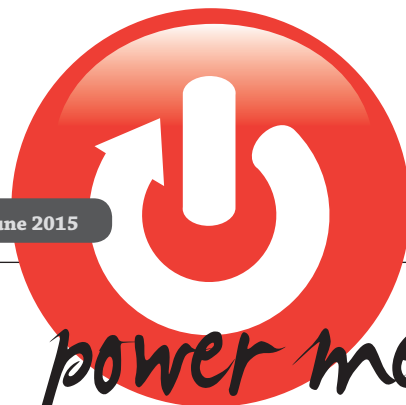




Electronic Educator

Connecting Technology Educators in Maine

A Publication of the Association of Computer Technology Educators of Maine June 2015



ACTEM 2015

This Year in Bangor!

by Barbara Greenstone

The ACTEM 2015 conference is shaping up to be one of the best yet with its new location at the Cross Insurance Center in Bangor. Mark your calendars now and plan to join us on October 15 and 16 for two exciting days of professional learning and networking opportunities.

If you attended the 2014 conference, you are aware that it's now a full two-day event, with each day offering a mix of one-hour, three-hour, and full-day workshops, keynote speakers and exhibitors. Holding the conference in

Bangor this year allows us to take advantage of a new, spacious, state-of-the-art facility with all the amenities it offers. The Cross Insurance Center

is centrally located within easy access of I-95 and close to several hotels and a variety of restaurants, making it an ideal venue for a statewide conference.

The ACTEM Conference committee is busy putting together a program that will offer something for everyone, beginning with the Thursday keynote address by Leslie Fisher of Fisher Technologies. Leslie is an international consultant, trainer, and presenter whose company "was created to help educators with their technology implementations and decisions." Friday's keynote speaker is Jaime Casap from Google. Jaime is the Chief Education Evangelist at Google and part

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A message from the President Michael Richards, Wells-Ogunquit C.S.D

Each school year brings on an uniqueness that is hard to describe to those outside of the education world and this year continues to fit the bill with ups, downs, and some amazing insight. Recently I went through some of the topics that ACTEM members were engaged in on the listserv and it amazes me that we have so much knowledge and insight. Debates on Wi-Fi systems, the sharing of resources like 3D printers, discussions on the MEAs and SBAC, the Yankee spirit

of support when someone runs into an issue and seeks the insight of those who already faced the same situation, and those occasional "please sign me off this listserv" permeated our lists throughout the year. I know that next year will not be any different, maybe just new topics. I can't image what new things will come to the forefront, as the technology we work within is constantly changing.

This year there were a lot of great things that ACTEM was involved in and hopefully some of

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actem

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Upcoming ACTEM Business Meetings

September 21st, 2015

December 14th, 2015

March 14th, 2016

May 9th, 2016

We meet from 9:00 am to 12:00 noon on
Monday mornings in Room 103A/B,
First Floor, Cross Office Building,
Augusta. Remote sites are generally
available for these meetings. Check the
ACTEM website for meeting details.

Letter to the Editor

I was reading the March 2015 Electronic Educator last evening and I could not but smile and shake my head with pleasant amazement. The "Keynote Speakers Set to Inspire Educators" article on the first page was "Continued on Page 10." There were over 10 pages in the publication! The publication was well laid out with wonderful information for educators. I had a mental flash-back to the days in the late 80s and early 90s when ACTEM struggled with meetings attended by a hard core of perhaps 12-15 people - if we were lucky. During those years, Dennis Kunces worked hard to regularly send out a bare-bones *Electronic Educator* that might have had 2 pages. I think MDOE paid for the copying, thanks to Dennis and Richard Riley, but I am not sure.

However, I want to say how wonderful it is to see ACTEM thriving, growing and staying abreast of the fast-moving world of educational technology. Certainly there are organizational changes from twenty years ago - as there should be - and I commend all who are overseeing those changes. The result is an ACTEM that is on the cusp of where it needs to be - helping Maine educators more fully utilize the potential of technology in education in a rapidly changing world!

My congratulations to you all for your good work!

~John Lunt, former ACTEM
President & Conference Chair

2015-16 ACTEM Membership Renewals

ACTEM's membership year runs from July 1st through June 30th annually. This means that all memberships are up for renewal on July 1, 2015. Membership dues remain the same as the current year with individual membership at \$20 and institutional (district) memberships at \$50 per district. Small institutions or one building school districts membership fee is \$25.

Membership benefits for Individual Members include:

Discounted registration fees on conference & workshops

Lunch at quarterly business meetings plus the quarterly ACTEM newsletter

Discounts through ACTEM purchasing consortium on selected products and software titles as companies allow.

Opportunity to apply for professional development reimbursement of up to \$300 per year. Only individual members may apply for this professional development benefit. PLEASE NOTE: Beginning July 1, 2015

TRIVIA WINNER

The question was, "Back in 1995 ACTEM's first President signed the non-profit Articles of Incorporation to give ACTEM the 501c(3) status we still hold today. Who was ACTEM's first President that signed this Articles of Incorporation?" The correct answer: Robert Stackpole. The winner of a \$25 LL Bean gift certificate is Dennis Kunces, Retired, formerly of the DOE.

JUNE TRIVIA QUESTION

In the March issue of ACTEM's Electronic Educator, there was an article From SplashData that contained the annual listing of the 25 most common passwords to make the "Worst Password" list for 2014. What was the most common password from this article and thus was listed as #1 ranked worst password? Go to www.actem.org to submit your answer. All correct answers will be entered into a drawing for a \$25 Amazon.com Gift Card. The deadline to submit answers is August 30, 2015.

WIN
\$25

membership must be active for at least 180 days prior to applying for professional development reimbursement funds.

Institutional memberships are required for districts to purchase software and other accessories in our purchasing consortium. One membership fee per district allows all schools within that district to benefit from our low educational pricing. Institutional members also receive free shipping and discounted pricing of purchases from some of our partner vendors like CDWG and Lightspeed Technologies.

Institutional memberships do not qualify your district staff for professional development reimbursements and discounts on conference/workshop registration.

Our online membership system has the capacity to accept payments online and to pay with PayPal and credit cards. Membership renewals may also be submitted with purchase orders.

Renew your ACTEM membership today to avoid missing out on any benefits!

ACTEM Reimbursement Alive and Well

by Dennis Kunces

ACTEM sponsors a number of programs that support the mission of the organization which advance the use of technology by members to enhance teaching and learning. Some of these professional development activities include the fall conference, the mid-winter mini conferences, special training events and the member's professional development reimbursement program.

The reimbursement program has been a benefit for over 15 years. It reimburses members the registration cost of technology related training to a level annually of up to \$300. The program was developed to assist members obtain

professional development training at a time when local PD funds were lim-

"The true value of technology lies not in learning to use the technology but in using the technology to learn."

Educational Research Service, 2001

ited (still the case) and there were not many local offering that would meet the unique needs of computer coordinators and educators integrating technology. The first year of the program had a budget of \$3,000 in which ACTEM ending up reimbursing \$1,600 to the six members who applied. Each successive year the program demand would grow and the membership continued supporting the grants so that our budget is now at \$20,000 with a maximum award of \$300 per member.

The funding is generated from some of the profits of the fall conference, software sales and special events. With the support of the membership this benefit has become a stable component of ACTEM PD and an incentive for educators to join ACTEM.

