

## **ABSTRACTS FOR THE 2007-2008 TECH PREP MINI-GRANT AWARDS**

### **Pre-Engineering Course Development / Cortland Junior Senior High / \$4,690.00: Charles Petit**

This grant will aid in an overall restructuring of the Design and Drawing courses taught at Cortland High School. The new direction of our program is an exciting one with several milestones. Inevitably we are seeking to create a Design program that will take students through the two dimensional CAD experience, into a three dimensional modeling program, finally into the development of computer controlled prototype development. The final goal is to develop a connection with the TC3 Engineering Sciences program.

### **Reviving the Transportation Curriculum / Ithaca High School / \$8,404.60: Craig Cowell**

The Ithaca City School district once had a successful automotive technology program. Through the years, classes were eliminated for various reasons including the transportation program. The goal of this grant is to revive the transportation lab, add new electives and update current curriculum. The Ithaca High School Technology department has already been experimenting with alternative fueled vehicles. With the updated lab we will be able to integrate flexible fuels and alternative forms of energy as part of our curriculum as well as collaborate with local businesses. The addition of electives that will be offered in the new lab will reach a wide range of the student population, while opening new career opportunities to many students. Through this grant we wish to revive, renew and offer new possibilities to students.

### **Digital Video Program Expansion / Dryden High School / \$9,724.41: Margaret Grace**

This project involves the ongoing collaboration between Dryden's English and Fine Arts Departments to support the Video Production Courses. Last year, through a Tech Prep Mini-grant, the course instructors expanded the curriculum for an introductory video production course. With this expansion, students had greater access to cameras, editing stations and updated software. Since then, students interest has grown exponentially, causing course offerings to double in number and expand in content. This year we will offer an advanced video production course in which students will learn more complex editing software and explore deeper subject matter through their films. The Tech Prep grant will enable us to purchase enough cameras and accessories for the increased number of students served. It will also enable us to continue to invite staff and students from TC3 to the classroom each semester, an invaluable resource to the high school students.

### **Girls and Technology Summer Camp / TST BOCES / \$3,224.00: Penny Carpenter**

This summer, for the first time, TST BOCES career and Tech Center will launch pilot program to introduce 8<sup>th</sup> grade girls to the field of computer technology. The primary intention of this "Girls Tech Camp" is to give the participants a better understanding of Information Technology (IT) career choices prior to high school and college. The girls will be allowed to explore current technologies in a non-competitive, collaborative environment. This introduction to the excitement, fun, and creativity of using technology should foster confidence and help these girls to explore non-traditional educational opportunities in the future. Topics to be covered will include: web design, PC building, GPS locators, digital art, and GameMaker.

**DeRuyter Central's Maple Syrup Community Project / DeRuyter / \$7,050.00: David Hubman & Steve Camelbeek**

Thanks to the generosity of the Carl Perkins Act, TC3, and Tech Prep a 20-year tradition in the DeRuyter community will live on. For over 20 years the students, staff, and community have joined together each spring to collect and produce some of the finest maple syrup in central New York. This endeavor combines the efforts of our agriculture and technology students, our marketing classes, the Country Side Hardware Store, and dozens of families who volunteer their trees and property to make this happen. IN order to continue this worthwhile and productive unit, our 19-year-old evaporator needs to be replaced. This essential piece of equipment has been repaired over and over and is in jeopardy of failing at any time. During the 2006-07 school year over 77 students were directly involved in the production of maple syrup.

**Developing Visualization Intelligence / Dryden / \$1,540.00: Sue Gilcher**

The goal of this grant is to demonstrate the effectiveness of a unique approach to the development of visualization intelligence in students who are known to have delayed visual skill development. This will be initiated through the use of computer assisted learning tools such as SkillsTutor and AutoDesk Inventor. The special education teacher will interview a cross-section of students receiving academic support services. Students will then be enrolled in the visualization skills course, Design & Drawing for Production (DDP). The students will receive the same assignments as the rest of the class. In addition they will receive assignments provided by the SkillsTutor software. The primary goal for student development is to improve their ability to transition into the post-secondary environment with well-developed visualization intelligence, defined as the ability to process both physical and mental images in thinking. In addition, well-developed visualization skills facilitate the ability to form associations between pieces of information, which helps improve long-term memory and the ability to comprehend information and communicate it to others.

