Career Technical Education News from Greenville City Schools

Both the CIS and Engineering Tech Prep Programs at Greenville High School have been asked to represent the school at the Ohio School Board Association Conference November 11-14. To honor this selection the Southwest Region will be recognizing the district with a framed certificate at their Annual Fall Meeting on October 11 at the Warren County Career Center.

Greenville Senior High School is proud to be a comprehensive high school offering a variety of career opportunities for our students. In addition to the programs detailed here and presenting at the Ohio School Board Association conference, The Greenville Career Technical Center offers the following programs for students:

Agricultural Business
Automotive Technology
Biomedical Science/Project Lead the Way
Careers with Children (Greenville Learning Center preschool)
Career Based Intervention
Computer Information Systems
Engineering College Tech Prep
Financial Specialist (accounting, insurance, HR, finance)
Hospitality and Facility Care
Interactive Media
Marketing
Medical Tech Prep
Supply Chain Management (logistics)

Gravitational Water Vortex - Greenville Engineering Tech. Prep.

The Gravitational Water Vortex Power Plant is a horizontal form of the hydroelectric dam. The benefits of using an artificially induced vortex above gravity- accelerated water increases efficiency, decreases cost, and not only lowers the negative impact on the environment, but actually increases the sustainability and health of the river as a whole. The ingenious invention was designed and developed by Franz Zotlterer, an Austrian engineer, who saw the advantage of using this natural process.

To date there are no Gravitational Water Vortex Power Plants present in the USA; they exist only in Europe. The most prevailing feature of the device is its necessary drop height is a minimal of 0.7 meters; whereas the minimal drop height necessary for a hydroelectric dam is two meters, a drastically larger drop. The reason that the small drop height is so important is due to construction; a smaller drop height means that less terra forming will be necessary to build the construct.

From a technical standpoint, the power plant is incredibly simple. A small channel is drawn off from a creek or river, which is then delivered, into a large rotation tank. Once in the tank, the water spirals around the center point until reaching the turbine designed by Zotlterer, located at the center point is poised directly above a hole where the water finally exits the tank. While falling through the hole, the water spins the turbine producing energy; the water then reenters the initial body of water from where it was drawn. While the water is in the tank many biological events occur; the water is aerated, decomposition is accelerated, and microbial growth is

promoted. One final, major advantage that the Gravitational Water Vortex Power Plant has over the traditional hydroelectric power source is that no fish ladder is required; fish and organisms are able to pass through the device freely in both directions.

For the 2012 Engineering 12 class at Greenville Senior High School, teammates Chase Jenkinson, Lane Flora, and Scott Wirrig have chosen to follow in the footsteps of the 2011 Engineering 12 class by further researching and developing the project. With instructor Chris Sykes, these students will prepare a written report, portfolio, a new functioning model, and a presentation to be used for various events. What makes this project different from previous projects is its ability to go further than the class itself. The students will be presenting the Gravitational Water Vortex Power Plant project at the Ohio State Board of Education in November.

Computer Information Systems

The CIS program at Greenville High School was asked to represent the school at the Ohio School Board Association Conference November 11-14. To honor this selection the Southwest Region will be recognizing the district with a framed certificate at their Annual Fall Meeting on October 11 at the Warren County Career Center. This will be the second year for them to attend this conference. They will be presenting information on the employment experiences offered them through the CIS class. The Greenville City Schools has been hiring students from the CIS class between their junior and senior years to work over the summer with the network administrators to help get the district's computers ready for the school year. The hired students were able to participate in a Progress Book training session so they were able to work with the returning teachers as the district changed to a different online grade book program. The students continue to work after the school day on an as-needed basis. This program provides an excellent opportunity to gain valuable work experience. Several of last year's graduates have already secured positions in computer related fields at GTI and Crown Equipment while continuing their related education at Sinclair Community College.

The CIS program is a two-year program offered to juniors and seniors. It is taught using Cisco's online curriculum which prepares students for the Cisco CCNA certification exam, the industry standard in computer networking. CIS also covers IT Essentials which prepares students for CompTIA's A+ certification exam, which is the industry standard in computer repair/help desk. For more information contact Mr. David Peltz, CT Director at 937-548-4188 x 848 or the instructors Mr. Robert Warner, rwarner@greenville.k12.oh.us, or Mr. Nathan Sharp, nsharp@greenville.k12.oh.us.

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