KITTERY TECHNOLOGY PLAN

Kittery School Committee approval: July 12, 2016

Plan Authors:
Information Technology Department
District Technology Team
Technology Lead Teachers

MITCHELL PRIMARY SCHOOL
SHAPLEIGH MIDDLE SCHOOL
R.W. TRAIP ACADEMY
DISTRICT CENTRAL OFFICE

KITTERY SCHOOL DEPARTMENT

INFORMATION TECHNOLOGY DEPARTMENT

Director of Curriculum, Instruction and Technology	Marilyn Woodside
District Data Manager	Nancy Embry
Systems Administrator and R.W. Traip Technologist	Donal Harkin
Shapleigh Middle School Technologist	Seth Cole
Mitchell Primary School Technologist	Anna Leijon-Guth

TECHNOLOGY COMMITTEE (*aka BLUE SKY*)

Joe Bassett- Special Education Teacher, Shapleigh Middle School
Kim Bedard- School Committee Member
Doug Bennington- 5th Grade Teacher, Shapleigh Middle School
Doreen Carson- Math Coach, Shapleigh Middle School
Kristina Clements- English Teacher, R.W. Traip Academy
Seth Cole- Technologist, Shapleigh Middle School
Donal Harkin- Systems Administrator
Anna Leijon-Guth- Technologist, Mitchell Primary School
Paul Marquis- Chemistry Teacher & Kittery Parent, R.W. Traip Academy
Lauren Roy- ELA Teacher, Shapleigh Middle School
Ruth Sallade- 1st Grade Teacher & Kittery Parent, Mitchell Primary School
Kerry Waters- 4th Grade Teacher, Shapleigh Middle School
Suzanne Watson- Math Teacher, R.W. Traip Academy
Amy Marie Wilson- 3rd Grade Teacher, Mitchell Primary School
Marilyn Woodside- Director of Curriculum, Instruction and Technology

TECHNOLOGY TEACHER LEADERS

Paul Marquis- R.W. Traip Academy
Suzanne Watson- R.W. Traip Academy
Doug Bennington- Shapleigh Middle School
Lauren Roy- Shapleigh Middle School
Ruth Sallade- Mitchell Primary School
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WEBMASTERS

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The expanded use of technology in all grade levels and departments has made the instructional and administrative use of computers an important and highly visible Kittery School District initiative. Technology is an integral part of District operations, and is often the teaching, learning, and increasingly, the assessment platform for our students.

1. Community and Parent Involvement

The Kittery School District continually strives to increase parental and community involvement in our schools. We understand the critical role families play in the overall success of our children and strive to provide families with as much timely and pertinent educational information as possible to assist them with their children's school experience. To that end, technology is an essential tool in involving our parents and the community in a robust system of ongoing communication. We encourage both giving and receiving input and feedback.

Kittery maintains a district web site as well as school sites to promote involvement and increase communication. We also utilize Infinite Campus as our student information system, allowing parents and students to view students' grades, attendance, and schedules. In addition, our High and Middle schools have implemented the use of JumpRope as a tool to connect students and parents to the competencies in our standards based educational system. Kittery uses School Messenger as a mass notification service; this tool is used to contact parents regarding upcoming events and emergencies.

The Kittery School District uses a variety of survey tools to gather feedback from the community, and the use of Google Apps for Education has made it possible for faculty to create their own surveys to collect information from parents and students alike. We have used these tools to collect input and feedback about a variety of topics, including early release/late starts and budget priorities. Many teachers have created blogs and also use Moodle and other applications that allow interaction and involvement with parents and students beyond the school walls.

All school committee meetings are broadcast over the local cable channel as are various school events. In addition, Kittery Community and Adult Education offers multiple computer/technology related courses. It is this growing communication and collaboration with families and the community that keeps the Kittery School District a communicative hub for the district and town.

The Kittery Technology Committee (also known as *Blue Sky)* meets throughout the school year to address the continuous planning and development of technology-based learning in the district. In addition, each school has its own

technology team that meets monthly and coordinates with the district committee. Members of the district committee include the Director of Curriculum, Instruction & Technology, a School Committee member, teachers/parents from each school, and technologists. As needed, meetings may include other district personnel who should have input on technology-related planning and decision-making. The use of parent technology

nights and surveys are also employed as a means of gathering information. Surveys are also used to determine professional development/training needs among the staff.

2. Vision

The Kittery School District has a longstanding, continuous commitment to providing our students with an outstanding education. To that end, we seek to achieve and maintain best practices in using technology to support the educational experiences of all students. The use of technology should be seamlessly integrated and embedded into the curriculum and into our everyday practices of teaching and learning, communicating, and collaborating. We believe that all members of the school community should be able to:

- Use appropriate technology as a tool for teaching, learning, and assessment.
- Have access to appropriate technology throughout the District, including classrooms, labs, libraries, and offices.
- Use technology to empower learners by giving them tools for designing, communicating, and collaborating.
- Use technology to allow all users to curate information and solve problems.
- Recognize the ethical and legal responsibilities and opportunities of learning and working in an increasingly interconnected community.

