

# TECHNOLOGY TIMES

Rockaway Township  
Public Schools



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By Mike Valle, Director of Technology

## 21<sup>st</sup> Century Skills and Teaching and Learning

To be successful both in our schools and in the highly competitive world outside of school students must have a new set of skills to meet a wide range of new challenges. The children that sit in our classrooms today must have the tools to allow them to become the leaders of tomorrow. They must develop the ability to learn independently, collaborate with peers, solve problems and communicate results effectively. Starting in our elementary grades, our children must also develop an understanding of other cultures. Computer literacy and career learning will need to be well established skills for every one of our students to complete in this new and challenging international environment.

Rockaway Township is very well prepared for the tremendous challenges that teaching and learning in this global environment present. Our hardware, software and network resources have been designed to insure that all teachers and students have the tools readily available to teach and learn these 21<sup>st</sup> Century Skills. Students and teachers have access to a high speed network with Internet access for large group instruction in every classroom. In addition all district classrooms already have access ports for multiple computers for group work. When individualized learning is needed, we have computer labs in every school as well as laptop carts at the middle school to insure that we are providing every child the technology tools they need.

As our technology applications continue to dramatically expand every school year, it is critical that Rockaway Township continues to plan for the future. Our district technology plans recognize this need and provide the roadmap to insure that our equipment is always upgraded in a timely and in a fiscally responsible manner. During the past year all of our eight district computer labs have been updated and we continue to move the former lab computers to classrooms to insure that teachers and students have

SUPERINTENDENT OF SCHOOLS: DR. GARY J. VITTA

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access to the most up to date technology resources. One example of a specific tool for teaching and learning 21<sup>st</sup> Century skills that was recently added to our district is the StarBoard. Electronic interactive whiteboards are specifically recommended in the ARRA funding guidelines as very effective tools to engage students and develop 21st Century Skills. They are also an example of our effort to continue to upgrade our technology while controlling costs. Once these funds became available this past summer, Rockaway Township acted quickly to take full advantage of this grant opportunity and installed over 120 StarBoards in our schools. Developing 21<sup>st</sup> Century Skills is certainly a challenge for both students and staff. Through effective planning and the support of our Board of Education our technology program is fully prepared to meet the challenges of teaching and learning both now and in the future. ***“Our Vision is to provide all students with the means and opportunity to reach their potential through the use of technology as a tool for lifelong learning.”***

By Karen O'Donnell, K.D. Malone Educational Technologist

## Third Grade Loves Technology

Miss Valente and her third graders practiced their keyboarding and word processing skills in the computer lab. The assignment was to use Microsoft Word to type a Valentine Poem to a family member. The teacher first opened up Microsoft Word and used the Starboard to show the students what size font to use. She also reviewed how to center the poem. Mrs. O'Donnell then assisted the class with instructions on inserting appropriate clip art into a text box. This proved somewhat challenging but the boys and girls were up for the task. The class kept their hands on home row while typing and was successful with printing out their work. The third graders are now ready for the next assignment typing "Winter Similes". Students plus technology equal terrific results!



*Rockaway Township teachers now have access to StarBoards in both district labs and over 120 classrooms.*

By Bill Hartmann, Copeland Middle School Educational Technologist

## What's New at Copeland Middle School

Want to see a great way to learn, how about a fully interactive classroom where each student individually has the opportunity to learn and explore various topics on their own? The Computer Labs at Copeland Middle School are just such a place. On any given day, you can find a Spanish Class reading and typing in Spanish, or doing research and then creating a PowerPoint multimedia presentation on the Spanish speaking countries of the world. A short time later, you may find a health class using an interactive website that teaches students in a fun way about nutrition and healthy eating habits. At another time, you may find a science class that has come in to dissect a frog. Each student can dissect his or her own frog getting a one on one view of the different internal systems. Respiratory, circulatory, reproductive or the digestive system with all the internal organs are labeled and descriptions are next to each organ to tell you what it does. Besides all this, there is no mess to clean up at the end of class.

Later in the day, you may find a computer class where students are learning about internet safety. How about a class that teaches you how to use a digital camera and then gives you an opportunity to sharpen these skills by taking various pictures?



Digital Photography does just that. Then once these skills are mastered, students learn how to manipulate these photos using Adobe Photoshop. One student inserts himself into a picture to make him fly like superman, another is able to shake hands with the president, while a third is able to sit on the side of a soup bowl and go fishing. The possibilities are endless.

Recently, an eighth grade Language Arts class came in to learn how to use Electronic Bulletin Boards (E-Boards). Students were given an opportunity to personalize their E-board, add subject tabs, add notes and upload documents to their E-Boards. Students can now keep track of important dates using the electronic calendar that is part of the E-board. They can also save their class work and homework to it so they can stay organized and always be ready for class.

If you happen to come by after school, you may find students putting together the school yearbook, or working on a digital art project, or even composing some music. There is no better place to get practical hands on experience than in the Copeland Computer Lab.

