

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 is the gold in Monarch chrysalises? Emmy, 9

Although the spots appear metallic, the special cells in Monarch chrysalises reflect light like metal and give the appearance of gold. We don't know exactly why those spots exist. Ideas for why some butterfly pupae have metallic-looking spots include camouflage, warnings to other critters, "sunscreen" to protect the developing insect inside, or perhaps they are just a pretty consequence of the metamorphosis process.

I was stung by a bee before. Are they poisonous? Emmanuel, 10

Ouch! Bee stings hurt, but that's the point. Bees don't sting because they are mean. Rather, they sting when either they, or their hive, are threatened whether on purpose or accident. The venom from a bee sting isn't poisonous, meaning if you swallowed it, it wouldn't necessarily make you sick. But bee venom contains toxins that your body reacts to, usually feeling like a hot pin prick. Sometimes, people are allergic to the toxins and may need help from a doctor. Always be aware of the insect world when you're outside – watch and appreciate their behaviors, and avoid getting stung!



Image: Monarch chrysalis by Tamra Reall

I watched the Bee Movie so I know all about what happens in a beehive. Boy bees do all the work, right? Jesse, 5

While it tells a fun story, compared to what really happens in a hive, almost everything in this movie is incorrect. In a real hive, there is one bee, the Queen, who lays all the eggs. Only a few boy bees are in a colony of bees and they are called drones. They do nothing to help in the hive – they don't even feed themselves. Drones just hang around outside waiting for other bees to fly by. The worker bees are females and do all the work in the hive. The workers start out as nurse bees, helping other new bees get food and clean out their cells. Then they move on to become caretakers of the queen, honey-making bees, hive-building bees, and guard bees. Eventually, they may become field bees looking for pollen and nectar. The drones don't get off too easily, though. In the fall, as the worker bees get ready for winter, they drag any remaining drones out of the hive.

How many bugs are in our food? Damian, 15

Trigger warning: this may be one of those questions you wish you could "unread". But since you asked ... even using the best technology, it is impossible to keep all insects out of our food. In fact, there are legal standards for the amount of insects that can be in our food. Some examples include: ketchup can have 30 fruit fly eggs per 100 grams; peanut butter can have 50 insect fragments per six tablespoons; and, coffee can have up to 10% of beans infested. Some companies are intentionally selling food made from cricket flour, such as chips and chocolate chip cookies. They are delicious!

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