In order to realize this vision, we must continually respond to changes in technology by maintaining a robust technology infrastructure, providing technical and financial support, investing in professional development for all staff, and providing a wide variety of educational opportunities for all students.

3. Goals

The International Society for Technology and Education (ISTE) is the leading professional organization for technology teachers and educational technology leaders and provides a framework for the Kittery Technology Plan. ISTE has published technology standards that describe technology competencies for students, teachers, and administrators. These standards specifically address *"What students should know and be able to do to learn effectively and live productively in an increasingly digital world."* The latest standards shift the focus from technology skills to the changing roles of students as they increasingly use technology in their daily lives. These roles include:

- **Empowered Learner**: Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning Goals.
- **Digital Citizen:** Students recognize the rights, responsibilities, and opportunities of living, learning and working in an interconnected digital world, and they act in ways that are safe, legal, ethical, and selfaware.
- **Knowledge Curator:** Students make meaning for themselves and others by critically curating resources through the use of digital tools.
- **Innovative Designer:** Students use a variety of technologies within a design process to solve problems by creating new, useful, and/or imaginative solutions.
- **Computational Thinker:** Students identify authentic problems, work with data, and employ algorithmic thinking to propose and automate solutions.

- **Creator and Communicator:** Students communicate clearly and express themselves creatively for a variety of purposes using the tools, styles, formats, and digital media appropriate to their goals.
- **Global Collaborator:** Students use digital tools to broaden their perspectives, increase empathy and understanding, and work effectively in teams.

These standards are reflected in the goals presented in this plan. The Kittery School District has determined four areas of focus to improve student academic achievement using technology. The areas of focus are designed to innovatively and effectively integrate technology into instructional and support practices and are reflective of ISTE standards.

Goal 1: Teaching and Learning
- Access to technology provides opportunities for students and teachers to combine whole group instruction, small group collaboration, individual practice and online interaction both at school and at home.
- Learning opportunities are personalized and student-centered with choices about demonstrations of learning.
- Students learn to select the tool that will add value to the process of learning with an emphasis on innovation and creativity.
- Students use technology to gather and analyze data, create graphics and models to solve complex problems, demonstrate critical thinking and make connections between content areas.
- Learning settings include use of the Internet, collaborative formats like Google Drive, websites, blogs, wikis and digital content similar to that used in real-world work settings.
- Teachers seamlessly use technology in their instruction to explore key curriculum concepts and engage students to deepen their learning experience.
- Teachers collect and analyze data for informed conversation around student achievement that ultimately results in informing instruction and improving student learning.
- Teachers and students have access to an abundance of information and tools that improve productivity and efficiency.
- Technology supports the connected work of faculty. Teachers have a similar type of laptop for access to shared documents, digital portfolios, survey tools and online media tools through Google Apps for Education.
- Technology gives us access to changing the way the time students and teachers spend in school. Examples are the "flipped classroom" and online lessons and materials that provide access to learning guided by teachers who monitor student learning.

Goal 2: Professional Development
- Continuous improvement of instruction is the basis for professional development as well as self-directed learning through webinars, online courses and professional learning networks.
- Professional development enables teachers to succeed in a technology-rich, global society and to foster individualized and collaborative learning opportunities.

- Professional development provides opportunities that will develop in our staff the ability to understand and utilize technology as a productivity, communication, and instructional tool to support learning.
- Teachers share ideas with colleagues through professional learning networks and shared documents and create web-based (digital) materials for course content and connecting with families.

Goal 3: Enriching Communication and Collaboration
- Technology enriches communication and collaboration between students, staff, parents, and the global community.
- Schools post timely information and updates; parents access teacher websites/classroom blogs and view student academic progress; classes share globally through Wikis and Skype.
- Faculty web pages, course calendars and classroom blogs keep parents and families connected to the learning in the classroom.

Goal 4: Infrastructure and Support
- Infrastructure is designed for anytime learning for students and teachers.
- Provide quality personnel to support and coach district staff to successfully use technology in their daily practice.
- Build a sustainable infrastructure that provides robust and secure technology access and support for students, teachers, staff and the community.
- Fiber based wireless networks in all schools are updated, robust and capable of supporting multimedia.
- Provide access to data and analytical tools for teachers and administrators to make informed, data-driven decisions that improve instruction and student learning.
- The district data manager assists in creating the means to analyze performance and changes over time (charts, reports, logs, etc).
- Teams of teachers are supported in the process of analyzing data and determining appropriate action.
- Provide high-quality, customer-oriented, technology support to district schools and central office to facilitate teaching, learning and operational goals.