*"The access to state of the art technology will continue to enhance the learning experiences for all Copeland students."*

By Maura Ollo, Copeland Middle School Educational Technologist

## Music and Technology Initiative at Copeland

Albert Einstein said, "If I were not a physicist, I would probably be a musician. I often think in music." Copeland students now have a new opportunity to think in music using software Sibelius and Mixcraft. Sibelius is music composition and notation software. Mixcraft is multi-track audio and MIDI recording software.

The MIS department installed the software earlier this year and the General Music teachers have enthusiastically embraced this new technology. The music department, including Dave Bishop, Ardith Collins, Gary Kutzelman, John Palermo and Kurt Zimmermann, has incorporated the use of this innovative software into the General Music curriculum for grades 6, 7, and 8.

Each student has the opportunity to compose music by creating new melodies, adding notes, adding lyrics, and listening to the creation immediately. The student will gain competence in composition skills by entering in a melody, making incremental changes to rhythm or melody and playing back the changes. Snowball microphones are used to import the student's voice.

Music Department Chair Kurt Zimmermann states that, "The use of composition software within the General Music curriculum is bringing our General Music classes into the 21<sup>st</sup> century. The students are very excited to use the software and it allows the teachers to provide a wide variety of technology experiences."

By Hal Conover, D.B. O'Brien Educational Technologist

## EasiTeach Math Lessons

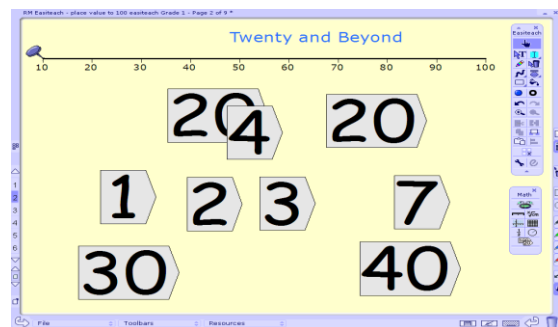
EasiTeach is a collection of graphic tools that can be used to make custom lessons that are especially useful with interactive whiteboards like the Hitachi StarBoard or Smart Technologies SmartBoard. The lessons can also be used with a mouse and normal computer display. Teachers frequently use a computer to introduce a lesson with colorful drawings, graphics, or video. EasiTeach lets teachers make these kinds of lessons. In these lessons the students can manipulate numbers, letters, and words making them less abstract. In the screen shot shown number cards for tens and ones places are shown separate and combined. The children can drag the cards and watch them click together to make a new two digit number. You can also see the EasiTeach toolbar and Math toolbar that have the tools used to build a lesson. In a lesson like this the teacher could have a child using the Starboard while the class does the same activity at their seats using a computer and mouse. Assessing their progress is easy because the number cards are large enough that the teacher can see them from a distance.



*During the 2009–2010 school year music software has been installed in all district computer labs to enhance music instruction.*



The program will continue to grow as students and staff gain knowledge and experience with the new technology. The possibilities are endless.

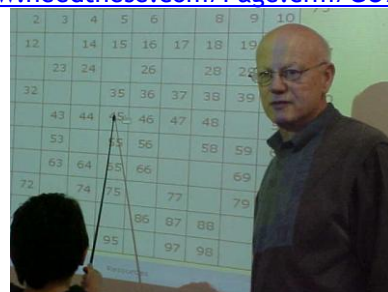


There are many sites with EasiTeach lessons. You can explore these lessons by downloading a free EasiTeach reader at this site:

<http://www.rmeducation.com/easiteach/reader>

Lessons can be seen at this site:

<http://www.needthese.com/Page.cfm/GO/et>



*Mr. Hal Conover working at the StarBoard with a DBO student using EasiTeach software for mathematics.*

By: Karen Orlando, Stony Brook Educational Technologist

## Oh! The Places We Can Go...

Mrs. Hogan's fourth grade students are excited about their upcoming visit with fellow fourth graders at Rogers Elementary School in Frisco, Texas. This visit will not involve a car, plane, train or any other form of transportation. The Stony Brook students will simply walk from their classroom to the computer lab and be connected with the fourth grade class in Frisco, Texas, via a webcam and Skype call. Skype is a service that allows people to make phone calls through their computer internet connection for free anywhere in the world.

This class-to-class collaborative videoconference will be held on March 4<sup>th</sup> and will be student driven where the children will participate in a question and answer discussion of lifestyle, community and school life. Prior to the session, the two participating teachers will decide which students will ask a question and who will answer a question, therefore allowing all children to participate in the activity. At the conclusion of this first session, the teachers will discuss what steps can be taken to continue a relationship between the two schools.

*"The use of webcams and Skype software will provide great opportunities to develop cross cultural understandings on a global level."*

By Mike Valle, Director of Technology

## Technology Trends

Rockaway Township has been very fortunate to have the district support needed to create a technology program that will fully support the challenges of 21<sup>st</sup> Century teaching and learning. As technology continues to evolve so rapidly we must all continue to be lifelong learners to be effective. Here are a few technology trends which illustrate the critical need for on-going learning:

- We are preparing students for jobs that do not exist yet.
- Students will be using technologies that have yet to be invented to solve problems that we are not even aware of yet.
- The top ten in demand jobs in 2010 did not even exist in 2004.
- The number of text messages sent every day exceeds the population of our planet.
- The United States Department of Labor predicts that workers will have 10-14 different jobs by the time they are 38.
- The amount of new technological information is doubling every two years.
- Our students are digital natives.

