UNITED STATES

'This Is the Front Line … Where I Can Really Make a Difference'

Lisa Park and her colleagues take on creationism and other antiscientific attitudes in the classroom—and in the voting booth

AKRON, OHIO—Lisa Park's introductory physical geology class at the University of Akron fills from the front and the back of the room simultaneously. Some students hustle into the front seats and chat eagerly with Park, while others drift into the very last row, leaving empty seats in front of them.

When Park announces that the upcoming final exam will cover material from the whole term, rather than just the last few weeks, the students in the back row aren't happy. "This is the hardest class!" hisses one student, blonde hair wet but eye makeup firmly in place at 9:15 a.m. Her neighbor, whose head is down on the desk, doesn't appear to hear.

By the end of the hour, however, even those in the back row have bestirred themselves to do a small-group exercise with giant plastic relief maps. The entire class can now explain that mountains form where tectonic plates converge. Score one for scientific literacy.

"I've been at a private liberal arts school, a big research I university, and here. This is the front lines," says Park about the University of Akron, an open-enrollment university in a northeastern Ohio city that's hoping to replace its lost manufacturing base with polymer science and biotechnology. A sizable fraction of students at the university are the first in their families to go to college, and a third don't make it beyond the first year, says geology professor David McConnell, co-author with Park and others of a new introductory earth science textbook. "This is their leg up to get somewhere," says Park. "This is where I can really make a difference."

Park, 41, can identify with them. She grew up in a blue-collar suburb of Cleveland, the daughter of a NASA engineer and a teacher. "I tell people I couldn't be elitist even if I tried. I'm from Parma, Ohio," says Park. She received her B.A. from the nearby College of Wooster and headed west—to the University of Arizona—for her Ph.D. before returning to the area in 1995 to join the faculty of the University of Akron.

With relatively few of their students aiming to become research scientists, Park and her colleagues are gearing their efforts toward scientific literacy. "The goal is that 5 years from now, they can process information on, say, global warming in a reasonable way," says McConnell. Adds Park, "We need to educate [students] as citizens."

The envelope, please. Geologist Lisa Park looks for fossils that can serve as paleoclimatic markers when she's not helping to create scientifically literate students.

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To engage their students, Park, McConnell, and others try to make science relevant with "inquiry-based" exercises like the one with the relief map. During another of Park's classes, for example, students brought in bottled and tap water. Sophomore Sarah Rolan, 24, recalls that a chemical analysis found that a leading brand of water had a pH of only 4.5. Says Park: "You've got to make it relevant or you lose them. … Their eyes glaze over when you talk about groundwater. But water they personally drink? They were totally into it."

Having a diverse cross section of students also means that Park and her colleagues often confront mainstream attitudes toward science, including creationism. In recent years, Park has seen a tide of creationism rising both on campus and off. "We teach almost literally in the shadow of The Chapel," notes anthropology instructor John Reeves, referring to an evangelical megachurch on the edge of the university's urban campus.

Creationist speakers visit the campus fairly regularly, sponsored by religious groups or a "critical thinkers club." In her geology classes, Park explicitly debunks the idea that the biblical flood formed the Grand Canyon. Many of her students have only a sketchy background in evolution. "My high school biology teacher only went over it for a couple of days—didn't want to get into it," says freshman accounting major Kacy Grogg, 19. Junior Brandon Behnfeldt, 21, who plans to be a biology teacher, allows that the scientific age of Earth is more reliable than the biblical one. But when it comes to evolution, he says, "I hold with intelligent design." If he takes Park's paleontology course, he'll hear an entire lecture that skewers intelligent design arguments.

Last fall, Park and her colleague, biology professor Stephen Weeks, worked nonstop to elect a pro-science candidate to the Ohio Board of Education. "I could not stand by and do nothing," says Park. She analyzed local polling data that were later used to deploy volunteers on voting day. "I realized, this is paleoecology. I have two species, Democrat and Republican, and I'm looking at their site distribution."

Such hard work involves tradeoffs, however: Park and Weeks each missed a January deadline for submitting research proposals to the National Science Foundation (NSF). "To me, fighting for evolution is part of my job," says Weeks. "But the system is not set up to benefit those who make this kind of move."

Park has been funded by NSF, despite a low success rate in paleobiology, and by other sources—enough to support research by a small group of undergraduate and master's students. "One thing that got me into paleontology is just handling the fossils," says Park. Her goal is "to keep that wonderment, that discovery, alive."

To judge by senior Melissa Kindle, Park's approach is working. "I want to do what she does," says Kindle, confidently screening core samples in the sink. "I want to be a paleontologist."

–ELIZABETH CULOTTA

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