4. Identify Current and Necessary Technology
Kittery Schools use a cycle of assessment and purchasing that reflects a K-12 perspective. Innovations in hardware and networks are matched by professional development and expectations about the usage of technology in all aspects of teaching and learning as well as in district operations. As we continue to maintain, update and increase technology we will take into account classroom designs, teaching styles, and student needs for the coming years and remain mindful that educational technology's primary role is to deliver and enhance instruction and learning to heighten the classroom experience and improve student achievement.

Safety in the Schools and in Central Office
- Secure access into the schools with passkeys

- CopSync (September 2016)
- Perimeter video cameras reporting back to the police department in real time
- In-school Motorola communication
- In-house firewall (schools)
- AED HeartStart

<u>Mitchell Primary School Current Technology</u>
- SmartBoards in all classrooms (23) (7 are the 600 series, 11 are the 800 series, and 5 are LightRaise)
- 3 Apple TVs
- All classrooms have document cameras
- All classrooms have mounted projectors
- All teachers and administrators have 13" MacBook Air laptops
- Many educational technicians have MacBooks (2007 or 2008) and/or access to the lab computers
- 24 21.5" iMacs (2009) in a lab setting
- 4 laptop carts totaling 100 laptops. 75 are from 2006 and 2008; 25 are from 2010.
- One iPad cart of 22 iPads (2011)
- 2 sets of 12 iPads
- 3 HP Pro Curve switches
- Connected POS terminals in the cafeteria
- Apple Xserve; OSX Leopard
- Cisco wireless network
- Fiber network with speeds up to 1000mbs
- Canon combined copier/printers (Konica Minolta beginning in July, 2016)

<u>Mitchell Primary School- Looking Ahead</u>
- Upgrade 25 (of the 100) laptops and lab to ElCapitan
- Replace the 600 series SmartBoards with LightRaise (continue to increase access to updated, interactive technology in all classrooms)
- Continued support of software subscriptions and email accounts
- New copier/printers (Konica Minolta in July, 2016)
- Updated switches
- Student laptops- need plan to replace; may need to supplement with Chromebooks (increase computer access for all K-3 students)
- Plan to phase out the computer lab; there about two years remaining on the current equipment
- Acquire additional iPads over time so that each classroom has an iPad center
- Communications network that includes phone, voice over IP, intercom system, updated switches, video camera in the school itself.
- Update wireless network in the next two years
- Continue to provide appropriate network equipment upgrades to keep pace with increased network traffic and multimedia
- More hands on (makerspace)
- Students- additional "creation" pieces (iMovie, newscast, etc.)
- Continue to use technology for a more integrative approach to learning

- Coding at each grade level (code.org)

Shapleigh Middle School Current Technology
- 1-1 MacBook Air in grades 7-8 (11")
- 1-1 2009 MacBooks in grades 4-6
- All faculty and administration have MacBook Airs (13")
- All educational technicians have 2009 MacBooks
- All classroom have Apple TVs
- 10 iPads
- 10 desktop computers in the library (older iMac models)
- 15 PCs that run robotics software
- 18 document cameras
- 20 interactive whiteboards (600 series, 800 series, LightRaise interactive projectors, interactive displays)
- Science probes
- Electronic microscopes
- iPad Pro in science classroom
- All classrooms have projectors
- 3HP Pro Curve Switches
- 27" iMac and MacBook Pro for Data Manager
- Apple Xserve; OSX Leopard
- NutriKids server- Windows 2012
- Cisco wireless network
- Fiber network with speeds up to 1000mbs
- Canon combined copier/printers (Konica Minolta beginning in July, 2016
- Connected POS terminals for the cafeteria
- MLTI caching server
- 48" display used for announcements in the cafeteria

Shapleigh Middle School- Looking Ahead
- Acquire one full classroom set of iPads
- Purchase one – two LightRaise projectors a year for the next three years to replace the 600 series interactive whiteboards (contine to increase access to updated, interactive technology in all classrooms)
- Create a plan for upgrading presentation technology
- Provide interactive displays in the art and instrumental music rooms
- Create a plan to replace the grade 4-6 MacBooks (either a buyback in 2017 or purchase Chromebooks); continue to support 1-1 student computing
- Repurpose the grade 4-6 MacBooks for the educational technicians
- Purchase 2 additional laptops carts
- Replace the 3D printer
- Purchase iPad Pros for the 7th and 8th grade science teachers
- More hands on (makerspace)
- Continue support of software subscriptions and email
- Communications network that includes phone, voice over IP, intercom system, updated switches, video camera in the school itself.

