

**future  
focus****Technology is Integral to Student Learning**

By Marilyn Kelley,  
Director of Information Support Services

**Yesterday and Today**

If you take a look at the two classroom photos that accompany this article (one from the 1950s and the other taken this past spring), you are sure to find similarities: students, a teacher, desks and chairs. Taking a closer look you also will find marked differences: the 1950s chalkboard is replaced by an interactive whiteboard (Promethean); eBooks have replaced the standard textbooks; and laptops or notebooks are being used to take notes (many teachers also are posting class notes on Moodle for the students to reference at a later time). Regardless of the changes in delivery, what has been the constant in a Blake education is a supportive environment that offers a rigorous and academically challenging curriculum.

**The Role of Technology**

Recognizing that a vital aspect of the 21st century classroom is offering a variety of ways to communicate with students, teachers are embracing technology and its tools to enhance the learning experience. Class discussions remain rich and challenging, and now with the use of technology, students and teachers can use these new tools to carry out content and subject discussions at any time of the day both in and outside of the classroom. School does not have the physical or time boundaries it had for earlier generations. Homework still has a positive impact on student learning outcomes; however, providing students with immediate feedback on the validity of their answers



**Promethean whiteboards and eBooks are two technology tools used in today's Upper School classrooms.**

and giving them the opportunity to correct mistakes while they are still thinking about the problem provides a depth of understanding that isn't always possible in the traditional model of homework. Online homework web sites are continually evolving, providing a place for students to receive online coaching as they work through solving problems. Students are accessing homework assignments, handouts and notes from class pages on Moodle. Learning is now 24/7. The goal of these tools is to help students develop the learning strategies needed to acquire the knowledge necessary to think productively.

**Access to Technology is Integral to Student Learning**

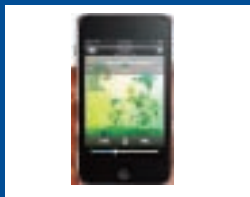
As transformations to the curriculum continue to occur, access to the necessary technologies becomes integral to the learning process. Issuing laptops with the necessary software to students supports the School's mission, the 2010 strategic plan and the technology plan. Blake's Technology Advisory Committee is proposing issuing laptops to all Upper School students for the 2010–11 academic year. If the Board of Trustees approves this recommendation, students would have school and home equality of access to a laptop that has the same software and functions as their peers. Instead of simply having computer labs or carts of laptops available at school, students would have an individual laptop to use both at home and in school.

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**A Blake classroom in the 1950s**

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## LOWER SCHOOL

### Lower School Libraries Online

Lower School library resources are now available online, which supports the division's mission, "To foster students' learning and their development into active, independent members of the learning community who use information effectively, creatively and responsibly."

Curious about how many books your child has checked out, if the Highcroft library has a copy of the book "Al Capone Does My Shirts" or how the School makes choices about what books to buy for the library? You can find answers to these questions and more by visiting Blake's [Lower School library web site](#). There you will find the circulation rules, online catalog, material selection policy and more.



**Lower School students can now access the School's library resources both in person and online.**

## UPPER SCHOOL

### Math Tutorials a Click Away With New Digital Pen

Upper School math teacher Paul Vetscher started his career with a slide ruler, but now he has a new tool in his classroom — a digital pen. The pen is a pint-sized computer with a microphone and camera. It records conversation and digitizes handwriting automatically, syncing the ink and the audio. The paper can later be used to revisit notes by tapping on the paper, which cues the audio associated with where you tap. The notes and audio also can be uploaded to the Internet.

Vetscher believes that technology should be interactive, not just a way to disseminate assignments, and this pen is one way to make that happen. Vetscher is using his pen to create tutorials on topics for which students need more help. His mini tutorials can be accessed with any Internet device, including smartphones and iPods.

