



# THE TWENTY

*This Month: Curriculum and Technology Departments*



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Colonial Intermediate Unit 20

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## IU 20 Leads Regional STEM Initiative

BY AMAAL AWADALLA, *Assistant Director of Curriculum*

"America's economic growth in the 21st century will be driven by our nation's ability to generate ideas and translate them into innovative products and services" (National Governors Association). How do we prepare a workforce to meet this challenge?

Students are the future workforce. In order to meet this challenge they need to have the ability to understand how the world works within and across the areas of science, technology, engineering and math. Today's students need to have STEM (Science, Technology, Engineering and Math) competencies which are: global awareness, analytical thinking, technology literacy, communication skills, digital literacy and problem-solving.



*Tom Baileys, CIU 20 Director of Technology puts his math skills to the test as the attendees try to estimate the distance the robot will travel. Amaal Awadalla (standing), CIU 20 Assistant Director of Curriculum, prepares the robot to solve the math problem.*

On Friday, February 18, 2011, IU 20 hosted a STEM meeting to discuss related programs and activities in districts and how this initiative can grow around the region. About 15 administrators participated in various activities that can support or upgrade their current curriculum to build in the STEM competencies. Administrators had the opportunity to solve an algebraic math problem through the use of a robot. The discussion around this activity was that the math problem would become more practical and concrete for students. They would be able to apply other skills they had

learned in order to determine the distance the robot will travel. In the process of solving this problem, other scientific questions arose as to what other factors affect the robot's travel such as friction from the carpet as it relates to the robot's speed. Participants were shown that by asking one mathematical question, students would use other content area knowledge and therefore take them much deeper in understanding the concept.

Participants also connected to Penn State's Nanotechnology Lab and experienced free resources that are available to teachers to integrate into their curriculum. Other ideas that were discussed were Defined STEM, a web-based tool that includes project-based learning and videos, which will be rolled out over PAIUnet, and various virtual learning opportunities.

Gina Vives, Director of Technology and Curriculum at Delaware Valley School District, presented Project Lead the Way, a program that DV imple-

## Executive Director's Message

BY DR. CHARLENE M. BRENNAN

### The Twenty for February

The upcoming month of March will be an eventful one with Governor Tom Corbett's announcement of his first budget proposal on March 8. With the recent announcement of the use of federal EduJobs monies (stimulus) to back fill state support for public education this year, anxiety has set in regarding the impact the proposed state budget will have on public education in Pennsylvania. If you have been reading newspapers though, state revenue projections are looking better this year and some predict the deficit could fall to \$2 billion by July, but that is by no means certain. And even a \$2 billion gap is a lot and will result in painful cuts throughout Pennsylvania. A \$1 billion hole in public education funding will be impossible to fill in one year and will require a multi-year solution.

Given all of this and the difficult decisions school districts, career and technical centers, intermediate units, and other public entities must make over the coming months, focusing on what is most important, the education of our children and their academic progress seems ever more elusive for decision-makers. However, we cannot lose sight that our primary mission is to educate this generation of children, albeit perhaps, in different and more economical and efficient ways.

In The Twenty this month, we provide information on several projects from our curriculum and technology departments that show how we at the IU are assisting your districts in meeting this important mission. From SAS to school improvement to digital storytelling and beyond, we are working closely with your staff to ensure children learn. Despite its challenges at the moment, I believe our public education system is the most powerful force in this country to ensure every child has a chance for a better life. For many children, it may be the only chance they will ever have to create a productive future for themselves.

Whatever challenges present themselves to us on March 8, remember that the work you do is extremely important in the lives of children. Here at the IU we will continue to assist your staff in any way we can to ensure all children continue to learn and have a positive experience in school.

Just a reminder: Session 2 of the 5 Part Webinar Series Orientation to Colonial Intermediate Unit 20 will be held on March 23 via Elluminate at 5:45 PM. We will be sending reminders out to all of our local board members in the next few weeks.

mented in their high school and is currently planning to implement at the middle school. The program has three tracks that schools can choose to integrate into their current programs. They have two high school programs: Pathways to Engineering and Biomedical Sciences. At the middle school level the program is Gateway to Technology, which exposes students to STEM related fields.

