



RSU #22
Hampden Newburgh Winterport Frankfort
Technology Use Plan

June 2015

2015 - 2018

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Introduction:

Technology is an educational necessity. RSU #22 is making technology resources available for 'anytime learning' through distribution of laptops, desktops, tablets and peripherals. In addition, the district has committed to other technology purchases, such as projectors, software programs, hosted services and hardware.

The district will continually research and evaluate new technologies, pursuing those that meet our educational needs. Once selected, ongoing training will be provided.

In the fall of 2012, Hampden Academy went to 1-1 computing by implementing an iPad program. In the fall of 2015 Hampden Academy will continue 1:1 but will be switching to Chromebooks. Ongoing professional development for staff will be provided. In addition, the high school has 12 iMacs in the library and a computer lab of 26 iMacs.

Grades 7-8 will continue to participate in the MLTI project and 6th graders will also be in a 1:1 environment with Apple Macbooks during the school day (they will not be able to take them home).

The three elementary schools will be supplied with mobile carts of MacBooks and Chromebooks as well as four iPad tablets in each classroom. The district will continue to furnish all teachers with laptops either through the MLTI project or through local funds.

RSU #22's district website will continue to provide communication to our four communities and is currently being redesigned by a commercial company. In addition each school maintains a Facebook page to further the dissemination of information to parents and the public. The district utilizes School Messenger a mass notification system. Messages can be delivered to home phones, cell phones, work phones, email addresses as well as social media sites or texted to cell phones.

RSU #22 Vision Statement:

Education enables all students to learn the skills, acquire the knowledge, and develop the attitudes necessary for them to reach their potential as citizens who can meet the challenges of a changing global society.

We believe that:

- all citizens in our communities share the responsibility to educate our children and themselves.
- our schools are community support systems and should welcome and encourage all members of our communities to participate.
- our schools will have a supportive and empowering atmosphere for all students and community members.

RSU #22 Technology Philosophy:

- Technology is an essential tool for school transformation that leads to changes in how teachers teach and how students work and learn.
- An instructional staff well trained in the effective use of technology as an integral component of the curriculum and assessment provides optimal learning opportunities and support the individual learning needs of all students.
- The ethical use of technology is an essential element for an educated democratic citizenry.
- Highly effective organizations use technology to analyze and synthesize information and to streamline barriers that promote growth.
- Technology is an essential component that facilitates parents, teachers, and community members working together to optimize learning for our students.
- Effective and efficient use of technology requires ongoing, comprehensive professional development for all staff.

Community and Parental Involvement:

“Technology is an essential component that facilitates parents, teachers, and community members working together to optimize learning for all students.” This translates to one of the major goals of the three-year plan to “implement technologies that will allow for student, teacher and community collaboration.”

Middle school parent technology sessions continue to be important informational nights to ensure that students are able to bring their devices home as part of the MLTI project.

Our high school, Hampden Academy, has sponsored distance-learning opportunities to local community groups. In addition, technology mini courses are provided in collaboration with the Adult Education program.

RSU #22 prepares a newsletter (Link 22) that is mailed to the community, providing updates and informing community members of activities occurring at all schools. The newsletter is also available on the district website.

The district continues to offer a wide variety of technology courses, workshops, and distance learning through the adult education program.

Parents, of students in grades 6-12, have access to their child's records, grades and attendance via our student information server, PowerSchool.

The district website regularly updates public information for all community members, such as school board goals, plans, policies, the district budget, curricula, employee and employment information, health and safety updates, and links to each school's website.

RSU #22 utilizes a notification system. Messages can be delivered to home phones, cell phones, work phones, email addresses or texted to cell phones.

RSU #22 utilizes an e-mail system that enhances internal communication with staff, and external communication with parents/guardians and community members. Social media sites, such as Facebook, Edmodo, and Twitter are used for communication as well.

RSU #22 Technology Vision:

The fundamental goal of technology in the school program is to improve the quality of education. We believe that technology is an essential tool for school transformation. That leads to changes in how teachers teach and how students work and learn.