Creating the tutorials requires some planning. With his first video he discovered that he needed to have a script so that he would know when to start making diagrams or writing problems. He also believes that digital tutorials need to be kept brief, so he uses a timer to ensure they are less than five minutes. Now Vetscher is working to make his tutorials more interactive for students. Future tutorials will invite students to pause

## MIDDLE SCHOOL

### Using Technology to Connect Students to Learning

Sharing ideas, authoring a poem or short story, or creating a media presentation are some of the goals that seventh and eighth grade English teacher Eric Hansen has for his students. Often using a visual image as the starting point for these activities, Hansen introduces students to the critical skill of interpreting visual material. He asserts that the critical skills needed for reviewing visual material are the same skills required for reading and writing, and also he believes that visuals remove the barriers often confronted when students have varying levels of reading and writing skills.



**Eric Hansen**

Hansen begins his classroom projects by asking his students to access selected images online and then uses their classroom time to focus on meaningful discussions. There is diversity in the end products, which often combine low- and high-end technology tools. For example, the culmination of a unit on Julius Caesar is a puppet show. Students create symbolic story representations that demonstrate their understanding of the story and cognitive ability to read between the lines. The story of Julius Caesar comes alive in a new way. Through creating stick puppets, writing scripts, drawing scenery, acting out the story, filming their work, and then working with iMovie to edit, add sound tracks and create a final movie, classroom goals are achieved as new connections to learning are made.

the video at specific moments and try to solve a problem, and then see how he did it.

These tutorials add to the ability of his Moodle site to provide clarification on topics and make Moodle an extension of the classroom. His students are very impressed with his use of technology, prompting them to give him the title "master of Moodle."

To view one of his tutorials, click [here](#).



**Paul Vetscher, Upper School math teacher, holds his newest technology tool — a digital pen.**

## Will the eBook Someday Replace Hardcover Books?

If you are like many, you may be curious about the role of the book in today's modern libraries. Librarians often find themselves fielding questions such as, "Do you still buy books?" or "How much are students reading online?" You also may have seen a recent news story about an independent school in Massachusetts that is substantially reducing its print collection (the story was a bit inaccurate because the school is not getting rid of print books entirely). Here at Blake, books are an important part of a wide range of media and resource choices.

Anyone who remembers searching for articles in an academic journal by scrolling through a print index and then walking down rows of shelves hoping that the volume they needed was available, can appreciate the power and ease of modern databases. Besides being easy to use, electronic resources encourage students to spend more of their time synthesizing, analyzing and taking the information they find to new levels. Likewise, the use of images, podcasts and video helps engage students in learning through audio, visual and even kinesthetic means.

Even in a high-tech world, Blake is confident that books still hold their own value. Through reading a book someone might find themselves in an epic fantasy world, deep below the ocean surface investigating a World War II submarine, discovering Roman tourism in the first century of the Common Era, or exploring the challenges of a complex mystery novel. Although books can be used for the sole purpose of accessing information for class learning, far more often books — and other longer texts — provide a chance for an immersion in a different world, a new perspective or an unpredictable challenge. Books can be used to seek comfort in stressful times, to process a particular experience or to explore an experience yet to come (like going to college or traveling to a new environment).

That's the other good part about books. There's something for everyone. It's not necessary to read the classics to get these benefits. The skills of keeping focus, remembering details and paying attention over a long story develop whether we're reading "Tess of the D'Urbervilles" or "Harry Potter." The benefits of reading well-crafted fiction or nonfiction literature about people both like

and unlike us helps stretch our minds.

The next obvious questions are, "What about eBooks? Will they someday replace books, and aren't they more useful?" They definitely provide certain benefits such as

portability. However, readers may find limitations when they want to

browse and dip their toes in the water of a more complicated book. Each person eventually develops a preference for when he or she wants a hardcover book instead of an eBook. Some people want to look at cover images and blurbs, some skim the first few pages, some just want to read chapter 11 (since the middle of a book often gives the best view of the pace and style). It's hard for electronic browsing — when it's even available — to meet all those needs. And, of course, many titles are not yet available electronically or are outside the purchase reach of the most active readers, even if they own an eBook reader.