**TV Studio and Computer Lab Video Production Software for Cincinnatus TV Channel 38 / Cincinnatus / \$4,067.80: Nicole Rice & Mary Warner**

The Cincinnatus Central School District offers a TV/Radio Production course as part of its 5 unit sequence in computers. Students are currently using recording equipment and computers to produce movies, public service announcements (PSAs), advertisements, news spots and recordings of school events like concerts, talent shows, sports, and classroom projects. All teaching areas have cable outlets from Time Warner Cable. We need to produce end results quicker so we have more events airing all the time. The grant will purchase *PPT2DVD*, *Flip-Q*, and Adobe *After Effects* software. By having *PPT2DVD* software, which converts *PowerPoint* to DVD format, students cut their production time at least in half. The *Flip-Q* software runs our teleprompter text so that the anchor may read the news off a screen, rather than looking down at a paper. This helps the students look like a professional news team. *After Effects* allows students to add transitions, animations, motion graphics, and many other bells and whistles to their movies to make them more professional and unique. Students may then enter their movies into regional and national film and video contests.

**Pre-Engineering CNC Plasma Cutting System / Candor High School / \$10,080.00: Stephen Lindridge**

The purpose of this project is to further establish a Computer Numerically Controlled (CNC) curriculum that meets industry standards in the Technology Education Department at Candor High School. The Technology Education Department at Candor includes courses in manufacturing (a course focused on metal machining and aluminum casting), Architecture, Computer Aided Drafting and Design, and Principles of Technology (a course that investigates applied physics while building a racing go-kart); each of these courses fall under the pre-engineering umbrella. The courses listed above could make use of a tool such as a plasma CAM model DHC Plasma Cutting System. In addition to the aforementioned courses the Technology Department would be sharing this advances CNC technology with the Fine Arts Department during a three dimensional sculpture unit. Candor is currently using a pair of Smithy Granite 1324 Lathe/Mill/Drill machines which have been outfitted with CNC capabilities. Due to the number of students in each class and the time it takes for a student to operate these machines, hands on time is limited. A CNC Plasma Cutter would effectively increase the time each student can spend on designs and the machining process by 50%. In addition to the increased time that a student can be actively engaged in the creation of three dimensional parts using a CNC machine, this new machine will give each student access to a different type of SNS system with separate capabilities. Students will also gain an understanding in the basic aspects of business as they produce a product for profit that stems from a market survey, design and prototype production processes.

**The Mobile Groton Digital Media Collaboration / Groton High School / \$7,275.00: Mick LeVick**

This is a continuation of our Groton Digital Media Lab upgrade that has grown into an effective collaborative effort between Mick LeVick's Video Production course, Joann Morrison's Photojournalism class, the Groton community, and both students and faculty at neighboring TC3. This ongoing interdisciplinary project will continue to link Groton's Fine Arts and English Language Arts Department to the town of Groton and surrounding communities. Chris Xaver (TC3) and Kathy Morris (TC3) will provide continued project input. We are looking to increase opportunities for both Groton and TC3 students through a mobile upgrade to our lab. The addition of mobile laptops and additional equipment will allow our mostly stationary lab to become an effective portable production center, allowing us to showcase student work while integrating with projects in our local community and with TC3. In regards to this particular grant, Groton High School has committed to providing the portable digital overhead and will meet our software needs. In addition, this grant will provide us the opportunity to offer collaborative workshops sponsored by the Lansing/Groton Teacher Center. We have also integrated a night adult education course in photojournalism for adults in our community. Students will now have the opportunity to develop additional video production and photojournalism skills, as well as gain real-world experience by allowing more off-site work and extensive community involvement that has already been established this past year. Finally, the sharing of TC3 students will continue with the continued goal of developing more dual credit course offerings.