Some of the most popular events include the Technology Teacher Conference (formally FOSSED), the national ISTE conference, the Google Summit, Power School University and many events where one or sometimes two members attend unique events all across the country. These events may cover a whole variety of topics or concentrate in areas where training covers a particular skill.

For those new to the program the benefit is available to members who have belonged to ACTEM for a minimum of 180 days, reimburses only registration/tuition costs and is limited up to \$300 per ACTEM calendar year (July 1 to June 30th). The expense must be paid for by the individual member and proof of personal payment such as copy of a credit card statement; canceled check or PayPal receipt is required. Also proof of attendance or course completion is needed. A short internet based survey

must also be completed to support the completion of a member's request. The initial application is found on the ACTEM website (www.actem.com) and needs to be completed along with a verified membership for the calendar year when the activity ends.

All the rules and requirements are on the website under Professional Development.

The program seems to be working well and is very popular with about 75 members applying each year up from the 6 from the first year of this benefit. If you have any questions on the program please contact me at dennis.kunces@gmail.com or contact Gary Lanoie at the ACTEM office.

The Cybrary

Cybrary is the world's first, free IT and cyber security online training network. Cybrary's goal is to provide everyone the opportunity to learn IT and cyber security for free. Thus, Cybrary actively partners with those in the educational community to provide free access to a library of IT and cyber security training



courses for students across the globe. The platform enables teachers to integrate IT and cyber security learning into their curriculum, giving students access to the in-demand skills that will serve them well after they complete their education. In order to best prepare for the future, it is important to educate our youth. Cybrary is proud to offer its educational platform to schools everywhere.

FMI: <http://www.cybrary.it>
Info@cybrary.it, Tel. 301-220-4526

MLTI Summer Institute

July 21-23,
Bowdoin
College

Isn't time what we crave the most in education? Use the 2015 MLTI Summer Institute as a gift of time to learn and share ideas in learning through technology. Examine and try out new ideas in depth with the support of experts. Find content that will help address proficiency based learning, teacher accountability and higher order thinking skills targeted by the new MEA

Choose from a variety of relevant topics including:

- Online and blended learning
- Programming with Swift
- Leadership for technology
- Targeting critical math concepts with technology
- Creating badges for learning
- Augmented reality and OER

We'll be offering two keynotes. Chris Lehmann from Philadelphia's Science Leadership Academy will inspire on Day 1. Erin Knight from Cities of Learning and Badge Alliance will offer her perspective on the 2nd morning.

- One Principal (or Assistant Principal) attends free with the registration of two or more educators
- \$155.00 - 3 day commuter includes lunch, dinner and materials
- \$255.00 - 3 days includes overnight accommodations*, meals and materials
- Non MLTI Educator/Out of state Rate
- \$225.00 - 3 day commuter includes lunch, dinner and materials
- \$325.00 - 3 days includes overnight accommodations*, meals and materials, as well as the use of a MLTI Device during the 3 day event

Learn more and find our registration page at <http://maine.gov/mlti/events/institutes/>



Start Planning for Auburn's LL 2015 iPad in the Primary Grades

by Jim Moulton

The Auburn School Department is pleased to announce the dates for "Leveraging Learning 2015; iPad in the Primary Grades." This will be the fifth Leveraging Learning institute, and this year's design and theme is reflective of the evolving needs and interests of the participants. The theme for this year will be "iPad as a Thinking Tool - Beyond Simplicity; Raising the Rigor." Auburn recognizes the importance of rigor, as defined in the Great Schools Partnership's Glossary of Education as, "...instruction, schoolwork, learning experiences, and educational expectations that are academically, intellectually, and personally challenging."

Built around a team model, Institute strands will include: How can we lead and support? (Leadership & Professional Development); What happens in the classroom? (Curriculum, Pedagogy, & Assessment); How do we know our implementation is working? (Data & Research); How do we make sure the equipment will work well for users? (Technical Project Management)

The three days will be a blend of opportunities to learn from Auburn's iPad in Primary Grades team members and other Maine and national voices, combined with time for your own team's critical planning work with access to Institute facilitators & resources.

Team members might include superintendents, building principals, classroom teachers, librarians, technology coordinators, technology integrators or coaches, and school board members.

Looking back on LL2014, Lydia Leinmbach, Technology Integrator in the Hall-Dale Schools of RSU 2 says, "In 17 years of teaching I have never been to a conference that has spurred my thinking as much as this

one. The firm basis in research and pedagogy makes the difference. Each session sparked ideas, deepened my understanding and /or challenged my thinking."

Grade 1 Teacher Joline Pessant at Sabattus Primary School said, "This has been the most enlightening conference that I've ever attended. I loved the opportunity of choosing my sessions, customized to where I am professionally. Thank you for the INSPIRATION!!!"

You are invited to subscribe to the iTunes U course that was used to support LL2014, where you will be able to get a feel of the event as well as be able to access content supplied by last year's presenters as follow-up to their sessions. <https://itunesu.itunes.apple.com/enroll/FJA-BWC-ADK>

LL2015 will be held from noon on Wednesday October 28 to 1 PM on Friday October 30, 2015. For more information, please visit the Hold the Date page at: institute2015.auburnschl.edu and plan to bring a team of participants to benefit from this powerful event. Registration will open on August 19, 2015 and will be available through the same URL.

ISTE Bus Update

We have a full bus! ACTEM has combined efforts with RISTE (Rhode Island Society of Technology Educators) and we currently have 42 Maine and New England educators on the bus to ISTE 2015 in Philadelphia.

Dennis Crowe will be the bus host or "ACTEM's Director of Transportation to Exceptional Professional Development." He has planned some fun and shenanigans for the trip, and arranged a "Duck Boat" tour on Sunday morning sponsored by Data Memory Systems. ACTEM would also like to thank our two major conference sponsors, ePlus Technology represented by Jeff Mann, and DICI represented by Tyler Dunfey.

Microsoft K-12 ESS Licensing from ACTEM

Enrollment for Education Solutions (EES) Subscription Licensing - EES provides assured coverage for desktop platform products through one annual count of employees, the ability to add additional products as needed, student licensing options, and the benefits of Microsoft Software Assurance.

Microsoft ESS subscription licensing programs offers:

- The right to run products, and any upgrades of those products, for the designated term
- Simplicity of licensing products school or organization-wide through an annual FTE count of people
- Easy software license compliance, work at home rights for faculty and staff and Microsoft Office 365 for Education

Additionally Microsoft will include no-cost Office 365 ProPlus subscription licenses for your students through the EES Student Option.

TWO Options available for Microsoft ESS Licensing

OPTION A: Microsoft Office Only - ACTEM Pricing \$27.25 per FTE Office Pro Plus for Windows and Office for MAC. License FTE and covers all school owned devices for Office.

Office 365 Plan E1 for Faculty / staff and students. This includes Exchange Online and Office Web Apps.

Office 365 Pro Plus for Faculty / staff and students. This allows for the install of any version of Office (including iPads) on up to 5 devices per user. Can be personal or school devices.

