

## Centipede or Millipede?

### **Scientific Background**

Neither centipedes nor millipedes are insects. They are *arthropods*, invertebrates with segmented bodies and exoskeletons. Centipedes and millipedes both live on land in moist locations - under rocks, in rotting logs, in leaf debris, or other detritus.

Centipedes, meaning *one hundred feet*, are predators belonging to the Order Chilopoda. Despite their name, centipedes do not all have 100 legs. They have flattened body parts, and each body part has one pair of legs. The legs of the first body segment have been modified to form poisonous fangs that help it to capture prey. Centipedes eat insects, earthworms, spiders, slugs, and other small animals.

Millipedes, meaning *one thousand feet*, are herbivores belonging to the Order Diplopoda. Millipedes have between 50 and 200 pairs of legs, depending on the species. Millipedes have a rounded, segmented body, and short antennae. Most millipede body segments have two pairs of legs. Millipedes are nocturnal and have poor vision. Most millipedes are herbivores that eat dead and decaying plant material. Millipedes do not have a venomous bite, but some secrete an irritating chemical from their stink glands to discourage predators.

### **Vocabulary**

- arthropod
- detritus
- exoskeleton
- invertebrate
- predator
- stink glands
- Chilopoda
- Diplopoda
- herbivore
- nocturnal
- segment
- venom

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

### **Thinking Question**

How are centipedes and millipedes alike? How are they different?

### ***Exploratory and Extension Activities***

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

#### **Greek and Latin Root Meanings**

Use *cent* and *pede* to introduce or reinforce Latin and Greek root learning. Have students research words that use *cent* and *ped*. In small groups, have students look through the dictionary or use [www.dictionary.com](http://www.dictionary.com) to find as many words that include *cent* and *ped*. Other affixes can be introduced, such as *pod*, *pes*, and *mil*. When the research is complete, have students share their results. Write all the words on the whiteboard for a class list.

#### **Millipede Music**

Make groups of musicians with two students on hand drums, two students on small xylophones who will control the movement of the student millipede. Students who make up the millipede will pair off. Each pair will tie their legs together as if preparing for a three-legged race. Pairs will line up to represent a millipede body. One student will lead the body as the head. When the drummers sound the first beat, the first two pairs will use their outside, free legs to move forward—millipedes have two pairs of legs per segment, the two pairs of legs move in synchrony. On the second beat, the next two pairs will move forward and so on until all students have moved. Drummers should beat with a steady, slow beat, like a *lento*. When students understand the rhythm of millipede leg pairs with their own individual set of muscles, moving in pairs, each slightly out of phase with the pair in front and the pair in back, then the xylophones can do a glissando up and down the keyboard. When student millipede body/legs hear the glissando, they are to increase their movement rhythm, so the body produces a wave effect.

Name: \_\_\_\_\_

### Centipede or Millipede?

Use the word bank to match the characteristics with the correct arthropod(s). Add your own characteristics.			
cylindrical body	herbivore	aquatic	terrestrial
flattened body	arthropod	one pair of legs per body segment	two pairs of legs per body segment
predator	insect	exoskeleton	wings
carnivore	invertebrate	scavenger	caterpillar

Characteristics of Centipedes	Characteristics of Both Centipedes and Millipedes	Characteristics of Millipedes
Characteristics of neither Centipedes nor Millipedes		

## Answer Key

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Characteristics of Centipedes	Characteristics of Both Centipedes and Millipedes	Characteristics of Millipedes
<i>flattened body</i>  <i>one pair of legs per body segment</i>  <i>predator</i>  <i>carnivore</i>	<i>terrestrial</i>  <i>arthropod</i>  <i>exoskeleton</i>  <i>invertebrate</i>	<i>cylindrical body</i>  <i>herbivore</i>  <i>two pairs of legs per body segment</i>  <i>scavenger</i>
Characteristics of neither Centipedes nor Millipedes		
<i>insect</i>  <i>aquatic</i>  <i>wings</i>  <i>caterpillar</i>		