February 18 was just the start of regional conversations. One of the next steps is to provide various professional developments for teachers on how to integrate some of these activities into their current practices. Another step is to begin exploring funding opportunities to support this initiative.

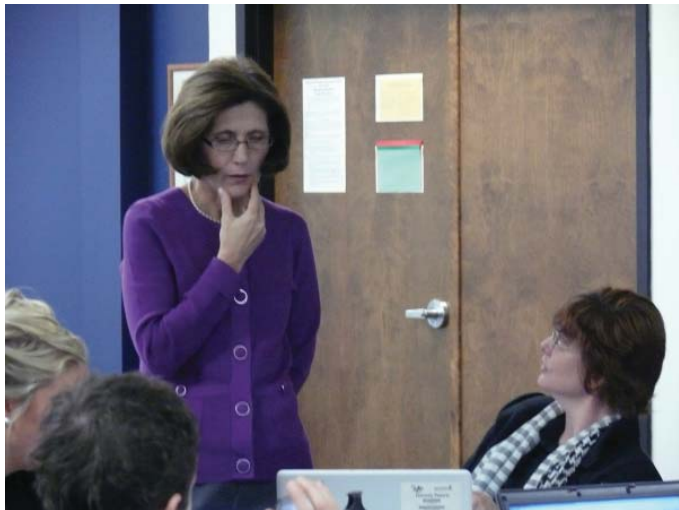
## Teachers Create SAS-sy Lessons

BY HEATHER BROWN, *Coordinator of Educational Technology*

Recently, over 30 teachers that teach Science, Social Studies and English Language Arts participated in a two-day professional development titled Standards Aligned System (SAS) Lesson Plan Project led by Dr. Jean M. Dyszel. The goal of this event was to provide educators an opportunity to reflect and refine their lesson plans to align to the Common Core and increase rigor with hopes of their lesson being accepted to the SAS website.

On the first day, teachers were given time to explore the SAS portal and identify standards, big ideas, and essential questions of the lesson they were planning to revise. They also reviewed the key points and standards in English Language Arts and Mathematics Common Core Standards. Dr. Dyszel had teachers participate in an activity from a technology perspective where they watched model lessons and rated the rigor according to either National Educational Technology Standards (NETS), H.E.A.T (higher order thinking, engaged learning, authenticity, and technology use) or enGauge framework. Finally, they collaboratively defined a rubric that integrated the essential components that were identified in the lessons they viewed. The rubric provided a guide for teachers while they revised their lesson.

The second day, teachers had an opportunity to provide constructive feedback on the lessons with their colleagues using the rubric. Teachers then reflected on the feedback and adjusted their lessons. Teachers submitted a final project for consideration of acceptance to the SAS website.



*Dr. Jean Dyszel (standing) answers questions for Donna Poore (seated) from the Bethlehem Area School District during the Lesson Plan Project workshop.*

The presenter, Dr. Dyszel works with administrative staff in the Allentown School District as a curriculum consultant to assist in creating K-12 standards-aligned curriculum. She is a PA Inspired Leadership Induction (PIL) mentor with the PA State System of Higher Education for new administrators promoting leadership development. Dr. Dyszel also works as a curriculum consultant with PA Department of Education. In this role, she is a member of the Standards Aligned System (SAS) Quality Review Team to provide training on SAS usage and ensure SAS quality and works directly with the English Language Arts Common Core Transition Team, charged with alignment of Common Core to PA Standards and transition to Common Core Framework. As a previous Distinguished Educator with PDE, she has worked with low-achieving school districts as a consultant to build capacity for student achievement.