Office 365 Pro Plus for Students. This allows for the install of any version of Office (including iPads) on up to 5 devices per user. Can be personal or school devices

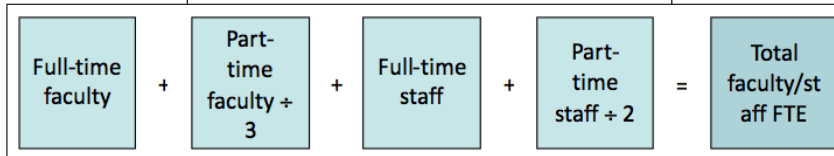
OPTION B: Desktop Bundle Option

- ACTEM Pricing \$57.50 per FTE Desktop w / Core CAL suite that includes the following:
Windows 8.1 Pro / Ent - upgrades any qualifying Windows or MAC to any Microsoft OS.

Office for PC / MAC - Office Pro Plus for PC and Office Standard for MACs

Windows, Exchange, Sharepoint and Lync Server CALs -for File and print, Active Directory, Web access to mail, and Instant Messaging

System Center (Forefront) Endpoint Protection, Configuration Manager and Virtual Machine Manager



Office 365 Plan E1 for Faculty / staff and students. This includes Exchange Online and Office Web Apps.

Office 365 Pro Plus for Faculty / staff and students. This allows for the install of any version of Office (including iPads) on up to 5 devices per user. Can be personal or school devices.

Contact the ACTEM office if you are interested in a quote for your school or district.

Perpetual vs. Subscription

Perpetual: You own the software licensing permanently and continue to use it as long as it works with your operating system, without annual fees.

Subscription: You must renew the license annually in order to continue using the software, ensuring you'll always have the latest version.

Adobe Licensing Options

Perpetual licenses are no longer available from Adobe with the few exceptions of some titles like Acrobat Professional, Lightroom, Photoshop Elements and Premiere Elements. For a full listing of software still available in the perpetual license option check out the complete list on ACTEM's website.

Adobe Acrobat DC was recently released in both perpetual or subscription licensing. This new version offers PDF tools that let you create, edit, sign, and track PDFs from anywhere with Adobe Document Cloud services

Adobe Creative Cloud Annual subscription licensing is available through ACTEM. All Adobe Creative Cloud licenses have a renewal date of

August each year. Cost of licensing is pro-rated to that August date when you purchase.

Adobe Creative Cloud Complete subscription licenses are available in two options

Named User Licenses - \$252 per year (registered to an email address)
Device User Subscription - \$179 per year (for computer labs with multiple users)

Adobe Creative Cloud Complete also offers single application versions of it's subscription licensing. Cost ranges from \$96 to \$110 depending on named user or device licensing.

New England ISTE is offering an Enterprise Term License Agreement (ETLA) again this year for ACTEM member districts at \$24 per FTE (FTE people count is the same as Microsoft's ESS formula). This is a district-wide subscription license agreement with a 3-year price lock and annual payments.

Contact the following people if you are interested in this option:

- Jared Pace at Adobe - jpace@adobe.com
- Leslie McAllister at GovConnection - lmcallister@govconnection.com

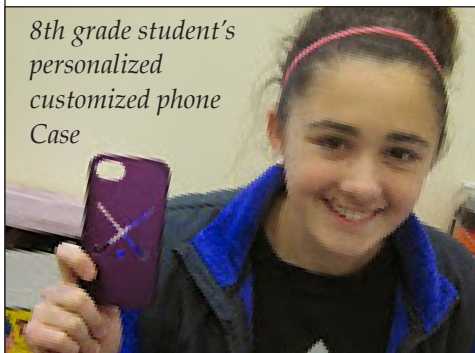
Every few years a new technological tool is introduced and as educators

we're told how it will revolutionize the classroom, yet often the promise falls short of the reality. The tool is too costly or doesn't match any real educational goals. Some, however, make such an immediate impact that you can't imagine going back to a classroom without it. This understandably short list includes obvious choices like computers, the Internet, and now 3D printers.

The introduction of this technology has excited my students like nothing else before. It's the first time I have watched students develop an idea, design it, produce it, redesign, and reproduce over and over again. No more one off projects like that Science Fair volcano. It has had its last baking soda bath.

The most common questions I receive about 3D printers in the classroom are, "What should I buy and how expensive are they to operate?" "What material do they use?" "How does it fit in the curriculum?" "What can I print and where do I start?" This

8th grade student's personalized customized phone Case



article will cover the answer to these questions and more.

"Never tell a Person HOW to do something, but WHAT and they will surprise you with their INGENUITY!"
General George S. Patton

3D PRINTING IN THE CLASSROOM

WHAT SHOULD I BUY?

With apologies to Robert Browning, in this case 'more is more.' The limitation of the printers is the time it takes to create a product. I would rather have multiple printers with less features than a single printer that has a vast array of bells and whistles. Twice the capacity, twice the output.

After interacting with numerous entry level printers and seeing how other schools have used them, I've settled on using the Makerbot platform. There are, of course, other companies and models out there, but at this point in the evolution of the technology, I wouldn't recommend the newer models that use different materials or open source coding. This is due to the learning curve and the problems they are still working through. Being an early adopter here may result in more time spent fixing the machine than using it. If it's your first printer, I would recommend a brand name to start with.

HOW MUCH WILL IT COST?

Cubify is a possible entry level model for elementary schools for under \$1,000. It has a smaller build plate and the filament costs more. They use the standard printer ink sales model where the printer is less expensive, but the ink is not. Makerbot Mini is another option with same build plate issue, but can use a variety of filament suppliers. Either you will pay up front for the machine initially or more over time for the cartridges. The next level, the Makerbot Replicator has a larger

by Keith Kelley
Integrated
Technology Teacher,
RSU19 Sebasticook
& Somerset Valley
Middle School
Newport Maine

build plate, up to the size of a loaf of bread and added features like WiFi and camera accessibility. This make for a great machine for the classroom. You can spend more for even higher quality jobs, but unless a program needs a specific form factor or feature, I find this machine is a pretty good sweet spot of cost and functionality.

WHAT MATERIALS DO I USE?

Additive 3D printers use thermoplastic filament which can be ABS (petroleum) or PLA (starch) based. I generally prefer PLA filament over ABS, but each has its advantage and disadvantages. PLA is starch based so material is harmless and recyclable, it is however less flexible. ABS is petroleum based so it will need a heated build plate and will smell like burning plastic. The better flexibility of ABS is cool, but for what my students produce PLA has been more than adequate. There are machines that use rubberized and other types of thermoplastics on the market. At this point we will continue to use PLA until something changes substantially.

The cost of a two pound roll of generic brand PLA is around \$20. For brand name material double that cost. This material lasts a long time depending on size of the projects. For instance, an iPhone sized case costs less than \$1 in filament to print. Filament comes in a variety of colors both solid and translucent with the specialty colors and properties being more expensive.

