

Kids Ask Dr. Bug

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

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What are antennae used for?

Lily, 6

Antennae are like noses – insects use them to smell and sense the world around them. Insects use smell to detect food, find mates, and stay on a trail to find their way home. Some male moths with fancy and sensitive antennae can detect a female moth over a mile away. Insects living in colonies, like ants and honey bees, can sense whether things coming into their nest are from their colony or are an invader. If you watch a beehive (from a safe distance), you may notice guard bees at the hive entrance that check incoming bees to learn whether to attack or keep busy.



Image: Count the legs (8!). This is an ant-mimicking spider. Image by Sean Hoyland (public domain image)

Insects, spiders, and fungi can be tricky, however. Some critters pretend they belong in a colony by looking or smelling like the insects they want to eat. In order to not be attacked by ants, some spiders look, smell, and act like ants. Look closely at the “ant” in the picture – how many legs? 8 legs means this is a spider. Another example of mimicry are some fungal spores that look and smell like termite eggs so they are tended by termites along with the termite colony’s eggs.

Do butterflies have blood?

Acelyn, 6

Yes, kind of. Like blood, hemolymph is the fluid in insects (and other arthropods, too) and it does many of the same things that blood does for us – it helps the body get oxygen and nutrients and can carry away waste. This yellowish-green fluid goes through an insect’s body very differently, however. You have arteries that carry your blood to all your body parts. Although insects have a heart, called an aorta, they don’t have arteries. Instead, arthropod bodies are full of hemolymph, more like a water balloon.

How do insects eat?

Jesse, 5

There are so many different kinds of insects, but there are a couple of ways insects typically eat: chewing or sucking. Mosquitoes, squash bugs, and aphids are some of the insects with a straw-like mouthpart that they stick into a plant or animal to suck out fluids. Other insects, such as caterpillars, lady-bird beetles and green lacewings bite and chew their food before swallowing.

How do insects fly?

Lila, 6

I recommend looking up “insect flight in slow motion” on the internet to see insects taking off and flying through the air – it’s beautiful! Only adult insects have wings and while most have two pairs, flies only have one pair. Insects have impressive muscles that power their wings, and they also use their antennae, eyes, and sensors on their bodies to get where they need to go safely. Here are some neat insect flight facts: A type of midge (a tiny fly) beats its wings over 1,000 times per second. Sphinx moths can fly 33 miles per hour. Also, painted lady butterflies migrate 4,000 miles from North Africa to Iceland.

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