- Update wireless network in FY 17
- Continue to provide appropriate network equipment upgrades to keep pace with increased network traffic and multimedia

R.W. Traip Academy Current Technology
- 1-1 MacBook Air 11" laptops for students 9-12
- MacBook Air 13" laptops for all faculty and administrators
- MacBook for each educational technician
- 20 21" iMacs in a lab setting
- 27" iMac for production
- Tandberg
- 20 20" iMacs in the adult education lab
- 3 WACOM pro tablets for art
- LCD projector in every room in the school
- Multiple types of interactive classroom displays (SmartBoard, ENO, Promethean)
- Science probes
- iPads for math teachers
- iPad Pro for the science department
- 4 document cameras
- Apple TV in every classroom
- Connected POS terminals for the cafeteria
- 48" display used for announcements in the atrium
- New, state of the art audio system in the gymnasium/auditorium (FY17)
- 2 professional video cameras
- PCs for robotics program
- MultiFunction printers
- Windows 2012 server
- Xserve
- MLTI caching server
- 6 switches
- Moodle and Filemaker data server

R.W. Traip Academy- Looking Ahead
- Communications network that includes phone, voice over IP, intercom system, updated switches, video camera in the school itself
- Update wireless network in FY17
- 9-12 laptop replacement (MLTI)
- Continue to increase access to updated, interactive technology in classrooms as needed
- Laptop replacement for faculty, administration and educational technicians
- Rewire school with Cat 6E cable
- In-house Digital Media Server
- Polar GoFit student health monitoring system
- Complete the intra district network
- Theatrical lighting system for gym/auditorium
- Video system for gym/auditorium

- CNC shopbot machine
- Continued support of software subscriptions and email
- Continue to provide appropriate network equipment upgrades to keep pace with increased network traffic and multimedia
- Students at all levels understand how to code.
- Students at all levels develop computational thinking skills through authentic problem-solving experiences.

Kittery School District Central Office- Current Technology
- MacBook Air 13" laptop for administrators (3)
- iPads for administrators (3)
- LCD projector in the conference room
- Apple TV in the conference room
- Teleconference phone in conference room
- MultiFunction printers
- 4 21" iMacs for office staff/superintendent
- 1 27" iMac for administrative assistant
- Thunderbolt display
- 1 Lenovo ThinkPad for human resources assistant
- 1 Lenovo Desktop tower w/21" display for payroll clerk
- 2 401 HP laserjet printers
- 1 Gig switch
- Tyler Tech Munis secure routing for accounting software
- PCs for Business Manager and Human Resources Manager (town purchased)

Kittery School District Central Office- Looking Ahead
- Communications network that includes phone, voice over IP, intercom system, updated switches
- Update wireless network in FY17
- Laptop replacement through MLTI- administration
- Rewire building with Cat 6E cable
- Continue to provide appropriate network equipment upgrades to keep pace with increased network traffic and multimedia

5. Collaboration with Adult Literacy Providers

The Kittery Adult Education department provides the community with multiple opportunities to expand their knowledge and enhance their skills and is supported by the Kittery School District's Information Technology team in a number of ways
They work together to design and suggest course offerings, and the Adult Education program uses school lab facilities, computers, phones, email, website, network, classroom and office space to deliver instruction and perform their daily operational functions. In addition, the Rice Public Library in Kittery offers adult services that include ebooks, audiobooks, wireless access and computers.

6. Strategies for Improving Academic Achievement and Teacher Effectiveness

With the support of the Information Technology Department, the K-12 Technology Team (aka *Blue Sky)*, building technology leads, and a spirit of collaboration, Kittery teachers are expected to exhibit technology standards for teachers as developed by ISTE (International Society for Technology in Education). These are digital age standards that serve as a guide to how technology is used in teaching and learning to improve academic achievement.

1. Facilitate and Inspire Student Learning and Creativity
   Teachers use their knowledge of the subject matter, teaching and learning, and technology to facilitate experiences that advance student creativity and innovation in both face-to-face and virtual environments.

2. Design and Develop Digital Age Learning Experiences and Assessments
   Teachers design, develop and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in technology standards for teachers.

3. Model Digital Age Work and Learning
   Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

4. Promote and Model Digital Citizenship and Responsibility
   Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practice.

5. Engage in Professional Growth and Leadership
   Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

Using these standards, the district implements the following strategies to improve the capacity of all teachers to integrate technology effectively into curriculum and instruction:

● Support administrators, teachers, support staff, and students with the use of technology for educational and administrative purposes.
● Identify innovative educational and administrative technologies, and inform the teachers and administrators of emerging practices that could benefit our students.
● Maintain the budget and support for up-to-date technology devices in the hands of all faculty and students to support the curriculum.
● Offer professional development during varied times and in a variety of formats (summer; after school; online; informal sessions, embedded with on-site, as-needed support, etc.).

- View assistive technology devices as important instructional resources for students receiving learning support.
- Provide repair and maintenance for all equipment.
- Connect data management to teaching and learning.
- Manage network and upgrades as needed to support robust access.
- Provide adequate technology staff for administrative, technical and instructional support.

7. Integration of Technology with Curricula, Instruction and Assessment

The Kittery School District offers a student-centered learning environment supported by teachers who work to improve instruction and assessment as they connect to the curricula. Technology in the Kittery schools is supported by the Information Technology Department, members of the Technology Team (aka *Blue Sky)*, technology lead teachers at each school, and a spirit of collaboration.