Less expensive machines have single extruders where only one color is laid down at a time. To change colors, you must pause the machine and switch filament rolls. You can

<p>stack colors but not intermix them like a dual extruder can. You also must use rafting or supports to float jobs that need support. Rafting is the process of adding supports during printing that will be removed after the job is complete. This also helps with adhesion to the build plate. The more expensive machines will add a third material that can be dissolved in</p>	<p>you create a setup from above the machine. I did this with a simple closet hanger and rod setup you can purchase from any home improvement store. This allows you to switch colors easily and you also have a quick visual of how the spool is working.</p> <p>Also, the extruder nozzle gets dangerously hot. Usually the nozzle is protected by the build plate, but while</p>	<p>or Makerbot's Thingiverse and print directly from there with a small learning curve. They can print these model immediately, but have limited ability to customize. They can use a program like Makerbot's Printshop to produce rings, bracelet, medals, text and with new shape feature their own drawings.</p> <p>Intermediate level students can</p>
 <p><i>8th grade student printed prosthetic hand from Thingiverse.</i></p>	 <p><i>Working with printer and Makerbot Desktop Software.</i></p>	 <p><i>Makerbot replicator filament loading setup.</i></p>
<p>a solvent. This allows the creation of objects with moving components that work without any additional assembly. The cost of this method of printing, means it would most likely be suited for higher level products.</p> <p>WHAT DO I NEED BEFORE I GET STARTED</p> <p>Someone is going to have to maintain and watch the printer. I find it quiet enough so I can teach while it is running. I do not recommend leaving printers alone in a Makerspace unsupervised. I have had print jobs fail by leaving the build plate resulting in a glob of filament stuck to the nozzle. While some printers have a built in camera to monitor the job, you can also set up a webcam and use remote access software, like the free Chrome Remote Desktop to watch the print and be able to stop it if something goes awry. Since filament can be loaded incorrectly supervision is recommended. I recommend dedicating a computer to the printer. I do switch out laptops and the Makerbot Desktop software is free, but it is easier to access remotely on one machine.</p> <p>Loading the filament is easier if</p>	<p>loading filament and once the print job is completed there is a moment when the nozzle is still hot and accessible. The plastic becomes cool to the touch immediately once it has left the extruder and has been pushed through the nozzle. You can buy additional plexiglass protection panels, but realize these hold in heat and can ruin a print job if not set up correctly.</p> <p>HOW DOES A 3D PRINTER FIT IN THE CURRICULUM?</p> <p>Once the printer arrives, what do you do with it? The value of a 3D printer is taking an authentic idea, designing a virtual model and being able to create it in reality. Additionally, students can revisit their idea and make countless iteration of the work. There are a number of 3D design programs available. My students use Sketchup which is fully featured and free for education. Online alternatives include Tinkercad and 3DTin. There are tablet apps that provide an easier interface for younger students including MakerBot's PrintShop, AutoDesk's 123D Sculpt+, Tinkerplay and many more.</p> <p>Students can find existing items in sites like Sketchup's 3D warehouse</p>	<p>produce more advanced models using Thingiverse Customizer where they select from a set of simple parameters. Right on the website, students can add text or personalized rings, signs and phone cases. They can manipulate the model with a straightforward interface.</p> <p>At the pure creation end of the spectrum, students can produce items they created in a 3D program like Sketchup. Students can measure, prototype, design and redesign their own objects. For example, our tables had broken brackets so our students replicated, redesigned and replaced them. We saved money for the district and produced a real world item. To keep cost down for filament and machine maintenance parts my students will take on commissioned jobs from teachers, students, administration and community members. They pay for materials used.</p> <p>Here are examples of a beginner, intermediate and advanced lesson. The first is an ideal project to work with primary grade students. The second for intermediate grades and the third for more advanced students. All lessons allow the students to personalize their creation, while</p>

meeting STEM standards of design and process.

INTRODUCTORY LESSON

3D HAND PRINTING!

This lesson allows younger students to become involved in the fun of 3D printing. They are able to make custom drawings that are printed. In this case, we're creating a Mother's Day project.

Step 1) Students draw the outline of their hand on a white piece of paper.

Step 2) Students draw a simple shape in the center of the outline, remember the inverse of the shape will be printed. Hearts, stars or block letters work best.

Step 3) Students use black marker to outline the parts of their hand they want printed. It's important that the students are careful and do not have stray lines because those will be printed in the final version. If the kids are too young for this step, perhaps older students in the school can help trace the drawing in black marker.

Step 4) Take a picture of the black and white drawing with the Makerbot iPad app: PrintShop. This will convert

the drawing into a printable model that can be created on the Makerbot Replicator.

Step 5) Print the models and have students present them to their mom.

INTER-MEDIATE LESSON

DESIGN & PRINT YOUR OWN HOUSE

Students learn basics of Sketchup while producing a personal project that they can't find in the Sketchup 3d Warehouse. Using self-paced Sketchup Tutorials students learn the basic functions of the program. These online YouTube Sketchup Tutorial Videos are a great resource for students as well.

Step 1) Students download the Google Earth Satellite Image of their house into Sketchup and toggle on the terrain.

Step 2) Building their home on a satellite image forces students to accurately match the scale of their house. I use their real residence because it is NOT in the 3D warehouse. Students must build it for themselves rather than copying one from the internet and claiming it as

their own.

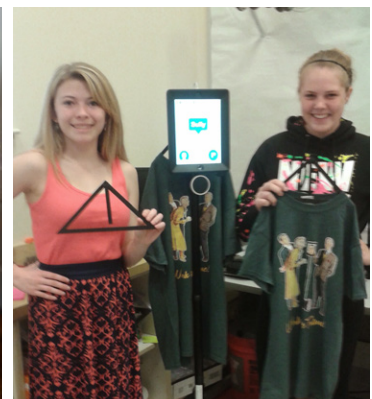
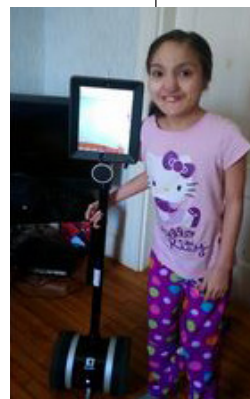
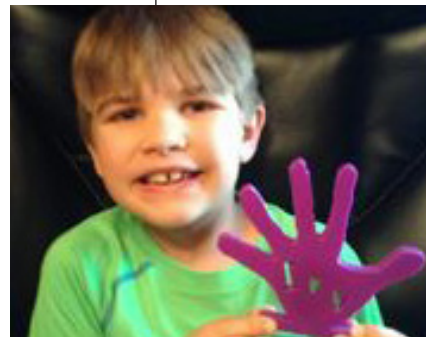
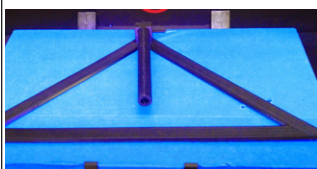
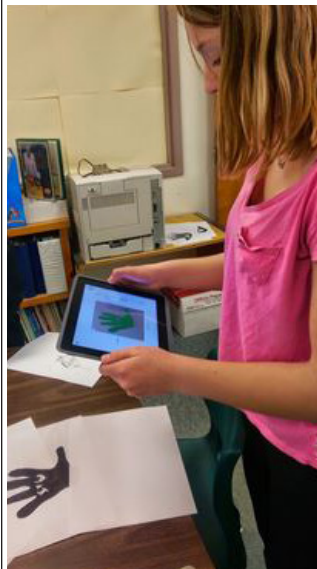
Step 3) Students are then introduced to 3D warehouse so they can add detailed doors, windows, any items needed for the exterior. The family car matching the color, make and model is expected in final product. They learn about grouping and components in this challenge.