For all of these reasons and many more, we fully expect that print books will be a big part of the Blake educational experience for a long time to come. Displays, conversations and library Moodle pages also help students find new material to read for pleasure. Although Blake's book collection always will focus on supporting curricular projects, all of Blake's librarians also will continually seek out books that encourage students to use their imaginations and explore ideas that may never be covered in class.



**Even in a high-tech world, Blake is confident that books will be a big part of the Blake educational experience for a long time to come.**

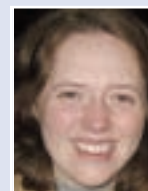


### Arnott is Upper School Teacher Librarian

Jennifer Arnott is not new to Blake, but she is new to her role as teacher librarian. Arnott has spent the last six weeks rearranging the library to create spaces for group work, quiet study and to encourage students to explore information. Arnott is a voracious reader of anything that sits still long enough (with a particular fondness for speculative fiction and historical mysteries). A heavy user of the Internet for communication and learning, she's also particularly interested in online literacy and behavior.

### Buchanan Joins Blake as Upper School Library Assistant and ISS Desktop Technician

Lizz Buchanan joins Blake as the new Upper School library assistant and desktop technician for Information Support Services. She is currently working on her master's degree in library and information science at St. Catherine University. Prior to joining Blake, she worked with Lakeville Community Education, primarily with elementary students. Buchanan is delighted to join the Blake community.



### London is Blake's New Network Manager

Joe London is Blake's new network manager. His office is located at the Middle School in room 228, so stop by and say hello. His wife, Bonnie, son, Jeffrey, and daughter, Emmalee, live in Crystal. London's hobbies include bicycling, cooking and hiking. Previous to joining Blake, he worked in a field position as a network engineer for Corporate Technologies.

## Blake Teachers in School to Learn and Practice Student Assessment

This past August, 175 Blake faculty and administrators gathered at the Upper School for learning technology sessions aimed at helping them practice and refine knowledge in the area of student assessment.

After an all-school sharing session on various ways that teachers are creatively assessing student knowledge, they broke into 11 interest-based concurrent sessions to look at tools and practice implementation. The offerings all focused on both technology and assessment.

The variety of sessions allowed teachers and administrators from all levels to find something that would be individually interesting and helpful. Some sessions offered guidance for teachers on how they might work with their students to creatively develop new assessment techniques and on how these new tools could be used for formative and summative assessment. There also was a session on updated technology tools to aid teachers in recording scores and calculating grades correctly. The session titles were:

- Google Docs with Malik Bush (TIES Cooperative)
- SmartBoard Notebook with Shelly Rinkel (Southeast Service Cooperative)
- Easy Grade Pro with Lynne Macziewski (Blake)
- Laptops for Classroom Learning with Dr. Scott McLeod (Iowa State University)
- Promethean ActivStudio with Carrie Johnson (Minnehaha Academy)
- Moodle for Upper School with Shane Stafford (Blake)
- Moodle for Absolute Beginners with Christin Winkler (Blake)
- Moodle for Middle School with Maelene Krig (Blake)
- Uncovering Student Ideas with Dr. Rand Harrington (Blake)
- Mind Mapping/Concept Mapping using Inspiration with T.J. Fletcher (TIES Cooperative)
- iLife Suite with Jill Burdo (Apple Distinguished Educator)

Although our list of presenters included specialists from outside the School, our Blake teachers seemed to favor our local crew. We will design sessions in the future to try to take better advantage of this talent.



For most, the day was a great success, and many teachers have developed new lessons and procedures as a result. We are planning to dedicate a half-day in February to provide similar sessions, as many teachers mourned not being able to attend more than one session in August.

As we look ahead, more exciting student assessment sessions will be planned to support our faculty as they continue to learn, develop and use these new tools.

## Laptop Institute is International Experience



This summer, Assistant Director of ISS for Learning Technology Dan Trockman attended the [Lausanne Laptop Institute](#) in Memphis, Tenn. Sponsored by the Lausanne Collegiate School, the institute brought together 450 educational leaders from 32 states and numerous countries including Austria, India, Qatar, Netherlands, Poland, Canada, Czech Republic, Vietnam, China, Singapore and Taiwan for a truly international experience.

