

## Teachers get a taste of live insect biology Teachers on bugs: 'We're loving it'

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Just three items are needed for the experiment: a cheap blue ballpoint pen, a clean piece of paper and a live, local termite.

Yes, a termite.

They're often seen on wood, and that's where Armin Moczek, an Indiana University assistant professor of biology, found those he gave out during a workshop for teachers Friday at WonderLab Museum of Science, Health and Technology.

"I love this experiment because it's highly reliable," Moczek said. "I've done this with like 100 students in the classroom, and it works."

About 20 participants sat in groups of four and drew circles on the paper with their blue pens. They then gently tipped the termites out of their tiny containers, and the bugs quickly made their way to the circles, tracing the circle again and again, rarely leaving the line.

"Do they just like the color?" wondered Katie Browning, who works with science-based Girl Scouts programs in Indianapolis.

Actually, a chemical in cheap, blue ballpoint pens mimics the trail pheromone of termites, Moczek explained.

Moczek trained as a tropical ecologist in Borneo before turning his focus to biology.

"I see insects, and I'm like, 'Oooh, interesting!'" he said.

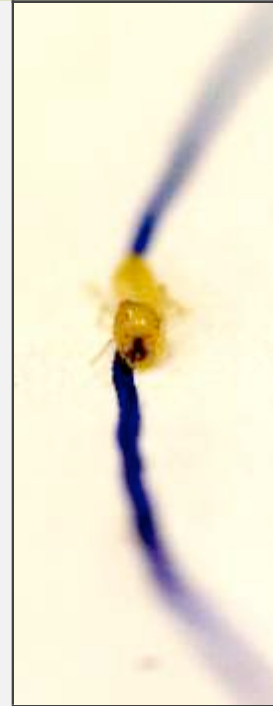
He started leading workshops at WonderLab last year to provide a resource in insect biology for local educational needs. He says people should realize how important insects are to their lives; they are pollinators and competitors for food, for example. And he believes when people start looking closely at details about insects, they begin to ask big questions: Why? How?

"Before you know it, you are practicing the scientific method," he said. "Exercising that logic, I think, you can't start early enough."

Termites weren't the only insects studied during the daylong, hands-on workshop. Did you know honeybees do a figure-eight "waggle dance" with their abdomens — which Moczek demonstrated — and present the only case in which abstract language has evolved outside primates? "We're loving it," said Jaime Burkhart, a fourth-grade teacher at Summit Elementary School.

Moczek described the day as "a tasting of different flavors of insect biology," but with modules teachers can adapt to a variety of ages right away.

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A termite follows the path of a line drawn by a blue ink pen during a workshop for science teachers at WonderLab Friday. The teachers experimented with different paths for the insect to follow and speculated about the reasons. David Snodgrass | Herald-Times

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Jane Vandenberg, who teaches second grade at Templeton Elementary School, said she heard the workshop was being offered and thought it was a good fit for her class.

"We teach about insects in our classes, and I (wanted to) get more activities to do with the kids," she said.

Second-grade teacher Patty Harpring, of University Elementary School, said she had been looking forward to getting background information for insect study — and some free materials.

Participants took home starting materials for insect collections, including a case containing local representatives of the insect world — a roach, a beetle, a fly, a bee, a leaf-footed bug, a butterfly, a grasshopper, a dragonfly, an earwig and a praying mantis.

Other workshop participants came from Lighthouse Christian Academy, Bloomington High School North, and St. Charles, Batchelor Middle, Marlin, Grandview, Arlington, Nashville and Gosport Elementary schools.

More workshops will take place at WonderLab in the spring, Moczek said. Interested participants should contact the museum at 337-1337.

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Jan Brand, a science teacher at Batchelor Middle School, speculates that termites may be using their sense of smell to follow a line made by a blue ink pen. IU professor Armin Moczek said the cheaper ink actually is very similar to termite pheromones, the chemical the insects secrete to create a path. David Snodgrass | Herald-Times

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