Fowler High School - Center for Math, Science and Technology

Fowler High School Center for Math, Science and Technology has been created to find new ways of meeting MST Standards. The School is a MST center and would like to become a magnet school for Math, Science and Technology. They were looking for ways to show students how math could be applied to Science and Technology.

Part of their solution is their involvement with a project called The Advanced Interactive Discovery Environment (AIDE) for Engineering Education.

This is a multi-year project supported by NASA and New York State, that is being conducted by faculty and researchers from Syracuse University, Cornell University and WebWisdom.com, a Syracuse based provider of Internet communication technologies.

A virtual environment will be developed and used to teach students fundamental engineering concepts as well as how to apply these concepts in the design, analysis and integration of complex engineering systems. This project would be appropriate for use by industry, and will allow practicing engineers to create innovative, affordable products more rapidly.

Dr. Helen Doerr, of the Department of Mathematics and Mathematic Education, at Syracuse University, who was also one of the project consultants, was able to include a section in the project that could be adapted to other levels of education. This included K-12, continued training in the workplace and distance education. As a result, a component of the project that will focus on similar systems for science and engineering education for high school students was added.

After discussion with Dr. Doerr and others, Fowler High School received a grant to create a program that would address the science and engineering concepts, as well as integrating math, and how math can be applied to the science, engineering and related technologies.

The result is the Center for Math, Science and Technology at Fowler High School. This is based around a ScanTEK lab with three modules each of Space Technology, Computer Applications, Computer Aided Design and Research and Design.

After careful consideration and matching their objectives to those of the ScanTEK modules, a team of two math teachers and two science teachers came up with that selection of modules because they integrate the most amount of math and science, as well as meeting the AIDE specifications. In addition to this they have incorporated ScanMATH with these modules to provide automatic math remediation.

Teachers liked the amount of integrated skills such as math, science and literacy. They also liked the fact that the modules address students of all levels of academic skills and that the modules are task oriented and objective based. They felt that the curriculum seemed to be very well thought out and that the flexibility the program offers, in respect to creating and modifying the curriculum, and the quality of the equipment seemed to be very good.

The class is presently an elective, although the goal is to make it a regular offering with math instructors teaching the class. It is designed to be used with all students in all grades, with the idea being to teach the math in a traditional class, then go and use the ScanTEK lab to see how you would apply the math in the real world with real technologies that offer career opportunities.

According to the teachers who use the lab, students have been very positive.

"The students seem to be amazed that what they are learning in the traditional class setting can now be visualized with the modules and how the math is applied within these technologies. It has created awareness, that in any of these technology fields, you will need your math skills. They seem very excited to get into the lab and apply what they have learned in real world experiences. We want to increase test scores. We want to peak our student's interest in areas of technology. We want students to take math longer. We want our students to be better prepared when they leave high school."

The ClassAct management system is seen as a real benefit by all those involved in the new lab.

"The automatic student tracking and grading helps pinpointing specific areas of weakness that a student might have, and has given us the ability to address those needs in real time. The addition of ScanMATH with the ability for automatic academic intervention has been great. We are now getting immediate feedback on student's performance. And being able to link to standards is going to be a big help to us. The ability to add or modify the curriculum to meet our programs needs is also very important to us, having the capability and flexibility within the ClassAct management system allows us to adapt to our program as it evolves."

Fowler High School's Math, Science and Technology Center is just one of many successful programs installed in NY State by our representatives – RJT Educational.