

# LONDONDERRY SCHOOL DISTRICT SAU #12



## TECHNOLOGY PLAN 2009-2012

### Board Approval:

The Londonderry School Board approved this multi-year technology plan, covering the period of July 1, 2009 through June 30, 2012 on August 11, 2009.

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Contact: Susan D. Ballard or Shawn Coe  
[sballard@londonderry.org](mailto:sballard@londonderry.org)  
[scoe@londonderry.org](mailto:scoe@londonderry.org)

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# INTRODUCTION

## **Technology Steering Committee:**

Susan Ballard, Director, Library Media and Technology, Londonderry School District, Co-Chair

Ron Campo, Londonderry School Board

Lydia Campos, Library Media Specialist, Londonderry High School

Kim Carpinone, Director of Special Pupil Services, Londonderry School District

Kevin Champagne, Community Member, CIO, Auto Use, Inc.

Shawn Coe, IT Director, Londonderry School District, Co-Chair

Mary Coltin, Assistant Principal, North School

Jill Connor, Coordinator, Special Pupil Services

Nate Greenberg, Superintendent, Londonderry School District

Bob Guaraldi, Community Member, President, @Ilmarin, LLC

George Herrmann, Londonderry School Board

Lynne Jackson, Library Media Specialist, Londonderry High School

Benjamin Loi, Assistant Principal, South School

Lynn MacDonald, Community Member, President, The Knowledge Tree

Carol Mack, Principal, Matthew Thornton School

Diane Malley, Curriculum Coordinator, Londonderry High School

Jo Oswald, District Technology Trainer/Integrationist

Frank Pignone, Community Resident

Ellen Romanowski, Library Media Specialist, Londonderry Middle School

## **Technology Committee Communication and Calendar:**

A distribution list has been established and a calendar of meetings has been developed in order to carry out the committee's work in a timely manner. In addition, the Steering Committee creates sub committees on a variety of topics or issues whose members meet as needed. Information regarding the Committee's efforts will continue to be presented to the community through our community newsletter, *The InCider Press*, local cable access programming, updates at school board meetings, and the school district website.

It is anticipated that the committee will continue to meet at least semi-annually (Spring and Fall) to review progress and make appropriate adjustments to the plan. Sub committees meet more frequently on an as needed basis.

## **Demographics:**

Londonderry, NH, a community of 23,236 residents (US Census 2000) is located in Rockingham County (277,359 residents - US Census 2000) directly off Interstate Route 93. It is about 12 miles from the Massachusetts border, less than an hour's drive from Boston. Close by are NH's largest urban areas, Manchester and Nashua. The town's land area covers approximately 48 square miles, with an industrial base and Northern New England's major airport terminal (Manchester – Boston Regional Airport) located in the northernmost section. Still other large parcels of land, located throughout the community, are in current use as agricultural. These are primarily apple orchards. Thus, the town maintains a rural environment while impacted by industrial and urban issues.

The location of Londonderry attracts many professional and technical workers; over 80% commute to jobs outside the community. The 2000 census shows per capita income at \$26,491 and mean income at \$50,566. The census also shows that the major portion of housing in the community is single-family dwellings although in recent years other types of housing have become more available, including condos and apartments. Work Force housing plans are in the discussion stage.

Although Londonderry is predominately white, our racial and ethnic composition is becoming more diverse. The 2000 census confirms a growing minority population and a number of languages, other than English, spoken at home. As a result, our school district is also serving a more diverse population with attendant service requirements and, in addition, we have identified 17.2% of our student population who need targeted SPED assistance.

Londonderry's form of government is an elected five-person Town Council and there is also an autonomous elected five-person School Board. The School Board has authority for one freestanding kindergarten building (345 students enrolled in a morning/afternoon half-day program and 114 students in our Early Education Program), three elementary schools (grades 1-5, 1969 students), one middle school (grades 6-8, 1358 students) and a comprehensive high school (grades 9-12, 1725 students). The chief executive officer of the public schools is a Superintendent assisted by an Assistant Superintendent for Curriculum, Instruction and Assessment, three directors (pupil services, library media and technology and Information Technology), five building principals and a Business Administrator. The Business Administrator supervises district managers for finance, facilities and human resources.

## **District Mission:**

To provide all students with the vision, skills and knowledge necessary to maximize their individual potential. Central to this accomplishment is the collaboration among all shareholders and disciplines so

that students can become contributing members of society and appreciate that learning is a life-long process.

### **District Vision:**

The Londonderry School District will provide appropriate individualized academic, social, emotional and physical learning opportunities in order to establish a dynamic foundation for quality education and continued student growth.

### **Technology Vision Statement:**

The Londonderry School District recognizes the pervasive way in which technology has changed the very fabric of our daily lives. Our student's day-to-day educational experience has been no less profoundly impacted by the way in which technology is used to provide a variety of positive influences including:

- enhanced learning environments
- increased student and teacher motivation
- improved life preparation
- increased student, teacher and administrator productivity
- enhanced communication\
- enhanced opportunities for collaboration
- expanded information horizon
- improved delivery of educational services

Therefore, the Londonderry School District will employ appropriate technologies to facilitate learning, communication, collaboration and administration. This will enable the members of our learning community to become proficient, effective, ethical users of technology.