Each year, the goal of the Laptop Institute is to bring together schools with 1:1 laptop experience with schools either thinking about or ready to launch their own 1:1 program. The majority of attendees were from independent schools. According to Trockman, "Having so many other independent school educators in one place together in intense conversation about laptops and learning helped me understand that the 1:1 laptop program that Blake's Technology Advisory Committee is proposing for the 2010-11 academic year is the right thing to do and the right way to do it."

In future years, the School is interested in sending faculty from a variety of disciplines to the institute to bring back the best of the conference to Blake. Within a few years, Blake hopes to be sending its teachers to the institute as a school that is not preparing to launch a 1:1 laptop program but as one that has already experienced a successful launch.

## Post Attends Branch Out Library Conference

This summer Middle School teacher librarian Jennifer Post attended a two-day school and public librarian conference in Willmar, Minn., called [Branch Out 2009 Beyond Your Comfort Zone](#). Information focused on the challenges of managing an effective 21st century library, including keeping up to date with technology while still providing a relevant and vibrant collection of books that nurture a love of reading. Breakout sessions covered the many programs and resources available to librarians, and meal breaks were a time for attendees to network and share stories.

Two of the most helpful sessions Post attended highlighted the free resources available to librarians. The first session covered changes in the Electronic Library of Minnesota (ELM), which now offers 44 databases and access to an overwhelming number of national and international newspapers and magazines. Using the ELM site and their library card, librarians can find information to help a student research an assignment, support teachers in their classroom curriculum and keep themselves informed about world events and issues. The second session focused on using online instruction and technology to assist students and teachers with a wide range of skill development. The presenters energetically moved attendees through some user-friendly and high-interest online videos that helped teach and demonstrate various skills.

Post's favorite session was presented by a high school librarian, a middle school librarian and a middle school library paraprofessional who enthusiastically worked their way through a list of 101 books for teens. Post took copious notes in preparation for her back-to-school shopping and has since added titles to Blake's already rich collection of fiction.

## Boston — NXT Training, Great Seafood and History

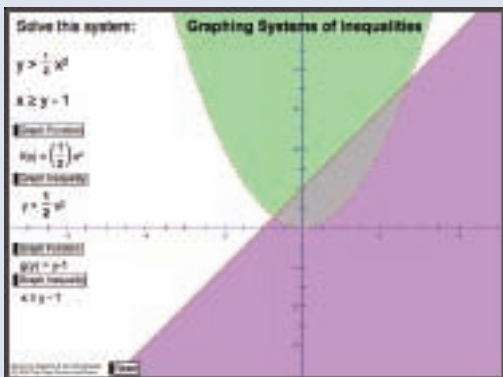
In August, Highcroft campus engineering and programming specialist William Watkins traveled to Boston to engage in focused [LEGO MINDSTORMS NXT](#) professional development training in the area of building, programming and robotics. At the same time, he took in a little of Boston's rich history and enjoyed some fabulous seafood. The training, which took place on the campus of Tufts University, covered how to effectively use NXTs for a broad differential range of students. Watkins' goal was to seek ways to fully utilize Blake's new technology. The NXTs were purchased using proceeds from the 2008-09 Book Fair.

Watkins was pleased with the rigor and focus of the weeklong workshop and says that he came away from the conference with a more constructivist approach to using Blake's new NXTs. He believes the School will immediately benefit from many of the experiences, lessons and projects shared in Boston this year. Blake's fourth and fifth grade students will begin regularly using the NXTs to fulfill programming, building and robotics portions of their engineering and programming benchmark expectations. Watkins welcomes the community to come visit Blake's classrooms during the NXT sessions to experience this exciting new technology.

## Technology Grant Enhances Classroom Strategies for Upper School Teacher

At the encouragement of PK-12 Math Department Chair Ina Loobeek, Upper School mathematics teacher Christin Winkler applied for a summer technology grant to enhance her classroom strategies and become a resource for her colleagues in the use of a well-developed piece of software called Geometer's Sketchpad.