Students now have a completed project of their own house using basics of:

- Scale
- Axis (X, Y & Z)
- Orientation
- Object Manipulation (Push, Pull, Delete, Fill, Paint)

Students add the .stl export function warehouse extension so they can export their house into a format the Makerbot Desktop software can understand. They print a version of their homes switching the filament as necessary to match proper colors.

Top row: three Introductory lesson images and the commissioned lunch table replacement part project, Bottom row: Commissioned scorers table project, and Jasmine with her robot with the new bracket.



ADVANCED LESSON 3D PROBLEM FINDING!

We often discuss problem solving in education, but there is also the need for students to become problem finders! To seek out the problems that haven't been solved and just need thought, creativity or a 3D printer.

One such project starts with a young girl named Jasmine. She is homebound, yet wanted to go to school, so with a few fundraising students and grant money our district was able to buy Jasmine a Double Robotics Telepresence robot she could use to go to class.

Using a standard school issued laptop, she navigated the halls and chatted with other students. A problem arose when we wanted to take Jasmine on a field trip with the others students. We needed a way to ensure wifi, so we used a Verizon MiFi and two students designed, adjusted and printed accessories for the robot.

My 8th grade students noticed there was no way for the robot to hold any helpful items. They wanted to add a T-Shirt and a space to hold a portable wifi unit. Using the 3D Printer they were able to create a bracket for both of these problems. They are currently working on making a way for the robot to push the elevator button so she can be even more autonomous.

For additional lessons check out my website www.learn3d.net on teaching design and prototyping. There you can see students producing a variety of projects at various grade levels. The students are producing everything from phone cases to prosthetic hands as fast as they can. The printers can't keep up with their flood of ideas. The filament we use has a cornstarch base, so it's harmless to work with and as it melts creates the happy side effect of a maple syrup scent. The classroom of the future is available today, and it smells delicious.

technologyteacher.me



by David Trask

The 2015 TechnologyTeacher.ME conference (formerly known as FOSSED) is heading into it's 13th year! This conference is often quoted as one of the best professional development opportunities in Maine. Technology educators, integrators, and tech support staff come together to spend 3 days engaged in hands-on learning in a comfortable, laid-back environment. The presenters are outstanding and the sessions are paced to give participants plenty of time to learn, experiment, and ask questions.

Each year the conference is held on the beautiful campus of Gould Academy in Bethel, Maine. This year's conference is scheduled for Monday June 29th to Wednesday July 1st. There's an inexpensive early arrival option for folks who prefer to arrive Sunday afternoon to be rested and prepared for Monday morning. Many people take advantage of this to avoid the early morning drive and to have a chance to "hang out" and network with other attendees.

One unique aspect of the TechnologyTeacher.ME conference is the fact that the registration fee is all-inclusive. Lodging, meals, banquet, snacks, and the terrific learning opportunities are all included. Participants wishing to stay on campus can do so for just \$399 and those who live locally can attend as a day participant for just \$365...everything included! Current ACTEM members can also use their professional development benefit to help offset the cost of the conference. David Trask, the conference director, recognizes that schools and individuals have unique situations when it comes to financial arrangements for the conference. Anyone who needs special arrangements, has a unique situation, or simply needs to ask questions, is encouraged to contact David. He'll do anything he can to help you or your staff to be able to attend.

The ability to slow down, relax and

talk with others is one of the things that makes this conference special. Time spent sitting around the table with your colleagues in the dining hall or relaxing in the evening allows attendees to openly share new ideas and strategies that can really add to the value of this professional development opportunity.

The sessions are still in development and some are yet to be added, but here are some of the sessions that we have on tap for this summer:

- Google Apps on Windows
 - Staying Safe in the Digital Age
 - The Arduino Hour! (hands on with Arduino)
 - Introduction to XenServer
 - Introduction to FreeNAS
 - Setting up and configuring pfSense
 - Getting to know iBeacon (new cool feature in JAMF)
 - Protecting yourself, your data, and your privacy for techs
 - Making Data Meaningful with Numbers
 - Amplifying Learning with GarageBand
 - Painting without the mess
 - Visual Notetaking
 - Documenting and Reflecting with iMovie (2 sessions...iOS and OS X)
 - iBooks Author
 - Reaching All Learners
 - Introduction to App Development with Swift
 - Coding the Retro Way!
 - Faraday Fridays (10 minute STEM)
 - Chromebook Management
 - (Lots of Chromebook hands-on stuff too!)
 - 3D printing for any grade level
 - Edison Robots and Sphero!
- And a few more coming soon!

Session descriptions will be available on the conference website as soon as they're finalized. For more information and to register, visit the TechnologyTeacher.ME conference website at <http://www.technologyteacher.me>. If you have any questions you can contact David Trask at copperdoggy@gmail.com.

Engaging Learners with Technology Yarmouth Summer Technology Course

Open to any teacher in grades K - 12

When: June 23, 24, 25
September 19, and October 24
8:00 - 3:00 (9/19 is 8:00 - 12:00)
Where: Yarmouth High School
Instructors: Mike Arsenault, Alice Barr, and Cathy Wolinsky

How can we engage students in meaningful learning through using a variety of technology tools and resources?

Participants will create activities, assignments and assessments that are designed to increase student engagement and learning using technology.

Teams of educators will develop methods to use technology tools and resources to engage students and learning settings across units and disciplines.

The design of this course will be to offer multiple sessions and choices for learning. Participants can enroll in the course for USM CEUs or recertification hours.

Sign up Here: www.smores.com/m7rsf Registration is \$275 Payable by PO, cash or check written to Yarmouth School Department.

CEU's are available through the Professional Development Center at USM for \$20 (37.5 hours for 3.8 CEU's). CEU's can not be paid for by PO. Must be paid (at the first class) with cash or check payable to University of Southern Maine.

ProAV Donates Robot to Gorham Schools

by Dennis Crowe

Morgan is a fifth grade student at Village Elementary School in Gorham that desperately wants to attend school, but has cancer. Due to regular chemotherapy, she misses weeks and sometimes months of schools.

In order to help Morgan achieve her desire to attend school regularly, her mother and teacher worked together to figure out a way for her to participate in class. Her teacher, Allison Penley, knew that she had an old iPad in the classroom and that Morgan had an iPad at home and so

Dennis Crowe and Crowe went looking for a solution. He thought that it would be an easy fix, but kept running into obstacles. Fate intervened with Crowe happened to mention Morgan's situation with the Northeast Sales Director of ProAV, Dave Bishop. ProAV is one of the leading hardware providers in the country, and Bishop told Crowe that he thought he might be able to help.

Bishop offered some suggestions, but felt that robots held the answer. Robots remain expensive, and the idea was tossed due to the prohibitive cost.

