

### 6 Participating High Schools STEP Track 2 Grant

#### Aiken University High School

Aiken University High School's mission is to prepare students for success in college. In an environment where all adults provide active support and guidance, students will gain the skills necessary to succeed. Engaging instructional methods will foster student motivation to learn and belief in success. Students' adherence to strict attendance requirements will give them the opportunity to achieve high academic and behavioral standards.

#### Simon Kenton High School

Simon Kenton High School is a community of students, educators, administrators, parents and families. Each member of this community is a valued individual with unique physical, social, emotional and intellectual needs, as well as strengths. With all partners working together, the mission of Simon Kenton High School is to provide quality and equitable educational programs and opportunities for all students. There focus is to promote life-long learning, social well being and responsible citizenship among these students.

#### Newport High School



of the training is directly linked to Larry Lezotte's research into The 7 Correlates of Effective Schools. Lazotte's research shows that academic outcomes are largely determined by the action, culture and organization of the school and school district. These correlates encapsulate the philosophy that drives our district's strategic plan.

#### Norwood High School



Norwood High School is located in Hamilton County, Ohio. Norwood High School is encouraging students to show their "PRIDE." This is the slogan of the new Positive Behavior Support (PBS) program. This is a code that the students will live by at Norwood High School. NHS will also again be offering Project Success. This program provides students extra help in the four core academic disciplines. NHS offers a wide variety of quality programs and athletics.

#### Withrow High School

Withrow University High School, located by UC, believes that a college education is the key to a bright future. It's also a serious commitment that requires focus, preparation and support - beginning in high school. At Withrow University High School, every student is college bound. By creating an atmosphere of success, students reach their potential to earn a high school diploma and advance to higher education. In a structured yet caring environment, students receive personal attention, a custom designed academic plan, college application assistance, help applying for financial aid, and much more. There mission is to empower students to be life-long learners by promoting high expectations, rigorous instruction, Cincinnati Public Schools academic standards, community service, and family support within a safe and disciplined environment.

#### Oak Hills High School

Oak Hills High School is a four-year public secondary school located in Cincinnati, With approximately 3,000 students enrolled annually, Oak Hills is the largest of the ten public high schools within the Greater Miami Conference. Oak Hills is also the largest high school in the state of Ohio. For the past six years, Oak Hills has qualified for the Ohio Department of Education's Excellent rating, the highest rating possible. This is based on average attendance, grades, graduation rates, and scores on the Ohio Graduation Test. Oak Hills is known for having very high graduation rates. The Ohio Department of Education cites Oak Hills as having the highest graduation rate among large high schools in the state at 99.1%. Oak Hills offers numerous courses with varying levels of difficulty. Students can take remedial level, college preparatory, or Advanced Placement classes in a plethora of subjects.



# Project STEP



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#### About Project STEP

Project *STEP - Science and Technology Enhancement Program* is a University of Cincinnati & National Science Foundation's Graduate K-12 Fellows Grant designed to educate, nurture, and facilitate science, math, and technology graduate students into bringing their experiences and knowledge into middle and high school classrooms while preparing them to become future educators. We currently work with Norwood High School, Newport High School, Oak Hills High School, Aiken University High School, Simon Kenton High School and Withrow University High School. STEP involves six graduate Fellows, 24 science and math teachers, a grant coordinator, evaluation services, a technology coordinator, and faculty members from the Colleges of Engineering and Education. Project STEP began at UC in July of 2002. A variety of lessons and activities are available on our web site (<http://www.eng.uc.edu/STEP/>)

#### RET Summer 2008 Review

The RET program (Research Experiences for Teachers) involved 12 teachers in the summer of 2008. There are 3 main goals of the 6 week summer program. The first is to educate, facilitate, and cultivate 7th to 12th grade math and science teachers by exploring the scientific method of inquiry and the critical research skills that engineers use to solve open-ended real-world problems. The second is to facilitate the participants as they become role models by applying their research experiences in their classrooms and with their colleagues. The third is to enable 7th to 12th grade students to directly link their education to events and issues occurring within their community and encourage them to become effective citizens in a technology-driven society.

Twelve teaches participated in small group research activities. Ms. Michelle Beach from Midpark High School, Mr. Jaz. Dhillon from Withrow University High School and Dr. Nathalie Mukolobwicz, from Saint Ursula worked on "Buildings That Resist Earthquakes Better". Ms. Nora Miller from Fairfield Middle School, Ms. Stephanie Simmons from Aiken University High School and Mr. Dustin Jones from Simon Kenton High School studied the "Availability of Safe Drinking Water". Mr. Benson Flory from Twin Valley South High School, Dr. Brad Homoelle from Saint Xavier High School and Mr. Andy Zureick from W.H. Harrison High School researched "Clean Diesel Technologies for Air Pollutant Reduction". Ms. Veronica Kumar from Simon Kenton High School, Mr Deon Edwards from Western Hills Design Technology High School and Mr. Grant Keys from Winton Woods High School investigated "Mobility and Safety of Transportation Participants".

The basic approach used in RET is discovery through actual construction and experimental testing, field data collecting, observing, recording, computer simulations, synthesizing, and generalizations. Each teacher worked on the project mentioned above for six weeks under the mentorship of a faculty member and a graduate student. Lectures, seminars, demonstrations and four field trips were conducted to prepare the teachers for their research and to provide them with background training in Engineering. The RET teachers also worked with the STEP Fellows (look inside for more details on STEP and STEP Fellows), and created lessons for the students in their classrooms. The teachers will participate in a post-RET implementation program which includes classroom supplies and support. The project evaluation includes assessment of both teacher and students

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