As Rockaway Township public schools continue to provide and support technology to be used as educational tools, teachers are finding creative and affordable ways to engage our children with their peers in other parts of the country. Skype is a great way to bring the world into our classrooms and to go out into the world.



Mrs. Hogan's fourth grade class connects to fourth grade students in Texas.

### 21<sup>st</sup> Century Learners Use:

- *Critical Thinking & Problem Solving*
- *Creativity and Innovation*
- *Communication and Writing Skills*
- *Collaboration and Leadership*
- *Cross Cultural Understanding*
- *Career Learning and Self Reliance*
- *Computer Learning and Literacy*



By: Erin Borino, C. A. Dwyer Educational Technologist

## Olympic Inspired Collaborations at Dwyer

One of the key pieces to creating 21st Century Learners is global collaboration. Several of the teachers at Dwyer School are using technology to collaborate globally within our own little world. Fifth Grade teacher, Miss Vanessa Greenwald has been working with her class on various technology projects all year. One of the things of interest to her is collaboration with other classes. She and her students have worked on a few online collaborative projects this year already. This time around she wanted to try a multi-grade level collaboration within the "walls" of Dwyer. Miss Greenwald enlisted the help of six of her fellow colleagues in grades 1-5. Together, they are working on Olympic themed projects that will be featured on a common eBoard and showcased to the whole group. The students in her class were each given a Winter Olympic sport to research. They used various Olympic websites to find facts about their sport according to an outline they were given. Students were then asked to write a traditional report on their sport. Their reports will then be published on the class Wikispace and linked to the group eBoard.

First Grade teacher, Miss Jennifer Carpenter's class has been studying penguins along with the Olympics. After reading Tacky and the Winter Games (Tacky the Penguin) the students were put into four groups. Each group was responsible for retelling part of the story and creating a poster to help illustrate their part of the story. They will present their story retelling and posters to the older students.

The Second Grade students in Mrs. Katie Nangle's class have been focusing on the Native American themed Olympic Mascots. Broken into groups, they researched the three mascots, Quatchi, Sumi and Miga along with their mascot sidekick MukMuk. After completing their research, the students will create a PowerPoint slideshow with their findings and make 3D paper models of the mascots.



While learning about North America, Third Grade students in Mrs. Maria Whelan's class will be investigating Canada and the Vancouver Olympics. They will be writing about their discoveries on a class blog.

In Fourth Grade, teachers Elyse Termotto and Mary Weilbaeher worked on a project with their math classes. Using the Create A Graph website (<http://nces.ed.gov/nceskids/createagraph/default.aspx>) students compared the weather during the Olympic games in Vancouver, Canada to the weather in various cities around the world. The students were able to create a double-line graph to visually show the difference in temperature between their selected city and Vancouver. After class discussions, their results will be posted on the group E-Board.

After all the projects are completed, the students and their teachers will celebrate by joining together to present their class projects to each other. The celebration will be accompanied by some of Miss Judy Aron's 5th Grade band students who have been learning the national anthems of several of the countries involved and well as the Olympic anthem.



*By: Joyce Schulze, Birchwood Educational Technologist*

## Technology Staff Development

It's 5:00 p.m. on a weekday afternoon, or perhaps 9:00 a.m. on a Saturday morning. Do you know where Rockaway Township teachers might be spotted? They might be spotted in a computer lab at Birchwood, Stony Brook, Dwyer, or the Copeland Middle School. What are they doing in these labs? Teachers are participating in Technology Staff Development courses offered by educational technologists to learn how technology can be integrated into their daily lessons.

Rockaway Township has made a strong commitment to our students and staff. When computers, document cameras, LCD projectors, Starboards, or any other piece of hardware is installed in classrooms, teachers are provided with several professional development opportunities to assist them in learning how this technology can be used in their everyday lessons. When teachers bring this knowledge back to the classroom, our students are reaping the benefits.

In addition to learning how the equipment works, teachers also learn through a variety of technology staff development courses how software programs and educational websites can be used to enhance instruction in the classroom. Upon completion of the technology staff development courses, teachers have ideas, step by step directions, and ready made lessons that can be taken back to the classroom and used immediately with students.



*Claire McEntyre and Sandy Struble in the Birchwood lab*



*Bob Melvin using a Birchwood StarBoard*

One of the things I like best as a presenter is hearing all of the great ideas the teachers share with one another. A portion of each class is spent sharing ideas of how the lessons they have learned in the course can be used in their own instructional setting. I am so pleased when I get emails from teachers telling me how they used an idea from my course in their classroom. These are emails I never grow tired of.

If you would like to preview any of the Technology Staff Development Course offerings, just click on Staff Site from the Rockaway Township homepage and click on Staff Development



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