Having a well-trained instructional staff that can effectively use technology is an integral component. It provides optimal learning opportunities and supports varying learning needs of individual students.

The ethical use of technology is another essential element for an educated democratic citizenry.

Technology is a tool that enables parents, teachers, and community members to work together to optimize learning for our students.

Effective and efficient use of technology requires ongoing, comprehensive professional development for all staff.

RSU #22 Technology Goals:

To achieve the vision described in the statement above, we will provide the technological support necessary to continue to meet the following goals:

Goal #1: Promote and expand technology integration within our classrooms to support students academic achievement, provide our students' with 21st century knowledge and skills, and promote responsible digital citizenship.

- Continue to refine and implement a tech integration guide for students at the elementary, middle and high school level indicating minimum standards for technology use.
- Maintain the ratio of building technology integrators to classroom teachers.
- Continue to develop policies/guidelines for the ethical use of technology for both staff and students.
- Continue to refine an integrated K-12 curriculum guide that will promote responsible digital citizenship.

Goal #2: Continue to provide ongoing diversified professional development to increase all staff's skills in utilizing technology to enhance teaching and learning.

- Continually identify essential technology skills all teachers need to have to effectively integrate technology into the classroom.
- Review and update an online technology self-assessment tool that will allow staff and technology support to measure staff proficiency.
- Utilize self-assessment tool to develop a professional development matrix to identify training needs for staff.
- Through Penobscot River Education Partnership (PREP), offer a summer technology institute to provide technology professional development to staff.
- Based upon district goals and self-assessment, the integration team will assist teaching staff in creating a personal learning plan for technology.
- Continue to develop and implement online training for staff.
- Continue to promote partnerships with other organizations (other districts, University of Maine, non-profits) to offer technology based professional development opportunities.
- Share building resources to promote district level professional development for all staff.

Goal #3: Provide students and staff with increased access to technology in their schools and continue to upgrade and maintain existing technologies.

- Upgrade and replace peripheral equipment to augment the use of laptops and other personal devices.
- Select and expand digital library services to include digital books, iTunes U, iPad apps, online databases, etc.
- Maintain the district library circulation system.
- Continue Internet access through MSLN and the state e-rate effort.

Goal #4: Support online learning and virtual schools to expand opportunities and to eliminate barriers

- Continue to contract online courses via the Virtual High School.
- Develop internal capacity to offer online courses via the most appropriate distance learning platform.
- Continue Google district e-mail; document sharing, and calendar sharing and collaboration tool for all K-12 students (when appropriate) and staff.
- Continue to promote the use of Moodle to create blended instruction between the virtual and physical classrooms.
- Continue to encourage all staff to establish an online presence to support student learning.

Goal #5: Review and make appropriate changes to the K-12 technology curriculum to support the Maine Learning Results: Parameters for Essential Instruction and International Standards for Technology in Education (ISTE) standards.

- Continue to identify and implement ISTE technology standards for all students to be included in all computer courses.
- Create a computer competency requirement for all graduating students from the middle schools.
- Update the responsible digital citizenship education program for K-12.

Goal #6: Continue to develop and improve the district data systems: to support teaching and learning, to track and analyze student academic data, and to support our logistics infrastructure.

- Continue to build and refine our student data system to ensure progress for all students.

Goal #7: Review and expand the use of curriculum specific technology to support students in meeting the Common Core State Standards, the New England Grade Level Expectations, National Science Standards and the Maine Learning Results: Parameters for Essential Instruction.

- Upgrade instructional software on an annual basis in coordination with curriculum needs.
- Evaluate and utilize open source software whenever comparable to proprietary software.
- Provide an inventory of software that is available to staff.

Goal #8: Provide students with the ability to work seamlessly between school and home.

- Implement and support 1-1 computing programs as appropriate.
- Select technologies that are open and allow students to create, edit and share digital data at home and school.
- Explore 'flipped classroom' techniques that can be loaded on personal devices to be used at home.