Mitchell Primary School Grades K-3

Elementary students engage in curriculum-related technology activities designed by the classroom teacher, library media specialist, and/or technologist. During the early grades, students become engaged in a number of developmentally appropriate computer projects, beginning in Kindergarten. Computers are used for problem-solving activities, creating simple publishing projects, painting and drawing, and slide show presentations. iPads are used to support early literacy and mathematics, and in stations in each classroom. As students progress through the grades, they complete projects and participate in technology-based activities that are more complex. Through the incorporation of laptops, iPads, the computer lab devices and on-line tools (Google Docs, and videoconferencing, for example), students develop their technology skills and dispositions through collaborative inquiries. They learn how to create multimedia presentations and how to use the Internet as a tool for research. Students also have access to a variety of subscription-based online reference materials and software. The goal is for students to leave Mitchell Primary School with the feeling that they can find, evaluate, and present information, and the confidence that they can use technology independently.

Shapleigh Middle School Grades 4-8:

Shapleigh Middle School's technology program is part of a coordinated effort that continues from the elementary level and is followed by the high school. Students continue to develop their skills of collaborative inquiry and to complete projects and participate in technology-based activities that are more complex. Teachers provide students with, and prepare them for, a broad range of computing experiences and approaches. In addition, middle school students are provided with instruction in essential digital literacies like digital citizenship and research skills, building on their experience in the elementary school. Students and staff have access to 1-1 computing using MacBook Airs and/or MacBooks, thus ensuring seamless access to tools and resources. The approach at Shapleigh Middle School is one of creative computing, with the goal of developing a student's capacity to learn how to apply a set of tools to the construction of meaning, and to finding solutions to authentic problems.

<u>**R.W. Traip Academy grades 9-12**</u>:
Building on the foundations developed in elementary and middle school, students at Traip Academy have the opportunity to use technology to empower their learning independently and within the context of specific or cross-curricular units of study. Students are provided a variety of digital tools and specialized applications emphasizing research, problem solving, communication and design. Students and staff have access to 1-1 computing using MacBook Air laptops, thus ensuring seamless access to tools and resources. Through a variety of learning management tools (Google Classroom, Moodle, Turnitin) teachers supplement classroom instruction with resources that allow students to review and practice at a customized pace. These learning management tools also allow teachers to digitize materials for students, and provide a more organized and coherent place for student and teacher exchange. Technology is integrated in all departments with the goal of preparing students to learn effectively and live productively as responsible citizens in our digital world. All students use technology tools to curate their knowledge and creatively communicate understanding.

Technology Strengthens Staff Workflow
At all of our schools teachers use laptop computers for assessment, record keeping, communication, and classroom projection. District facilities management, the school nutrition program, and transportation services use the district network and web services as well. Technology and software systems are integrated into the daily
work of support staff. Special education reports are created through an online service and records are archived electronically. Using Infinite Campus, a web-based student information system, educators in the district access and disaggregate data to improve data-driven decision-making. Technology is used to manage data and provide accessible formats to the staff and community. A new software system for payroll and accounting has been implemented to allow remote access to budget information.

Technology Enriches Communication and Collaboration
The Kittery School District believes that it is essential to support all students and staff members as they learn to use laptops, tablets and cloud based technology.
Teachers use technology to enrich and expand what they do in their classes. Staff members depend on technology to communicate and perform administrative tasks. All staff have email accounts through Google Apps for Education, as do high school and middle school students. Email, files and documents are accessible via the Internet.The library media specialists and technologists provide information and research services. They work together to promote information and media literacy for all students and staff, with an emphasis on problem-solving strategies, collaborative learning and critical thinking skills. The library collection supports the curriculum and promotes lifelong learning by including a wide variety of resources that reflect students' interests. Technology resources are readily available to all students, reflecting the belief that all students can be responsible, independent learners. Each school has a website which is created and maintained by a Webmaster within the building. Calendars, activities, announcements, handbooks, contact information and intranet information for KIttery staff are accessible through the website. Student absences, academic progress and grades are

available through parent portals within Infinite Campus and JumpRope. Teachers develop web presences and use the network for team folders, student access, document storage and dissemination of information to parents.

#8 Technology Type and Costs, and Coordination with Funding Resources
The planned activities will be reviewed annually at budget time and revised to reflect changes.