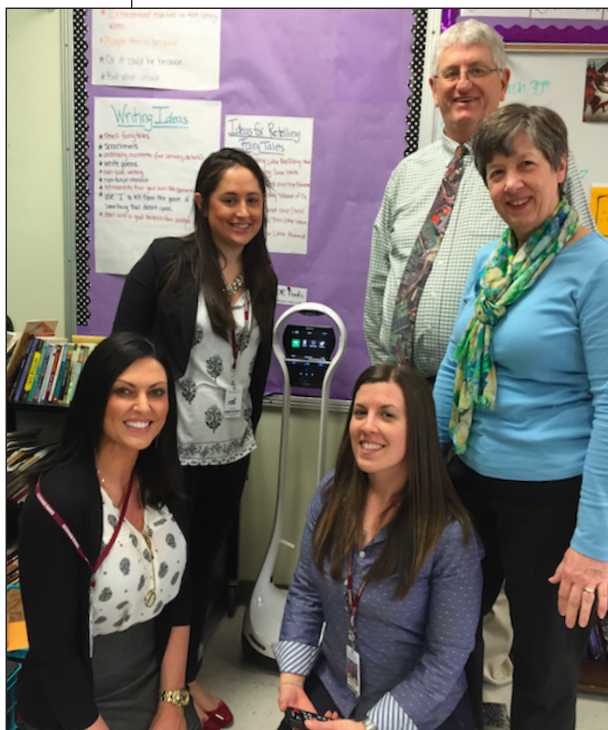
Bishop decided to check with VGo, New Hampshire robotics company, anyways. He had a feeling that they might be willing to load or let Gorham demo a unit.

VGo, however, did not have the capability to offer such a program, which did not sit well with Bishop. Bishop, moved by Morgan's story, decided to advocate a solution where ProAV would purchase a VGo robot and donate the robot to Gorham.

Four days later, the robot arrived in Penley's classroom, much to the excitement of Morgan's classmates.

Morgan has been in the class more frequently, but is facing another bout of chemotherapy in the coming months. She is very excited that she will be able to fully participate in the class due to ProAV's donated robot. Morgan will be attending Gorham Middle School next year, and the robot will allow her to virtually travel from class to class with her friends and classmates.

Morgan, Penley, and Morgan's classmates are beyond grateful to ProAV for their generosity. This magnanimous gift has allowed a student in a terrible situation to return some normalcy to her life during a trying time. Thank you ProAV!



Clockwise from front left: Amber Lane and Adrienne Blassioli of ProAV plus Dennis Crowe, Joanne Gauley, Allison Penley of Gorham Schools

they used Skype to communicate.

The problem was that the sound quality was often found wanting and was very frustrating to Morgan, so much so that it often brought her to tears.

Penley decided to reach out to Gorham's Technology Director,

STEM Conference Held at USM

By Dr. David Perloff

STEM Innovation Forum 2015 (www.stem-innovation-forum.org) was held on May 2, 2015 on USM's Portland campus in conjunction with the university's College of Science, Technology and Health. Sponsored by the Perloff Family Foundation, Maine Community Foundation and Maine Space Grant Consortium, the Forum offered a unique opportunity for Maine's K-12 teachers and students to showcase their approaches to hands on, project based learning as well as cutting edge curriculum approaches in the area of science, technology, engineering and math. Projects discussed included electric guitar building, the use of robotics to facilitate early childhood learning, near altitude ballooning, DNA barcoding and student developed video games for non-profits. The keynote speakers for the event were Kerry Gallivan and Shaun Meredith, co-founders of Portland based Chimani (www.chimani.com). Chimani's "Made in Maine" apps enable visitors to better plan, discover, navigate and socialize during their outdoor experiences.

According to Kathreen Harrison of St. George School in Tenant's Harbor: "The quality of projects and presentations was invariably stellar. Listening to this group of educators and students one would have no concerns whatsoever about the quality of education in our schools. These are teachers who are passionate about what they do and will work overtime to try new, promising programs out with their students – who will invest their intellect, energy and time into improving educational outcomes. The students at the forum were – one and all – invested, proud of their work, excited about learning."

A follow up conference is being planned for next year. Interested parties are welcome to contact Dr. David Perloff with suggestions for topics and presenters at daveperloff@gmail.com.

daveperloff@gmail.com.

Students from Nokomis Regional High School in Newport, ME present findings from an Environmental Impact Study relating to logging on school property.

Foundation Reaches 3D



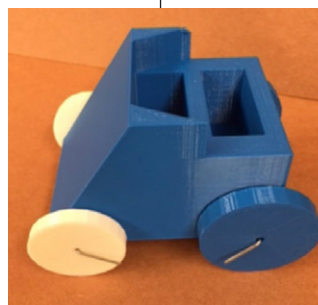
Printing Milestone

By Dr. David Perloff

As a key component of its PK-12 educational grant program (www.PerloffGrants.org), the Perloff Family Foundation has stepped up its support for project oriented technology education by providing 3D printers to selected Maine schools and programs. In May, the twenty-fifth 3D printer purchased by the foundation was delivered to New Sweden Consolidated School located near Caribou in Aroostook County where it is being used in conjunction with Lego Education Mindstorms robotics.

Regarding this milestone, David Perloff notes: "Maine was an innovator in providing classroom computing via its MLTI program. Our initiative is intended to broaden the use of classroom 3D printing, enabling more students to experience the engineering design-build process using state-of-the-art coding and fabrication resources.

According to David Trask, Technology Director at Vassalboro Community School: "We're analyzing and building Greek Temples and using things such as multiple hexagonal



columns merged together at 45 degree angles to create striated columns... also decreasing size stacks of thin rectangles and cylinders to create the steps on all four sides of the temple. We've learned that 3D modeling isn't as straight forward as one might think, but once you step out of the mindset and realize that everything isn't always as it seems, you can get pretty creative. It's fantastic problem solving for the kids."

In addition to 3D printers, the Perloffs have provided funding for makerspaces at Baxter Academy, Blue Hill Consolidated School and Noble High School, enabling students to build guitars, boats and furniture as well as to design and fabricate critical components for advanced ROVs, rockets and terrestrial robots. This June, Blue Hill Consolidated School's I.D.E.A. Center will take delivery of an Epilog laser cutter, partially funded by a Perloff Family Foundation matching grant. This state-of-the-art equipment will also be used by students at George Stevens Academy, increasing the potential for collaboration across middle and high school grade levels.

Example of a 3D printed, student-designed car for use in table top

physics experiments being conducted by students at Windham Middle School.

PHOTO JASON LANOIE, WINDHAM MIDDLE SCHOOL



Come Visit! Apple Distinguished Schools & Programs

By Jim Moulton

Every year, Apple recognizes schools and programs across the United States and around the world as Apple Distinguished Schools(ADS) and Apple Distinguished Programs (ADP) through Apple's Education Recognition Program (ERP).

Here in Maine we have a wonderful group of schools and programs that have been recognized through this program. Maine schools recognized as Apple Distinguished Schools are Middle School of the Kennebunks, Yarmouth's Harrison Middle School, Yarmouth High School, Bonny Eagle Middle School, Boothbay Regional High School, and Foxcroft Academy. Apple Distinguished Programs are Alfred Elementary School's iPad initiative, Auburn School Department's Early Elementary iPad Program, and MSAD 4's K-12 commitment to Recognized schools and programs meet criteria around Visionary Leadership, Innovative Learning and Teaching, Ongoing Professional Learning, Compelling Evidence of Success, and Flexible Learning Environment. They are innovators in integrating educational technology. As leaders in the education community, they enjoy collaborating and sharing their success with other educators who are eager to learn from them. Many schools publish their

success story as an interactive Multi-Touch book in the iBooks Store.

Working with the ERP schools and programs in Maine, the Apple Education Team is pleased to announce that plans are underway to design a series of no-

fully understand its power and how it has "come to be," these visits will feature a relatively brief informational session with school leadership and then provide opportunities for participants to get into classrooms where they can speak directly to teachers and students about how they are making use of Apple tools to support their work.