[Geometer's Sketchpad](#) is a dynamic construction and exploration tool for students, teachers and other visual mathematicians. With this software, precise figures can be constructed and interactively manipulated while preserving mathematical relationships. This interaction gives students the power to explore, analyze and understand mathematics in a fresh and eye-opening way. Winkler's technology grant made it possible for her to spend two weeks learning the software and investigating activities especially designed by Key Curriculum Press for algebra and calculus students.



Already this year, Winkler's students have used the new software in the computer lab and on the classroom Promethean board to manipulate visual models and construct their own algebraic objects and graphs. Her students also are learning how to complete activities on their own, which allows them to receive immediate feedback on their work and results.

As the year progresses, Winkler expects her students to become quite skilled with the software and create their own dynamic diagrams to explore, share and present. Tackling everything from solving algebraic equations to the fundamental theorem of calculus, her students are now approaching topics with more tools that will help support and encourage inquisitive and self-motivated learners.



**Students in Upper School mathematics teacher Christin Winkler's class are benefiting from her training in using the Geometer's Sketchpad software.**

**Q:**

*I know that FirstClass Client software can make it possible for me to access my Blake e-mail account from my home Macintosh or Windows computer, but where do I find it and how do I download it?*



**A:** FirstClass Client is the preferred software for accessing your Blake e-mail account, and installing the software on your home computer is an easy four-step process.

1. First, download the [FirstClass Client software](http://www.centrinity.com/clientdownloads) by going to [www.centrinity.com/clientdownloads](http://www.centrinity.com/clientdownloads). Save the software to a location you will remember (such as C:\temp for Windows or the desktop on a Macintosh).
2. Second, double click the file to start the installation and choose the default settings on each screen during the installation.
3. Third, start the program by double clicking the new FirstClass icon on the computer's desktop. You will be asked to provide some information on the Service Setup screen. Only enter [fc.blakeschool.org](http://fc.blakeschool.org) on the Server: entry. Press the Save button.
4. Fourth, log in to FirstClass. The first thing you should do is visit the E-Forms conference (located on the desktop in FirstClass) and double click the file in the lower right corner (currently vb802.fc). Press the Update button. This step ensures that the software is up-to-date with all the newest electronic forms and graphics in use on the Blake e-mail system.

### Connect Your iPod Touch or iPhone to the School

Did you know that both the iPod Touch and the iPhone can connect to the Blake wireless network? Bring your iPod Touch or iPhone to the library and Information Service (IS) staff will capture the MAC address of the device and configure your Internet browser to use Blake's proxy. The MAC address is added to the School's Cisco access control server to enable the connectivity.



Additionally, this fall an application that makes it possible to run FirstClass Client e-mail software on your iPhone became available. You can download the free FirstClass app from iTunes. This allows you to receive, send, open attachments and access your calendar within your School e-mail account. Just enter FirstClass Mobile Client in the iTunes search engine, and you'll be able to download the [free app](#) needed to get you started.

## future focus

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This approach will positively impact how students view the use of the tool and also support the transformation of how faculty develop their curriculum. Homework assignments using technology (Moodle, the Internet, specialty applications) could confidently be given with the knowledge that all students can work at home, thus maximizing discussion and conceptual exploration during class time.

The vision for students is that laptops become a necessary part of their learning process and a means that allows them to extend their learning community. As pen and paper did for past generations, the laptop itself becomes transparent in their work. Issuing laptops expands the breadth of opportunities for student research, projects and communication as they have increased access to technology tools.

There are opportunities planned throughout this year for families and students to learn more about the use of technology at Blake. Please consider participating. If you have a comment or question, don't hesitate to contact me at [mkelley@blakeschool.org](mailto:mkelley@blakeschool.org) or (952) 988-3408.

### Love of Learning • Integrity • Respect • Courage

#### Mission Statement

*The Blake School provides students with an excellent, academically challenging education in a diverse and supportive community committed to a common set of values. Students are expected to participate in an integrated program of academic, artistic and athletic activities in preparation for college, lifelong learning, community service and lives as responsible world citizens.*

#### Blake Online

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