

INDIANAPOLIS BUSINESS JOURNAL

CENTRAL INDIANA'S BUSINESS AUTHORITY

VOL. 27 NO. 1 • MARCH 13-19, 2006

Indiana's life sciences future starts today

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In 2004, Bio-Crossroads was awarded a comprehensive grant by the Lumina Foundation for Education to study Indiana's life sciences K-12 education standing. One of the goals of the study

was to find ways to improve student performance in science, math and technology in Indiana at the K-12 level. This study rightly identified an area where meaningful results can be achieved through concerted effort. More important, individuals at Marian College, who recognize the impact of improving K-12 education in the sciences, have mobilized to address part of this goal.

Improving America's and Indiana's achievements in math and science has become a national obsession. In his State of the Union address, President Bush announced the "American Competitiveness Initiative" which, among other objectives, includes the training of an additional 70,000 high school science and math teachers. The rapid pace of technological innovation in the sciences creates a challenge for teachers. How do they stay abreast of new developments and how do they bring those developments into a classroom that may or may not be equipped to take advantage of those advances?



**BRIAN
WILLIAMS**

Commentary

U.S. elementary kids spend an average of just 16 minutes a day on sciences. The National Academy of Sciences in its recent report noted that in 1999-2000, 93 percent of all students in grades 5-8 were taught physical sciences by a teacher lacking a major or certification in the physical sciences (chemistry, geology, general science or physics). In grades 9-12, 63 percent of the teachers lacked a major or certification in the subject. In Indiana, only 73 percent of teachers majored in their core teaching subject.

The lack of appropriately trained and equipped teachers is reflected in the attainment of students. Nationally, only 29 percent of fourth-graders, 32 percent of eighth-graders, and 18 percent of 12th-graders performed at or above the proficient level on the 2000 National Assessment of Educational Progress science test. Beginning with the 2007-2008 school year, No Child Left Behind will require states to start testing in science in three grades.

If Hoosier youngsters are to graduate from Indiana universities as internationally competitive engineers and scientists, they need to be adequately prepared.

Marian College, through its "Science Initiative," is taking the lead in preparing Indiana science teachers and helping them instill in their students excitement for science. Using Marian's EcoLab, a 55-acre wetland and lowland forest on campus, the school will pilot a unique two-week summer workshop for science teachers in central Indiana.

Using expert faculty, the workshops

will focus on providing practicing teachers with curricula, activities and tools they can use in their classrooms to teach science in new ways, using the most up-to-date scientific knowledge and techniques.

The workshops will focus on biology, chemistry and physics, reflecting the interdisciplinary nature of science in the 21st century. As part of the "Science Initiative," participating teachers will work with middle and high school students, using the new curricula, skills and tools. Workshop faculty will observe, assess and mentor the teachers as they work with students, so they are prepared to take their new skills to their own classrooms. Marian expects to host up to 30 teachers this year and 75 next year.

Marian's program offers a practical, low-cost means by which science teachers in Indiana can maintain their level of science knowledge and develop tools to excite their students about the possibilities of science. If those 30 teachers teach 30,000 students who become more interested in and excited about the sciences, we will have taken the first step in creating the knowledge workers of tomorrow.

If you want to help form the scientists and engineers who are the foundation of Indiana's economic revival, call Dan Elsener at Marian College at 955-6100. He will be glad to hear from you. •

Williams is a director of Wabash American Benefits Group, a local administrator of benefits plans. His column appears monthly. To comment on this column, go to IBJ Forum at www.ijb.com or send e-mail to bwilliams@ijb.com.