So first off, congratulations to all of Maine's recognized schools and programs. Secondly, thanks to the schools who will be opening their doors in the fall to allow their peers to come see what they are doing to work together as a school community to



Distinguished School

cost opportunities for folks to visit some of these schools and programs during the fall of 2015. Understanding how important it is to be immersed in an effective learning environment to



Student Data Principles

10 Foundational Principles for Using and Safeguarding Students' Personal Information

High-quality education data are essential for improving students' achievement in school and preparing them for success in life. When effectively used, these data can empower educators, students, and families with the information they need to make decisions to help all learners succeed.

Everyone who uses student information has a responsibility to maintain the privacy and the security of students' data, especially when these data are personally identifiable. Meeting this responsibility starts with limiting the data that are collected, stored, shared, and used to support student learning and success. Whenever possible, aggregated, de-identified data that do not identify individual students should be used to inform key policy decisions and

help improve services and systems that benefit students. In instances where using personal information is necessary, those few individuals who have access to this information to carry out their duties must handle it in a legal, responsible, and ethical manner.

As organizations that believe passionately in the effective use of data to support student learning and success, we offer this set of principles for safeguarding students' personal information. **In addition to complying with federal, state, and local laws, we believe educational institutions and anyone who has access to students' personal information should adhere to and build upon the foundational principles on the back of this overview.**

A coalition of national education organizations, representing a range of perspectives, experience, and stakeholders in the field, convened to develop these shared principles for safeguarding the personal information of America's students. See www.studentdatapinciples.org for a full list of supporters.

support all learners.

Information will be forthcoming as dates are established for these school visits. To be ready to take advantage of the opportunity these visits will provide, you may want to start a conversation around designing a visiting team and considering what grade level will be the most appropriate for you to visit.

To learn more about Apple's Education Recognition Program, please visit: <https://www.apple.com/education/apple-distinguished-schools/>

Are We Crazy? Maybe, but it's Working!

Madawaska's Laptop Summer Take Home Program Success

by Vincent Vanier

At Madawaska Middle/High School, we were faced with a variety of problems implementing our 1:1 laptop program. We had students that were ignoring the Acceptable Use Policy in our school. They did what they wanted with no regard for the school's rules. Our damage incidents were getting out of control. Even when we tried to collect on bills, we were often unsuc-

cessful. We also had more and more students participating in online classes and summer course work than in previous years. Something had to change.

We needed students to initiate a change in their own behaviors. We needed them to *want* to follow the rules with their laptops at school. The motivation was the laptops themselves.

In the fall of 2013, our administrative team worked with the student council to develop a policy which would promote positive behaviors regarding the use of laptops in our school. Students who met a few criteria would be allowed to continue taking laptops home over the summer months. The criteria was simple:

- Students can not have violations of our Acceptable Use Policy in the past school year.
- Student laptops must pass the end of year inspection. No damage to the laptop, charger, or case. If there is damage, it's sent away for repair and the student gets it back after everything is fixed (and paid for if necessary.)
- All outstanding bills must be paid.
- All laptops must be cleaned and up to date with the current version of software applied.
- A parental permission form must be signed.

What did this do for us?

- We saw a decrease in the number of Acceptable Use Policy violations by students. While it did not stop all users, it did appear to be enough incentive for most students.
- Laptop damage incidents decreased. This may be attributed to a variety of factors, but nonetheless it's headed in the right direction.
- We found ourselves able to collect on outstanding bills that we had trouble collecting.
- The tech team spent much less time updating machines

We believe:

- 1 Student data should be used to further and support student learning and success.
- 2 Student data are most powerful when used for continuous improvement and personalizing student learning.
- 3 Student data should be used as a tool for informing, engaging, and empowering students, families, teachers, and school system leaders.
- 4 Students, families, and educators should have timely access to information collected about the student.
- 5 Student data should be used to inform and not replace the professional judgment of educators.
- 6 Students' personal information should only be shared, under terms or agreement, with service providers for legitimate educational purposes; otherwise the consent to share must be given by a parent, guardian, or a student, if that student is over 18. School systems should have policies for overseeing this process, which include support and guidance for teachers.
- 7 Educational institutions, and their contracted service providers with access to student data, including researchers, should have clear, publicly available rules and guidelines for how they collect, use, safeguard, and destroy those data.
- 8 Educators and their contracted service providers should only have access to the minimum student data required to support student success.
- 9 Everyone who has access to students' personal information should be trained and know how to effectively and ethically use, protect, and secure it.
- 10 Any educational institution with the authority to collect and maintain student personal information should
 - a. have a system of governance that designates rules, procedures, and the individual or group responsible for decisionmaking regarding data collection, use, access, sharing, and security, and use of online educational programs;
 - b. have a policy for notification of any misuse or breach of information and available remedies;
 - c. maintain a security process that follows widely accepted industry best practices;
 - d. provide a designated place or contact where students and families can go to learn of their rights and have their questions about student data collection, use, and security answered.

CIPA Requirements for Schools

Schools that apply for E-Rate funding must comply with the Children's Internet Protection Act (CIPA) by filtering Internet services with a technology protection measure and implementing an Internet Safety Policy that was adopted at a public meeting. Documentation proving compliance must be retained for at least 10 years after the last day of the funding year in which the policy was relied upon to obtain E-Rate funding. The following elements are all required in order to be considered compliant.

Internet Filtering Technology Protection Measure

Requirement	A technology protection measure such as Internet filtering software
Description	A protection measure must be in place to block or filter Internet access by adults and minors to visual depictions that are obscene, child pornography, or harmful to minors (with respect to the use of computers with Internet access by minors). The filter must be applied to all computers, not just computers used by students. It can be temporarily disabled for adults engaged in bona fide research or other lawful purposes.
Acceptable Proof	<ul style="list-style-type: none"> • An invoice and proof of payment for the purchase of filtering equipment or software • Filter logs and screenshots of filter settings

Internet Safety Policy

Requirement	A formal, written Internet Safety Policy (which also may be known as an Acceptable Use Policy)
Description	<p>The Internet Safety Policy must address the following issues:</p> <ul style="list-style-type: none"> • Access by minors to inappropriate matter on the Internet and World Wide Web • The safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications • Unauthorized access including "hacking" and other unlawful activities by minors online • Unauthorized disclosure, use, and dissemination of personal information regarding minors • Measures designed to restrict minors' access to materials harmful to minors • Measures to monitor the online activities of minors • Education for minors about appropriate online behavior, including interacting with other individuals on social networking websites and in chat rooms and cyberbullying awareness and response
Acceptable Proof	<ul style="list-style-type: none"> • A copy of the approved Internet Safety Policy (with the adoption date listed on it) • Copies of each approved revision of the Internet Safety Policy (with the revision date listed)

Public Notice of a Meeting to Adopt the Policy

Requirement	Reasonable public notice that a meeting will be held to discuss and adopt the Internet Safety Policy
Description	The school or school district must provide reasonable public notice of a public meeting to adopt the Internet safety policy. For private schools, public notice means notice to their appropriate constituent group.
Acceptable Proof	<ul style="list-style-type: none"> • A copy of a newspaper notice announcing the meeting • A copy of a flyer that was posted to announce the meeting • A print out or screenshot of the school website or calendar announcing the meeting

Public Meeting to Adopt the Policy

Requirement	A public meeting to discuss and adopt the Internet Safety Policy
Description	The school board or the authority with responsibility for administration of the school must hold at least one public meeting to discuss and vote to adopt the Internet Safety Policy. For public schools, a meeting where public comment is permitted satisfies the requirement. If the policy is revised, a public meeting to approve the revision must be held.
Acceptable Proof	<ul style="list-style-type: none"> • A copy of the agenda <u>and</u> approved minutes from the meeting where the Internet Safety Policy was adopted • A copy of the agenda <u>and</u> approved minutes from each meeting where the policy was revised

If your school is selected for audit, you must have documentation to support your CIPA compliance. Failure to provide documentation may result in the loss of continued E-Rate funding and/or obligate your school to reimburse the full costs for Internet services for any fiscal year in which your school was found to be non-compliant.

over the summer months.

