



BAM! KAPOW! SPLAT!

A superhero is among us, putting the whoosh! back into science. He doesn't jump out of a telephone booth or drive a bat car. And he doesn't wear a black cape. He wears a white lab coat.

comes to life on a computer screen, **Te** saving the day by solving the mindboggling mysteries of life: Do bears go to the bathroom when they hibernate? How is pollen used in crime scene investigations? Which creatures use slave labor?

Gone are the days of the stereotypical "nerdy" scientist hunched over thick textbooks. With the advent of "CSI" and other science-based television programs, scientists have become heroes-popular and cool.

Dr. Biology, the scientific know-it-all, fits the hero mold. He is the brainchild of Charles Kazilek, director of technology integration and outreach at Arizona State University's School of Life Sciences. Kazilek connects with tech-savvy kids who are hungry for science that is fun and exciting. He does it with his interactive website. askabiologist.asu.edu.

"Dr. Biology is actually more than 100 science professionals," Kazilek says. "Expertise from all areas of biology enables Dr. Biology to answer all kinds of questions." At close to a million visitors a year, he has answered more than 20,000

science questions submitted by kids from America to Australia.

"I grew up in a time period when you could actually phone an expert," Kazilek explains. "I wanted kids to be able to do that today." When his own children were small, he came up with the idea to combine his two passions-science and computers-to connect kids with experts. In his spare time, he created a simple question-and-answer website, using his three children to test it. The site's "Words to Know" section is a direct result of his family's dinner-table discussions.

As students in grades K-12 began to use the website, Kazilek added more information. "Early on, the kids' questions became a great way to see if things worked," he says. "They also helped us know what the kids were concerned about."

Twelve years later, "Ask a Biologist" has grown from a simple, one-page format to an advanced website with podcasts, teacher and parent resources and entertaining activities.

Like most heroes, Dr. Biology works without pay. Kazilek and his colleagues built the website without any funding. A recent

grant from The National Science Foundation will be used to add more features, including a search option.

One of the site's popular events is the annual Ugly Bug Contest, a collaboration between Arizona State University and Northern Arizona University. Kids log on to vote for the most disgusting insect. (Who would've guessed that a tick is not nearly as handsome as a firefly or weevil?) Coloring pages of the ugly bugs can be downloaded and printed.

The Mysterious World of Dr. Biology, a science-based comic book, is popular with older kids. Dr. Biology draws readers with a hook: Some unusual things have been happening in the lab. His invitation to "access secret files" promises intrigue and excitement. The comic-book pages can be downloaded for free and stapled together. The word bubbles are empty, waiting to be filled with kids' creative dialog. The snappy graphics grab their attention and promote the use of language arts, creativity and problem-solving. But don't tell the kids. They think they're just having fun.

"It's not a homework site," says

Kazilek. "But a student [who] is working on a science project and has a specific question...can email it."

Podcasts feature kids interviewing scientists about specific science topics. The first podcast quickly became the most downloaded educational podcast on iTunesU. It featured the tiger beetle, whose incredible speed causes it to go blind.

Kids can tune in to learn about monkeyeating eagles or insect-eating plants. They can take a journey into outer space and discover if there is life on other planets. Crafty kids can learn how to make an ant farm using two plastic CD cases.

"It's totally changed my students' outlook on science and learning," says Joan Howell, who teaches gifted students in the Phoenix Elementary School District. Howell uses the website in her classroom and enters students in the twice annual contests to become podcast hosts. She prepares her students by having them play the role of interviewer.

"I've seen their questioning skills improve and they feel so empowered to learn," she says. Four of her gifted students from Paul Lawrence Dunbar Elementary have been chosen as podcast hosts.

The podcasts offer more than facts. They give kids an inside view of scientists as real people and showcase possible careers. They learn, for example, that Peter Vukusic, a leading butterfly expert, likes to snowboard and surf in his spare time. They listen to E.O. Wilson, the Pulitzer Prize-winning entomologist, talk about discovering fire ants at age 13.

Kids who log onto "Ask a Biologist" get a glimpse of the world around them, instead of one that revolves around them. They may think about becoming scientists. And in this place, it's socially acceptable to collect bugs or ask what snot is made of.

Kazilek loves sharing his passion for science and enjoys seeing the excitement in kids who suddenly discover that science is fun.

"We are all scientists," says Kazilek. "It's such a thrill when you make a new discovery." He calls it the "aha!" moment, and he plans to experience many more of them. RAK

Evelyn Hendrix, of Gilbert, is the mother of Holly (24), Jordan (22), Hunter (14), Logan (12) and Abbie (9).



Brian Varela (12) above and Itzany Mendez (11) below are students at Paul Lawrence Dunbar Elementary in Phoenix. Rebecca Clark is a biologist and grad student at ASU.