## DID YOU KNOW...

**Pennsylvania is one of four states involved in an Innovation 3 (i3) federal grant initiative. This five year grant is one of only 49 funded out of almost 1,700 applications. The grant seeks to provide 65 hours of intensive professional development to 9th grade English/Language Arts, Biology and US History teachers. Approximately 240 teacher leaders, 2,754 teachers, and 409,500 students will be impacted by grant activities. More importantly all IU 20 districts are being given priority for participating in grant activities, provided they meet study criteria.**

## National Presenter Speaks as Part of School Improvement Series

BY KATHY EMEIGH, *TaC Staff Supervisor* & LINDSEY SMITH, *Coordinator of Professional Development*

On December 10, 2010, national expert/author Dr. Edie Holcomb presented a workshop as part of the CIU 20 school improvement series for school administrators. Her presentation entitled "Students Are Stakeholders, Too!" provided leaders with practical strategies to promote greater interactions between adults and students through every phase of the school improvement process. Dr. Holcomb helped participants understand how a responsive principal involves students by inviting them to discuss their interests, needs and preferences about school matters and that by involving all stakeholders in a school community, school improvement is a reality.

In the workshop, participants considered levels of student involvement and identified roles for students as stakeholders in the school improvement process by analyzing student engagement in learning, leadership and school decision making. Participants were also charged with identifying practical next steps in student engagement and involvement.

Dr. Holcomb's presentation was day two of a four day series entitled "Back to the Future: School Improvement Leadership Series" designed to support building and central office leaders in continuous school improvement. Activities featured throughout the series are designed to be taken back to buildings and replicated with their teachers and committees.

Dr. Holcomb's session was extremely beneficial to school administrators as evidenced by their responses: "Everything in this session was valuable to me! The activities were applicable to use with my staff and the day went so fast!" "Great ideas for working on School Improvement with various stakeholders!" "It was great to function as a team with members from central office and building level administrators so that we can plan professional development using these specific strategies and techniques."

For more information concerning CIU-20 Programs and Services, visit our website at [www.ciu20.org](http://www.ciu20.org) or contact:

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## CIU 20 Planning Regional High School and Middle School Computer Fairs and Annual STAR Awards Banquet

BY TOM BAILEYS, *Director of Technology*

The annual regional High School and Middle School Computer Fairs for schools in Pike, Monroe and Northampton counties are currently in the final planning stages. The fairs are being held on the same date (March 4, 2011) and in the same location this year to allow districts to participate while saving on the cost of providing transportation to two different locations on different days. East Stroudsburg University has once again agreed to host the computer fair and graciously provide lunch in their cafeteria for all attendees. First place winners in each category will advance to the state competitions, which will be held at Dickinson College on May 24th and 25th for the high school and middle school respectively. Students participating in the fairs will be provided with educational technology work sessions during the day while their projects are being judged.

Colonial Intermediate Unit 20 is expecting more than 150 students to participate from nearly all of the school districts in the three county region. Students generally spend between 50 and 100 hours developing their projects and often use their projects to support other school events. The high school students compete in nine categories that are established by the state computer fair committee. These include Computer Fair Logo Design, Curriculum-Based Web Page Design, Digital Movies, Graphic Design, Information-Based Web Page Design, Multimedia Presentations, Programming and Text-Based

Desktop Publishing. Middle School students compete in six categories that include Animation, Computer Fair Logo Design, Digital Movies, Desktop Publishing, Graphic Design, Multimedia Presentations and Web Page Design.

The regional and state computer fair competitions have continued through the efforts of the intermediate units and generous sponsorships despite the elimination of funding for these events by the state Department of Education.

CIU 20 is also busy planning the third annual STAR (Superior Technology Achievement Recognition) awards banquet. School districts have nominated teachers, coaches and administrators and submitted work samples for judging. Final nominees have been selected and notified and they are busy preparing the video vignettes that will be shown on the night of the awards. The CIU 20 Culinary Arts teacher and students at Colonial Academy are busy preparing to provide a unique and delicious meal for the evening's activities as well as hors d'oeuvres preceding the dinner. The planning committee for the event expects to have a dynamic keynote speaker from the Department of Education as in the past and are pleased to invite all of the CIU 20 board members to participate in the event. This is a great opportunity to celebrate achievement and excellence in technology with teachers, coaches and administrators.