Mitchell Primary School

Activity 2016-2019	Hardware/Other	Costs	Funding Source
Teaching & Learning	Replace 75 laptops	Depends on type	Technology Budget
Teaching & Learning	Additional 10 iPads/yr	$6000/yr	Technology Budget
Teaching & Learning	3 LightRaise/yr	$13,500/yr	Technology Budget
Teaching & Learning	Replace projectors as needed	$1000/projector 13.	Technology Budget
Teaching & Learning	Replace faculty and administrator laptops	Lease agreement $280/seat for 4 yrs.	MLTI Lease agreement
Teaching & Learning	½ time Ed. Tech	Per contract	District Budget
Teaching & Learning	Replace Ed. Tech laptops	TBD	MLTI buyout
Teaching & Learning	Professional Development	~ $1000.00/yr.	Technology Budget & Title IIA & MLTI
Assessment	Data Manager	Per contract	Salary budget split between the schools
Assessment	Infinite Campus Student Information System	$1100/year	District Budget
Infrastructure	Copier/Printer	$6,558/yr for 5 yrs.	District Budget
Infrastructure	Replace switches 2 per year (3 yrs)	$4,667/yr for 3 yrs.	Tech. Budget & Erate
Infrastructure	Communications Network	In planning stages	CIP

Shapleigh Middle School

Activities	Hardware/Other	Cost	Funding Source
Teaching & Learning	MLTI Refresh Grades 7 & 8 laptops	Difference between state allotted funding and alternate solution; 4 year lease	MLTI program and Technology Budget
Teaching & Learning	Replace teacher and administrator laptops	Grades 7-8 and RA same as student; remainder is $280/sear for 4 years	MLTI program and Technology budget
Teaching & Learning	2 LightRaise/year	$9000/year for 3 years	Technology Budget
Teaching & Learning	Mounted projectors as needed	$1000/projector	Technology Budget
Teaching & Learning	Professional	~ $2000/yr	Technology Budget &

Activity	Hardware/Other	Cost	Funding Source
	Development		Title IIA & MLTI
Teaching & Learning	Full Set of Classroom iPads (25)	$15,000 (over 3 years?)	Technology Budget
Teaching & Learning	Interactive display for art room	$4000.00	Technology Budget
Teaching & Learning	Replace Grades 4-6 student laptops	TBD	MLTI Buyout
Teaching & Learning	Replace Ed. Tech laptops	TBD	MLTI Buyout
Activity	**Hardware/Other**	**Cost**	**Funding Source**
Teaching & Learning	Two Laptop Carts	$1800 each	Technology Budget
Teaching & Learning	Replace 3D Printer	$1500.00	Technology Budget
Teaching & Learning	iPad Pro & peripherals for 7th and 8th grade science teachers	$1300.00 each 14..	
Assessment	JumpRope Standards Based Grading System	$5300/yr	District Budget
Assessment	Data Manager	Per contract	Salary budget split between the schools
Assessment	Infinite Campus Student Information System	$1100/yr	District Budget
Infrastructure	Copier/Printer	$6,558/yr for 5 yrs.	District Budget
Infrastructure	Replace switches 2 per year (3 yrs)	$4,667/yr for 3 yrs.	Tech. Budget & Erate
Infrastructure	Communications Network	In planning stages	CIP

R.W. Traip Academy

Activity	Hardware/Other	Cost	Funding Source
Teaching & Learning	Replace 9-12 student laptops	$248/seat per year for four years	MLTI program and Technology Budget
Teaching & Learning	Replace teacher and administrator laptops	Difference between state allotted primary solution amount and alternate solution for 4 years	MLTI program and Technology Budget
Teaching & Learning	Polar GoFit Health Monitoring System	$2044.00 one time fee	Technology Budget
Teaching & Learning	iPad Pro and Document camera for art room	~ $2000.00	Technology Budget
Teaching & Learning	Interactive boards (displays) 2/year	$9000/year for two years	Technology Budget
Teaching & Learning	Digital Media Server	$1500.00	Technology Budget
Teaching & Learning	Replace projectors as needed	$1000/projector	Technology Budget
Assessment	JumpRope Standards Based grading system	$3324/yr	Technology Budget
Assessment	Data Manager	Per contract	Salary budget split between the schools
Assessment	Infinite Campus Student Information System	$1100/yr	District Budget
Infrastructure	Copier/Printer	$6,558/yr for 5 yrs.	District Budget

Infrastructure	Replace switches 2 per year (3 yrs)	$4,667/yr for 3 yrs.	Tech. Budget & Erate
Infrastructure	Communications Network	In planning stages	CIP

Kittery School District Central Office

Activity	Hardware/Other	Cost	Funding Source
Teaching & Learning	Replace administrator laptops	Difference between state allotted amount and alternate solution	Technology Budget
Assessment	Data Manager	Per contract	District budget split between the three schools and central office
Infrastructure	Communications System	In planning	CIP

Safety Across the District

Activity	Hardware/Other	Cost	Funding Source
Infrastructure	Replace/maintain Motorola emergency communication as needed	TBD	District Budget
Infrastructure	Surveillance cameras in the schools	In planning	CIP

9. Supporting Resources
Kittery School Department Information Technology Staffing (2015-2016)

Technology Director	District- also serves as Director of Curric. & Instruct.
Systems Administrator	District-wide and R.W. Traip Academy
Database Manager	District-wide
Technologist/Integrator	Shapleigh Middle School
Technologist/Integrator	Mitchell Primary School
0.5 Technology Ed Tech	Mitchell Primary School (beginning in FY17)

The Information Technology Department is responsible for developing and implementing information technology that is essential for supporting the district's vision of an outstanding education. This involves repair, maintenance, upgrading hardware, installing software, maintaining networks and servers, and supporting staff and students in all things technology-related, including working toward the goal of improving the integration of technology into the curriculum. The department also supports the end users with technical assistance for the hardware and network systems such as our student information system, email and phones.

