

Kids Ask Dr. Bug

Home to more than plants, kids ask Dr. Tamra Reall about the curious things found in the garden.

Is time different for insects? Soren, 14

A minute is a minute no matter who or what you are. Yet, how that time is perceived and how much can happen in that amount of time can be very different for various species. Scientists found that perception of time is generally linked to size. So, the smaller the animal, the faster it's metabolic rate (the amount of energy used in a period of time), and the slower time passes for that animal. For example, a house fly can avoid the fly swatter because they can see more information in a second than larger animals – basically, they can see and process more frames per second than humans can. Another example is how quickly cockroaches scatter when air currents hit the attachments (cerci) on their hind end.

Do centipedes use all their legs? Cloe, 13

This reminds me of a poem:

A centipede was happy—quite!
Until a toad in fun
Said, 'Pray, which leg moves after which?'
This raised her doubts to such a pitch,
She fell exhausted in the ditch
Not knowing how to run. (Katherine Craster)

It's a good thing that centipedes don't have to think about using every leg! But to answer your question, yes, a centipede uses all their legs when everything is working correctly.

However, if the centipede loses a few legs through an unfortunate accident, such as an encounter with a bird, it would still be able to walk using its remaining legs.



A centipede by Steviament from Pixabay

Could centipedes become vegetarian again? Anthony, 14

This is a complex question! Centipedes are carnivores and eat many other arthropods, such as termites, silverfish, ants, and cockroaches. I cannot find any examples of vegetarian centipedes. Even so, the arthropod world has many surprises and I imagine, if it became advantageous for some species of centipedes to become vegetarian, it could happen. The centipede's cousin, the millipede, is typically vegetarian. There are a few exceptional millipede species, though, that hunt worms, insects, and will even eat a centipede if given the opportunity.

When you step on a cockroach, why do they not stay squished? Addison, 14

Cockroaches have flexible exoskeletons that can handle some pressure. Also, your shoes probably have spaces to give you better traction and places for the roach to protect itself. Fortunately, most roaches outdoors are not pests and don't want to live in your house.

You may be interested to learn that some insects can handle *a lot* of pressure! Scientists recently discovered that the diabolical ironclad beetle can withstand pressure 39,000 times its body weight. This beetle can get run over by a car and survive! The way the beetle's various body parts fit together like a layered puzzle protects it from sudden breakage and death. Scientists are studying how the beetle survives in order to create new technologies, such as holding vehicles and buildings together.

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