Many of our students have an intimate relationship with their school issued learning devices. The desire to use these machines over the summer months is something that can be used in your favor. We thought we were taking a big risk, but sometimes it takes big risks get big rewards. Our results were an overwhelming success.

For more information, read <http://goo.gl/Hy7R8b> or watch <https://youtu.be/FvVL42uQmSY>

ACTEM 2015

(continued from Page 1)

of the Google Apps for Education team. (For more information about these speakers, please see the March 2015 issue of Electronic Educator.) The workshop schedule will include sessions on diverse topics of interest to anyone who teaches with technology or supports those who do. Participants will choose from inspirational presentations, hands-on workshops, round table discussions, and other learning and sharing opportunities. Whatever your grade level, subject area, or computing platform may be, you are sure to learn about new tools, ideas, and practices that you can use and take back to share with colleagues in your school. And, as always, the program allows ample time to visit the exhibits and speak with vendors and representatives from organizations offering educational technology products and services.

The venue may be new, but registration costs will remain the same as last year:

Early Bird (before Sept. 25th): One day - \$95, Both days - \$170
Regular Registration (Sept. 25th - Oct. 9th): One day - \$120 Both days - \$225
Walk-in Registration (Oct. 10th - conference): One day - \$145 Both days - \$275

So start planning now to join us on October 15 and 16 and spread the word. See you in Bangor!

President's Message

(Continued from Page 1)

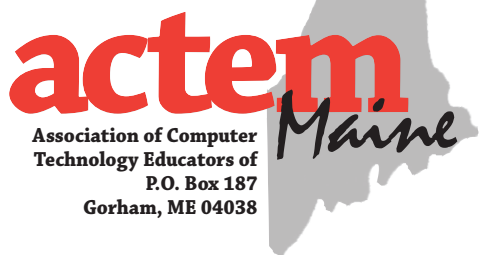
them were helpful to you besides the listserv. ACTEM put on another great conference featuring Chris O'Neal and Maine's own Richard Byrne. This year ACTEM was able to pull off a Northern and Southern Mini Conference in February. ACTEM members took their expertise and hit the big stage whether it was helping the DOE, working with Networkmaine, or working with the UMaine system on unifying some of their technology offerings to list a few. ACTEM members lead a majority of the webinars from New England ISTE (which people can still see at neiste.org). Gary Lanoie & Dennis Crowe spent time trying to get ACTEM's name beyond the normal circles by reaching out to groups like School Business Managers. And last but not least impact would be on the 66 members and counting who were able to seek professional development opportunities using their member benefit through ACTEM. As you can see we have been busy and that doesn't cover all of the great things that went on this school year.

Even though this was a good year for ACTEM, next year looks to be even better. At our summer retreat we are looking at the details in providing a badging system for teachers so they can be MLTI certified. Also at the summer retreat, the board will be looking at policies and procedures to set ACTEM up for new leadership as I will be stepping down in May 2016. #ACTEM15 is trying something different this year by moving the conference up to Bangor and the Cross Center. #ACTEM15 also will be featuring some great Maine presenters and of course a couple of dynamic national speakers, Jaime Casap and Leslie Fisher. Also at the conference, we will be showcasing a new award called ACTEM's ACHIEVE award (ACTEM Commends Highly Innovative Educators that Value Excellence). I've only touches on a few things that ACTEM will have their hands in next year but you represent what ACTEM can achieve with the different ways you use technology in education.

I hope you are ready to put the seat belt on and join us for an exciting 2015-16 school year.

Share & Recycle

After reading this issue of ACTEM's newsletter, please leave your copy in the faculty / staff rooms at your school so others may hear about the latest happenings and professional development opportunities in educational technology in Maine.



Association of Computer
Technology Educators of
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EVENTS

June 16-18 RISE to the Challenge Conference MAEA/COABE - Bowdoin College: <http://association.maineadulted.org/annual-conference>

June 28-July 1 ISTE 2015 - Philadelphia: <https://www.isteconference.org/2015>

June 29-July 1 Technology-Teacher:ME - Gould Academy <http://www.fossed.com>

July 7-10 Constructing Modern Knowledge - Manchester, NH <http://constructingmodernknowledge.com>

July 21-23 MLTI Summer Tech Institute - Bowdoin College, <http://www.maine.gov/mlti/events/institutes>

July 27-30 Campus Technology 2015 - Boston, MA <http://events.campustechnology.com/Events/CT-Summer-Educational-Technology-Conference/Information/HOME.aspx>

August 3-7 Technology for Innovation in Education - Tilton Academy, NH <https://sites.google.com/a/tiltonschoool.org/t4ie>

August 6 & 7 Empowered ED Institute, Grafton HS, Grafton, MA <http://www.cvent.com/events/empowered-institute/event-summary-c56fc5b8c07a-4c69ac36ca2f15345143.aspx>

August 24 & 25 Google Apps Maine Summit - Hampden Academy, <http://me.gafesummit.com>

August 26-27 Google Peak - York

October 15-16 ACTEM 2015 - Cross Insurance Center <http://www.edline.net/pages/>

ACTEM/MAINEducation_Conference

October 21st & 22nd MassCUE 2015 Annual Technology Conference - Gillette Stadium, Foxborough, MA - <http://www.masscue.org/pages/MassCUE>

October 25 & 26 CECA Fall Conference - Mohegan Sun, Uncasville, CT - <http://www.ceca-ct.org/ceca/Conference/>

October 28-30 LL2015 - iPads in the Primary Grades, Auburn, ME institute2015.auburn-schl.edu

December 1-3 2015 Christa McAuliffe Technology Conference,

Manchester, NH - <http://nhc-mtc.org/cms/>

MLTI Professional Development

Apple Solutions: <http://maine.gov/mlti/events/apple.shtml>

HP Solution: <http://maine.gov/mlti/events/hp.shtml>

Tuesdays 3pm
Tech Sherpas
<http://www.techsherpas.org/>

Thursdays 8-9pm
#EdChatME <http://www.greatschoolspartnership.org/edchatme/>

Southern Maine Integrators
Now TechConnectME - Join our Google+ Community

About Time and Beyond - join Susie Simmons and Mike Arsenault as they chat about all things technology integration in Maine (& beyond). <https://plus.google.com/events/c7t3atf0tsfcijk7qkankp7164s>