Goal #9: Select and implement technologies that will allow for student, teacher and community collaboration.

- Continue use of document sharing, calendar sharing and collaboration tools for all K-12 students and staff.
- Promote and provide support for implementing web 2.0 technologies that allow for digital collaboration.

Identification of Necessary Technology:

All RSU #22 teachers are provided a MacBook, either under the MLTI program or through local funds. MacBooks will all be upgraded as needed.

K-5

There are 3 schools serving this population with mobile laptop stations and 4 iPads per classroom. The iPads will be added the summer of 2015 and staff laptops will be replaced within the next two years. In addition, each school will have an assortment of Mac laptops and Google Chromebooks. The numbers of these carts will increase, as fiscal resources are made available.

Each classroom has an Epson Brightlink Ultra-Short-Throw projector and Apple TV in it. We will be adding a Google Chromecast device to each of the projectors in years two and three of this plan.

6-8

RSU #22 has two middle schools serving this population and both participate in the MLTI laptop program for seventh and eighth graders. Six grade students are also provided with 1:1 district purchased Macbooks, however the devices remain at school.

Students and staff laptops will be upgraded in year two of this plan. Each classroom has an Epson Brightlink Ultra-Short-Throw projector and Apple TV in it. We will be adding a Google Chromecast device to each of the projectors in year one of this plan.

9-12

Hampden Academy has an Epson Brightlink Ultra-Short-Throw interactive projector and Apple TV in each classroom. We will be adding a Google Chromecast device to each of the projectors in year one of this plan

Web-based services

RSU #22 is moving many services and resources to a web-based model:

- PowerSchool – the student information system
- Google Apps – staff and student email and collaboration suite
- Freshdesk – cloud based help desk program is used to track trouble tickets
- Moodle - course management system
- Edmodo - secure social learning network for teachers and students

Web-based assessment and instructional

- support: Lexia – student phonics support
- Renaissance Learning – independent reading support for middle school students
- ALEKS – individual math programs
- SkillsTutor – reading, language and math support
- Assistments – individual and small group plans to support math
- NWEA (Northwest Educational Assessment), Measures of Academic Progress
- PLATO -individual courses for high school students
- VHS courses

Network Infrastructure

Each school and the central office have data networks. We select hardware to support open standards, to be reliable, secure and cost effective.

The physical layer for networking is a category five unshielded twisted pair cable in all schools, except the new high school which is category six unshielded twisted pair cable. Each classroom and student area has a robust wireless network available for connectivity.

In addition to the wired network, we also provide wireless computing at each school. These networks will need to be upgraded during the life of this plan.

A Wide Area Network for ease of asset management and service will be studied and implemented.

Video conferencing equipment (Tandberg) will be installed in 2012-2013 for grades Pre K-8 in our Winterport schools.

POTS (telephone services) The elementary schools and one middle school are dependent on Centrex system at this time. VOIP (voice over IP) is in use at the high school and one middle school. The Centrex based school will need to be moved to VOIP during the next couple of years.

Technology usage and training will continue to be increased to fully support teaching and learning. Teacher training programs continue to be implemented toward meeting NETS (National Educator Technology standards).

Collaboration with Adult Education and Adult Literacy Providers:

RSU #22's Adult Education program is located in our Hampden middle school, including the adult education district personnel, their equipment and software.

Integration and direct technology instruction through the Adult Education program is offered.

Course listings are available on the district web site and also distributed through the mail.

District technology resources are made available to the Adult Education department.

Strategies for Improving Academic Achievement and Teacher Effectiveness:

Title IIA funds are used to provide staff technology training.

Schools participate in academic data analysis for the North West Educational Assessment, and provides technology support for the district curriculum office.

District technology integrators provide resources for both staff and students. Their goal is to effectively integrate technology into the academic classroom at all levels in the system.

