

Turning school ground natural areas into environmental labs

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This mobile technology trailer brings the Discovering the Science of the Environment program from the School of Science at Indiana University-Purdue University Indianapolis to schools in nine Indiana counties. Credit: School of Science at Indiana University-Purdue University Indianapolis

Public school grounds will become environmental education laboratories when a 20-foot green and blue mobile technology trailer pulls into the parking lots at Creekside Middle School in Carmel, Ind. and dozens of other elementary and middle schools in nine Indiana counties this fall and spring.

Outfitted with interactive technology tools, web interface and sophisticated computerized mapping capabilities, the mobile resource vehicle brings the innovative, hands-on Discovering the [Science](#) of the

Environment (DSE) mobile program from the School of Science at Indiana University-Purdue University Indianapolis to thousands of students in grades four through nine.

These resources turn school ground natural areas into environmental laboratories, giving young budding scientists the opportunity to explore, analyze and learn about the nature around them. The focus is on immersing youth in natural environments with the goal of inspiring future leaders in science, technology, and environmental sustainability.

The students aren't the only ones who eagerly participate in a DSE program. Interdisciplinary teams of central Indiana teachers have the opportunity to take part in the week-long DSE Summer Institute.

The program assists in the establishment, maintenance, and use of outdoor school laboratories that meet state academic standards. Upon completion of the institute, teachers are poised to take advantage of the sophisticated resources DSE provides to teach students about soil, water quality, wetlands, [plant biodiversity](#) and dozens of other topics, fully integrating [environmental science](#) into their classrooms.



This mobile technology trailer brings the Discovering the Science of the Environment program from the School of Science at Indiana University-Purdue University Indianapolis to Lincoln Middle School and other schools in nine Indiana counties. Credit: School of Science at Indiana University-Purdue University Indianapolis

Corporate and foundation partners including Veolia Water, Nina Mason Pulliam Charitable Trust, Eli Lilly and Company Foundation, Dow AgroSciences, Indianapolis Power and Light Company, Duke Energy Foundation, the Hoover Family Foundation and the UPS Foundation support the program and enable DSE to provide both student outreach and teacher training without cost to families or school systems.

"This program was developed to change the way students learn science and to help them realize their role in the environment," said Brooke Furge, an education specialist who directs DSE for the Center for Earth and Environmental Science at IUPUI. "And research tells us that in order to develop scientifically and technologically skilled students, we must engage them through inquiry-based programs like DSE."

"Without this program, I wouldn't have the training, time, resources or technology to offer this to my students," said Erin Corwin, sixth-grade science teacher at Clay Middle School, also in Carmel. "Our kids excel in this portion of science and we are able to also tie it into other areas of our curriculum such as vocabulary and reading, improving the overall education experience for our kids."

But how do the students respond? "At the end of each year, I have my students provide a list of their favorite things in that particular school year. Since we started participating in the DSE program three years ago, more than 75 percent of the comments listed the DSE experience as

their favorite thing all year," said Devonna Miltenberger, formerly a sixth- grade science teacher at Craig Middle School, and now a sixth- grade teacher at Sunnyside Elementary School. Both schools are in Indianapolis, Ind.

Since its inception in 2007, DSE, which is a program of the Center for Earth and Environmental Science in the School of Science's Department of Earth Sciences, has brought environmental, science and technology education to more than 3000 [students](#) in over 100 classrooms annually. In addition, nearly one hundred teachers have enriched their classrooms by participating in the DSE Summer Institute.

More information: For more information on the DSE program go to <http://www.cees.iupui.edu/DSE.htm>.

Provided by Indiana University School of Medicine

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