Library
- Alexandria
- Destiny
- AudioBooks

- ebooks

Classroom
- TurnItIn

Offices
- ZipSlip (form management system)
- Qualtrics (survey software)

Food Service
- Nutrikids
- SQL server

Special Education
- Various software specific to the needs of the student(s)

Software
- MLTI umbrella offerings
- Geometer's Sketchpad
- GeoGebra
- Creative Suite
- MS office for staff
- iOS Apps
- Online subscriptions- BrainPop, Library Database, Curriculum Software, for example
- SRI, SMI, DRA online and other assessment tools
- Type to Learn

Other Resources
- Infinite Campus
- JumpRope
- Google Apps for Ed
- AESOP
- Virtual High School
- Naviance
- CopSync (beginning in FY17)
- Video Conferencing – Tandberg, iMessage, Google Hangout, Skype
- Peripherals- printers, document cameras, Apple TVs, copiers, scanners
- Interactive Whiteboards

10. Steps to Increase Accessibility
Kittery has a long history of promoting and supporting technology in its classrooms and throughout the district. Grades 7-12 students have had laptops for over twelve years. All teachers, administrators and support personnel are provided a device by

the district or the MLTI program. Our students in grades 4-6 have an individual laptop to use during schools, and those in grades K-3 have access to mobile carts of laptops as well as a computer lab and iPad carts and/or iPad classroom stations to support instruction.

The district purchased enough MacBooks from the 2009 MLTI grades 7-12 deployment to maintain 1:1 access to our students in grades 4-6, to equip four laptop carts in grades K-3, and to provide support staff with laptops. We hope to continue this cycle of purchasing to maintain access for our students and staff.
Although it is always uncertain what the next MLTI device will be and whether there will be a "buyout" option, we hope that Maine continues to support the MLTI as a powerful learning initiative.

Technology is used extensively to support our students with special needs. Web-based solutions are used to support literacy and mathematics instruction. ipads and SmartTables are being used as another learning option in our work, and students are using various math apps as well as recording apps such as ShowMe to demonstrate their knowledge.

Faculty utilize their laptops in all of the work they do in day-to-day tasks such as email communications, updating web pages and course calendars, entering grades, planning lessons, etc. Technology offers teachers many ways to provide instruction and choices for student to present and collaborate on their learning. Teachers in Kittery continue to be innovative in the ways that they and their students use technology in their learning.

The world around us relies more and more on the use of Internet-based tools to manage information and services in many aspects of our lives, and this trend is ubiquitous in our schools and continues to extend itself in many new and exciting ways. Consequently, Kittery School District prepares its students and serves the community by embracing safe and reliable Internet web technology within our curriculum and administration of the district. Future efforts of the IT department will continue to be directed toward enabling our IT infrastructure to be less complex, easier to manage, and highly compatible with increased web use and mobile computers.

As a first course of business, the IT department has undertaken initiatives to reduce the overall complexity and costs associated with the current network infrastructure while at the same time increase the reliability and robustness needed to become more Internet compatible.

Web-based systems and technology have taken hold within the district in a number of ways. The high school guidance department, for example, has licensed the use of *Naviance.edu*, an online service that greatly improves the ability for students to research and apply to colleges for financial aid, thereby making post secondary opportunities more easily understandable and accessible for our students. The Virtual High School (VHS) program is another example of students using the web for an increasingly enriching educational opportunity. Using Internet-based systems, students are able to take courses that are not available in our schools

today. Future possibilities of expanding our curriculum through such technologies have the potential to greatly enhance the educational opportunities across the district.

11. Promotion of Various Curricula and Teaching Strategies that Integrate Technology

The Kittery School District will incorporate the ISTE Student Technology Standards into the curriculum as part of a review/revision process. This process will allow technology team members to make recommendations and research technology tools and resources to integrate technology into the various content areas and determine professional development opportunities prior to implementation.

Technologists will play a key role in modeling and demonstrating the integration process and will work in collaboration with the teachers to assess student learning outcomes. They will also work with teachers to create and support a student-centered learning environment that promotes creativity through the use of technology and collaboration. The technologists are available to meet with staff and students as individuals or teams. They may co-teach with a teacher or assist in a classroom, and often help plan lessons/units. In short, the role of the technologist is that of coach/facilitator of all things technology-based. Best practices for technology infusion will be shared among our staff through a variety of resources, including online collaborative groups, lesson databases and professional development opportunities.