Through formal workshops, release time opportunities, and one-to-one contact, teachers receive support to become comfortable with their own use of technology. Teachers are also supported to utilize it effectively as part of the learning for the classroom.

All teachers record the districts local assessments on PowerSchool. Middle and high school teachers record all assignments and grades through an electronic grade book that syncs with PowerSchool. Parents have access to these scores and can participate with the teachers in supporting their children's academics.

The administrative council, technology integrators and other teachers are utilizing various assessment technologies to develop professional learning communities:

- (1) What is it we want all students to learn?
- (2) How will we know when students have learned the material?
- (3) How will we respond when students are not learning?
- (4) How will we respond when students have learned the material?

The administrative council is using various technology-based assessments (NWEA, DIBELS, PLATO, ALEKS, IXL, Fitnessgrams, Compass Learning and Lexia) to measure the academic success of all students and be proactive, instead of reactive, to improving academic achievement.

Integration of Technology with Curricula, Instruction, and Assessment:

The technology integration specialists work with classroom teachers to develop and implement appropriate technology solutions for the classroom.

The computer technicians provide a stable network environment and ensure our computing environment is functional at all times.

RSU#22 provides steps to continually expand integration and to document teacher and student progress towards meeting national technology standards.

Teachers are supported in using technology as part of instruction by the technology integration specialists assigned to each building.

The district will continue to utilize and expand various Web 2.0 technologies to assist teachers in creating technology based learning solutions that promote 21st century skills.

The district will be implementing a collaborative suite of online tools. Courses will utilize online textbooks for content in addition to traditional textbooks.

The high school offers VHS courses for students to take online in a variety of content areas.

District assessment data is maintained in PowerSchool and available for analysis to improve curricula. All schools use the PowerSchool system to record and track classroom based assessments. Parents with students in grades 6-12 have the ability to monitor their student's academic progress via the district online Powerschool portal. Teachers in grades K-5 utilize EMPOWER (Standards based grading) student tracking software.

The district uses the Northwest Evaluation Association Measures of Academic Progress to assess students in grades 2-9 in math and reading. The data has proven invaluable to monitor whether students are meeting national requirements in reading and math. The district will continue using the NWEA MAP test to assess students for the duration of this technology plan.

Technology Types and Costs - Coordination with Funding Resources:

Like other districts in Maine, RSU #22 has seen major budget constraints in the last few years. Our rural district is a 62% eRate receiver. There are few businesses in the district, making collaboration difficult.

Although our communities have been extremely supportive of our budgets, it is becoming more difficult to maintain our programs. In the past, we have been able to use grants to supplement our technology purchases. Currently we have no new grant monies to supplement our technology needs.

RSU #22 does collaborate with surrounding districts for purchases and professional development through the Penobscot River Educational Partnership as well as ACTEM.

TECHNOLOGY TYPE, COST, AND FUNDING SOURCES 2015-2018

Objective	Projected	Costs	Funding Source
9-12 Staff devices	2015-2016	\$99,500	District Lease/Loan
9-12 Student 1:1 devices	2015-2016	\$249,000	District Lease/Loan
Electronic Mail and archiving	Ongoing	\$0.00	Local Budget
Hardware Maintenance	Ongoing	\$40,000	Local Budget
Misc. Hardware and peripherals	Ongoing	\$60,000	Local Budget
Software and apps	Ongoing	\$20,000	Local Budget
Emergency notification system	Ongoing	\$4,140	Local Budget
Internet access for schools	Ongoing	\$2,300	Local Budget
Maintain/upgrade Wireless	2017-2018	\$50,000	Local Budget
Upgrade POTS to VOIP	2016-2017	\$40,000	Local Budget
6 th grade student 1:1 devices	2016-2017	\$25,000	Local Budget
K-6 Staff device	2016-2017	\$99,500	District Lease/Loan
K-6 Student Mobile carts	Ongoing	\$25,000	Local Budget
Print server replacements	Ongoing	\$1,000	Local Budget
Firewall replacements	2017-2018	\$10,000	Local Budget
Upgrade district iMacs	2017-2018	\$90,000	District Lease/Loan

Supporting Resources:

RSU #22 technology staff internally handles most repairs and maintenance. It is a cost effective method with faster repair time.