## CIU 20 Implementing New Financial, HR and Employee Portal System

BY TOM BAILEYS, *Director of Technology*

CIU 20 employees throughout the organization have been working extensively during the past several months on the implementation of a new financial management and human resources system. This new computer system, called ALIO, will provide a tight link between the business office and human resources functions including payroll and budgeting. The system is also going to provide an employee self-serve portal that employees can use to manage their absences, payroll deductions and reporting, name and address changes, etc.

The first phase of the implementation updated the financial and accounting systems to the new computer system. This included transferring all of the financial accounts and balances to the new system. In addition, all requisitions and purchase orders are now being processed electronically through the new system. The business office developed extensive matrices identifying which employees would have access to which accounts to request purchases. These decisions then contributed to the development of approval chains so that all purchase requests obtain the proper approvals in accordance with existing board policies and procedures. All clerical and administrative staff then had to be trained to process their requests via the computer at the same time that the business office had to be trained to process the electronic requests to complete the purchasing process and to generate reports and monitor budgets. The business office was also trained in using the new system to develop budgets for subsequent years.

The second phase of the project, which is currently ongoing, is to set up the new system to process employee payroll. This phase required the payroll personnel and the business office personnel to participate in extensive train-

ing to ensure that the employees' pay is accurate and uninterrupted. Also important, local, state and federal tax withholding and payment has to be complete and accurate as well as timely. The payroll department is currently preparing to perform parallel payroll processing using the new and old system to verify accuracy. Payroll processing with the new system is expected to begin in May of this year. This will provide the capability for employees to receive their paystubs and other important payroll information electronically by utilizing the employee self-serve portal which represents the third phase of the project.

The employee self-serve portal will begin implementation in the late spring and is expected to be fully available for all employees before the end of the summer. This capability will allow all employees to view their payroll and human resources data by logging into the system. This data will include paystubs, absence reporting and tracking and employee information updates. General employee training on the new system is being coordinated with the employee orientation that is conducted in mid-August.

The new ALIO computer software provides a giant leap in efficiency in the processing of employee forms, business office functions and in the operation of the human resources office. The system will allow the consolidation of tracking of items such as credentialing, tenure, service time, sick and vacation time and many other required monitoring functions. It will also assist in reducing the processing and routing of paper approvals and the reproduction of paper items for audits and program reviews. The reporting features of the new system will allow better analysis and monitoring of budgets for the business office and the administration.

## Digital Storytelling: Lights, Camera, Action, Green Screen!

BY HEATHER BROWN, *Coordinator of Educational Technology*



*Chris Adams from the Career Institute of Technology is shown in front of the Green Screen as the rest of his group films him for their digital storytelling project.*

Digital storytelling is an engaging approach for students to utilize their creative side to demonstrate comprehension of content. Digital Storytelling can be integrated in all content areas and grade levels. Potential curricular applications are persuasive writing, problem solving, retelling of historical events, authentic writing and creating a public service announcement. Administrators, teachers

and coaches from across the IU region attended the *Digital Storytelling: Integrating a Green Screen into the Curriculum* professional development held at the IU on December 9th, 2010.

During this workshop, educators watched and evaluated examples of digital storytelling and identified seven key elements that every project should include. They also learned the importance of fair use in the classroom and its guidelines for using text, images, music and videos to create multimedia projects. Once the foundation of digital storytelling was in place, participants were given opportunities to create their own projects.

First, they individually learned how free programs such as Photo Story, Movie Maker and iMovie, can create digital stories using images, pictures and videos. Next, participants were divided into groups and given the task to write a script to create a movie. The equipment provided to create their movies were flip cameras and the green screen kit. Each green screen kit included a stand, green curtain and two lights. Participants used images they found on the Internet for their backgrounds. By the end of the day, there were five different movies created and participants enjoyed the experience.

If you do not have flip cameras or a green screen kit to create a digital storytelling project, these items may be borrowed from the CIU 20 IMS library by calling 610-515-6441.

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