We understand the challenges presented by the complexities of technology in education and how it serves as a foundation for educating our students for the future. Technology is continually being evaluated for its appropriateness of use and curriculum integration. We are committed to serving our staff and students with the support necessary to create a seamless and systemic approach towards using, integrating and evaluating technology.

12. Professional Development, Training and Support

The Kittery School District believes that all staff should use technology, when appropriate, to enhance the educational program. This includes providing students with experiences that use technology in meaningful and appropriate ways. In addition, teachers are encouraged to teach with technology whenever appropriate resources are available.

Staff development addresses issues related to using technology to enhance the teaching/learning process. It includes, for example, broad based issues related to the philosophy of using computers/technology in the classroom and/or a discussion of the pedagogical rationale for computer based projects and the means to develop the projects, and other uses such as gamification to impact learning. Training
provides teachers with the technical knowledge for using hardware and software in the classroom. For example, a teacher may be trained to use a document camera or an Apple TV as an instructional tool. Support is the process of ongoing technology training and staff development.

Kittery Schools District provides support in educational technology and technology integrations skills in a variety of ways. We work from an evaluation tool that asks staff to identify areas of need and areas of expertise. From this, we are able to better plan the training/professional development that is needed and often enlist the services of in house staff. In addition to in house training, we continue to take advantage of the support associated with the MLTI program and also send teachers to conferences and/or workshops, if appropriate. We provide summer training opportunities, after school workshops, one-on-one instruction, and web-based training. Our building technologists and technology teacher leaders (two per school) are instrumental in providing support as well. Our goal is for all staff to be progressing along a continuum of technology proficiency. Professional development and training is differentiated, based on the needs of the staff.

13. Innovative Delivery Strategies

Kittery School Department uses a variety of innovative technology strategies to integrate technology into the curriculum. Now and in the future, technology is a powerful tool to assist with changing the way teachers teach and students learn.

We embrace Eric Sheninger's thoughts on learning in the digital age as described in Pillars of Digital Leadership; his ideas serve as a model for moving the district forward.

Mr. Sheninger states that technology in the classroom offers the following:
- It allows students to manipulate information and media to construct their own meanings.
- It enables students to share ideas quickly and easily.
- It engages students of all cognitive levels and abilities.
- It prepares students to be college and career ready.

Following are some of the innovative technologies provided along with staff development and technical support to help with incorporating them into all areas of learning.

- 1-1 laptops in grades 7-12 for 24/7 access
- 1-1 laptops stored in classroom carts for students in grades 4-6
- Mobile laptop carts in grades K-3
- iPad centers and iPad carts in grades K-3
- Computer lab with 24 21.5" iMacs grades K-3
- Student assignments submitted electronically
- Teacher Web pages with homework/class calendar
- Library databases through Alexandria and Destiny
- Writing done in Google Apps for Education Domain used in grades 2-12
- Classroom management software, Moodle grades 9-12
- Online streaming media subscriptions
- Blended classrooms and "flipped" classes
- Dictation and audio resources used for students who need accessibility or benefit from auditory reading
- Virtual field trips
- Classroom blogging websites

- Gamification
- Faculty and staff communication and collaboration K-12 using Google Docs
- Wikis designed by teachers as learning portals
- Infinite Parent portal open for grades K-12
- JumpRope parent portal open for grades 4-12
- Video conferencing opportunities at the schools
- Virtual High School
- R.W. Traip Academy student work presented as online sites and portfolios
- Independent study
- Common Sense Media
- Professional development provided in 21st Century Learning environments
- Coding clubs at the schools
- Classrooms equipped with appropriate presentation tools to meet the needs of teachers and students

14. Accountability Measures

Kittery School District staff, administrators and teachers work in an environment of reflection and collaborative inquiry with an end goal of increased student achievement.

- The district and school technology committees will evaluate and review the technology plan every budget cycle, recommending changes as needed.
- A number of external assessment tools are used and student scores are analyzed and evaluated to inform instruction.
- Data gathered through surveys, informal feedback, exit feedback from professional development and training, and observations are used to evaluate the technology plan, align professional development offerings, improve instruction and establish funding priorities etc. for documentation of our progress toward preparing all students for success on the Maine Learning Results.
- The use of laptops, iPads, projectors, document cameras, Apple TVs, etc. is reviewed regularly to determine the effect of technology on improving learning and achievement.
- Review of student performance on district, school and grade level and/or content area performance measures.
- Ensure that the administrators and staff have the skills to interpret data at the district and site level.
- All educational technology pilot programs will include an assessment for effectiveness in the proposal. The process will include strong connections to curriculum, assessment and identified student needs.
- Use survey tools to elicit community feedback on educational initiatives such as Infinite Campus and JumpRope parent portal feature. and JumpRope.
- Provide electronic editions of district, school and classroom forms, policies and handbooks.