

Another Advancement In

STEM Education



Iowa State University informing decision-makers about research in **Science–Technology–Engineering–Mathematics Education**

Science Bound encourages young STEM scholars

The Science Bound program not only resides on Iowa State’s campus – it gives young people the tools to get there.

“Science Bound is Iowa State’s premier program to prepare ethnically diverse Iowa students for careers in STEM (Science, Technology, Engineering, Mathematics) fields,” said Connie Hargrave, director of Science Bound and associate professor of curriculum and instruction.

Science Bound identifies 12- and 13-year-old minority students with an aptitude in science and math, sparks their interest in the fields, and provides the resources necessary to excel in them.

Those who complete the five-year curriculum – which begins in eighth grade and ends with their graduation from high school – are offered a full tuition scholarship to Iowa State to study in a science or technical field.

The program selects students from more than a dozen Des Moines-area schools and has recently expanded to include Marshalltown and Denison middle schools. Students are chosen based on their standardized test scores and teacher recommendations.

Since 1996, over 200 students have successfully completed the Science Bound program. Many have advanced within higher education, including one who went on to earn a doctorate from Cornell University.

“We don’t just want to get our students to college, we want to get them through college and into science careers,” Hargrave said. “It’s like a bridge we’ve laid before them. We’re building that long-haul bridge.”



Science Bound encourages middle school minority students to pursue educational training and careers in STEM fields.

Crossing that bridge requires a substantial investment from the students, who must maintain a 3.0 grade point average while participating in 75 percent of Science Bound activities.

Those activities include science fair projects, advanced math workshops, leadership programs, environmental science retreats, and STEM-focused seminars. Science Bound also organizes regular visits to Iowa State, where the students witness laboratory demonstrations and get a feel for the campus.

“Engagement is a natural part of what you do as a Science Bound student, and a natural part of what you do as a scientist,” Hargrave said. “We’re creating a culture where that is a part of what we expect from them. [We’re] teaching them to question things, to investigate the world.”

Hargrave and the other Science Bound educators help students develop a sense of pride in their accomplishments.

“We really work toward developing a strong achievement ethic,” said Hargrave. “Excelling is a part of who they are and is what we expect them to do.”

For more information:

Contact Connie Hargrave, Science Bound director, at (515) 294-1390 or email sciencebound@iastate.edu. Check out other STEM success stories at www.hs.iastate.edu/news/stem.