of legs. Their legs are adapted for running. Cockroaches are active and fast-running insects.</i></p> |
|  <p>Millipede Legs</p> | <p><i>Adult millipedes have two pairs of legs attached to most body segments. Matching legs on each side of a millipede move together. Many of a millipede's legs touch the ground at the same time. This movement of the legs enables the millipede to glide along smoothly. The legs also can help push the animal through rotting wood and soil. Millipede means "thousand feet," but millipedes actually have between 50 and 150 pairs of legs.</i></p> |

Answer Key

Types of Legs, Part 2

| Legs | Describe the leg in the picture. How does the arthropod use its legs? |
|--|--|
|  <p style="text-align: center;">Worker Bee Hind Leg</p> | <p><i>There are five segments in each honey bee tarsus. Worker honey bees have brushes on their legs to collect pollen that sticks to their feathery body hairs.</i></p> |
|  <p style="text-align: center;">Centipede Legs</p> | <p><i>Centipedes have one pair of legs on each segment. The legs of the first body segment, found right behind the centipede's head, are actually claws. When a centipede moves backwards, its last pair of legs is used just like feelers. Its back legs are longer than the legs on the other body segments and about as long as the antennae. Centipedes alternate the movement of the legs on opposite sides of the body like insects do. This results in an s-shaped motion of their bodies. Centipedes move much faster than millipedes. Centipede means "hundred feet," but centipedes actually have between fifteen to over a hundred pairs of legs.</i></p> |
|  <p style="text-align: center;">Giant Water Bug Hind Leg</p> | <p><i>Giant water bugs catch their prey with their strong front legs. The giant water bug's back legs are flat and look like oars. They use these legs for swimming.</i></p> |
|  <p style="text-align: center;">Tarantula Legs</p> | <p><i>Spiders have four pairs of legs, rather than three pairs, as insects do. There are usually two to three claws at the end of each of a spider's legs. Pedipalps are mouthparts that look like legs. They are found behind and below a spider's mouth. Pedipalps are feelers and are used to taste and crush food prey.</i></p> |