RSU #22 has moved to a lease for all printer and copier assets, and maintenance. It allows the district to budget with more reliable numbers.

District personnel evaluate the needs, and include the necessary resources in the budgeting process, to meet all goals. Printing, scanning, digital cameras, desktops, laptops, repairs and supporting software are included in the budget.

District Programs:

The libraries have automated software systems available within each school that are accessed through school-wide networks. In 2011, we upgraded the system to a hosted Atrium based setup.

Our Student Information System (PowerSchool) was upgraded to a hosted solution. New versions of the server software no longer operate on Mac OS. Based on the recurring cost of hardware, a decision was made to move to a hosted solution.

School Messenger is used for emergency alerts.

Online assessments include the Northwest Evaluation Association, NWEA.

Steps to Increase Accessibility to Technology:

RSU #22 recognizes the importance of increased accessibility for all students.

We provide software and hardware training for staff and students.

We strive to purchase technology where and when needed (expansion of one-to-one initiatives and placement of laptop carts, projectors, and web-based software solutions).

Working directly with the Special Education Department and individual I.E.P.s, we strive to find the best solution for each student.

Promotion of Various Curricula and Teaching Strategies that Integrate Technology:

The District has adopted the research-based National Technology Standards for Teachers (ISTE) to define skills that teachers should utilize to effectively integrate technology into the curriculum.

Technology integrators in each building work with teachers to improve these skills, and many teachers establish technology goals as part of the district's supervision model.

Technology integrators develop teaching strategies that are aligned with the ISTE standards.

The administrative council ensures that the focus on technology integration aligns with and directly supports the Common Core State Standards, the Maine Learning Results: Parameters for Essential Instruction and ISTE standards.

The District utilizes technology to report, analyze and create action plans based on student assessment in reading and math to further support the Maine Learning Results and NCLB standards.

Workshops and professional development opportunities are offered on a regular basis. Staff are encouraged and supported financially to attend professional workshops outside of our district.

Professional Development:

Site technicians, staff and the technology coordinator provide one on one training. We promote a teach-the-teacher model so individuals can be trained throughout the year.

Staff members make use of teacher resources via our web pages, portaportals and online courses.

The district supports staff attendance at the Association of Technology Educators in Maine (ACTEM) annual conference and state sponsored learning initiative sessions.

Coursework is supported for staff working toward recertification.

The district supports staff attendance at the PREP Technology Academy as well as ACTEM conferences, regional PowerSchool conferences and in-state Google training.

Training from Apple can be coordinated at any time for any area of interest at no cost. Chromebook training is also available to RSU #22 personnel.

Informal user groups also meet.

Innovative Delivery Strategies:

To maintain equity and access, methods of delivering knowledge are continually being researched and updated. Strategies being used include:

- Online learning through Moodle
- Web 2.0 tools -wikis, blogs, etc.
- Interactive whiteboards
- Interactive projectors
- Virtual High School programs
- Edmodo Secure Social Learning Network for teachers and students

- Google Apps for collaboration, staff email, teacher webpages and blogs for communication and feedback.
- Video Conferencing is available at 4 of the 6 schools and we should have a fifth added in the coming year.

Accountability Measures:

District direction and decisions are based on data. Administrators, parents and staff constantly assess progress. Each student and staff member agrees to an Acceptable Use Policy and understands the purpose of the district technology. This plan will be reviewed by the Maine Department of Education every 3 years. Real accountability for technology should be measured through student learning. Although this is a difficult measure to verify, teachers and administrators will recognize increased technology successes through:

- students using technology continually and not just as "specials" during the school day
- teachers attending trainings and becoming comfortable with changing landscape of teaching using technology
- teachers extending "classes" through online courses and websites
- collaborating across grade levels