It is our vision that our technology plan will empower us to:

- Provide the resources necessary to assure technology access at points and times of need
- Develop the skills necessary to provide for the seamless integration of technology into educational settings.
- Prepare the learning community for application of technology in current and future real world settings.
- Support the district's mission and strategic plan
- Utilize technology to address different learner modalities and needs.
- Establish a foundation of technology knowledge that will follow students throughout their school years and into the work force.

# GOALS

The goals of district technology planning relate to the expected achievement and benefits for several user groups. While each of these constituent groups has objectives to be met, which are unique to their interests, they share many in common.

## **Students will learn to use technology to:**

1. access, communicate, interpret, manage, present, acquire and generate information
2. develop critical thinking and problem-solving skills
3. enhance creativity
4. develop skills for the workplace
5. accomplish a variety of learning tasks
6. improve communication, mathematical, and content area skills
7. facilitate more immediate and meaningful exchanges of ideas and information
8. generate reports and presentations
9. demonstrate application of technology skills in content areas

## **Students and teachers will:**

1. use technologies as tools to meet benchmarks across the curriculum
2. exhibit legal, social and ethical behaviors regarding the use of information and technology
3. embed technology in their day-to-day routine
4. create and share content

## **Teachers, Administrators and Support Staff will use technology to:**

1. improve general and individualized instruction
2. develop curriculum and units of study
3. provide consistent and equal opportunities for students to apply technology skills throughout all content areas and grade levels.
4. facilitate assessment of curriculum, instruction and learners
5. communicate with one another, parents, other educators and other stakeholders
6. conduct educational research
7. access a dynamic system of resources (Inter/Intranet)
8. improve school management and operation
9. manage student records
10. participate in and enhance staff and professional development opportunities
11. streamline daily operations and enhance productivity
12. generate reports and presentations
13. memorialize and share content and work product

## **The entire Learning Community will use technology to:**

1. create a viable network of shared resources in a user friendly environment
2. manage and access a wide variety of information sources
3. provide and use information for collaboration and shared decision-making
4. ensure equal access to district, regional, state, national and international resources
5. provide improved information processing and communications
6. communicate and collaborate with one another
7. coordinate the efficient use of district, building and community resources
8. leverage learning community produced content and materials

# ACCESS TO TECHNOLOGY RESOURCES

The Technology Steering Committee will regularly prepare and update a synthesis of the subcommittee preliminary reports, make specific tactical implementation recommendations (multi-year plan) and prioritize implementation based on:

1. Legally mandated requirements
2. Budgetary restrictions
3. Alignment with our district strategic plan, professional development plan and school board goals
4. Alignment with graduation standards and grade level benchmarks
5. Needs identified through learning community feedback, assessment and observation
6. Alignment with state frameworks/national information literacy and technology standards
6. Alignment with state and federal standards

The multi-year plan is laid out so that goals will be reached by the end of 2012. The steering committee will conduct at least an annual review/assessment and make appropriate adjustments accordingly. To facilitate this effort the district has developed a process by which new initiatives are vetted through the use of an initiative planning and an initiative follow up template tool (see Appendix B and Appendix C).

## **Hardware:**

The individual building requirements and initiatives are developed and analyzed by the administrative staff and the Steering Committee. The Steering Committee has special education representation. Within each of the building-based requirements and initiatives, we have examined and incorporated the following:

- Computers (including thin client), monitors, peripherals and printers wireless/portable labs and other emerging technologies to serve some environments
- Printers (networked when possible)
- Projectors
- Screens
- Monitors
- Digital still and video cameras
- Scanners
- Smart Keyboards
- Electronic White Boards
- Student Response Systems
- PDAs
- Environment/ergonomics
- Climate control
- Furniture
- Fire control
- Telephone (voice)
- Intercom
- Distance and asynchronous learning equipment
- Cable/cablecast (video)
- Inter and Intranet access
- Low Power FM Radio

### Hardware Description:

Currently the Londonderry School District School District has just less than 1,200 PC workstations and Apple/Mac computers, serving both the educational programs and administrative services. (Does not include servers):

Population	Building	Computers	Level A	Level B	Level C
433	Pre K-Kindergarten	18	13	3	2
1822	Elementary Schools	319	111	80	128
1246	Middle School	279	59	20	200
1770	High School	507	8	68	431
5271	District Office Teacher Training Laptops	55	16	17	22
	Total	1178	207	188	783

Each school has a range of technology and equipment in place and regularly utilized. These include a number of printers (networked and stand-alone), scanners, digital cameras, data projectors, electronic whiteboards, large screen monitors (and VHS and/or DVD playback), and overheads. All school instructional and office areas are networked, and all instructional areas have a projection screen. All classroom and office areas have a phone and updated intercom. Londonderry has continued to expand its use of cable television (all classrooms are wired for access) and maintains/programs its own cable channel/bulletin board. The district is also using distance ed technology at Londonderry High School and Londonderry Middle School. We are also contemplating the utilization of this technology in combination with a web-based delivery system to provide homebound students increased learning opportunities. Additionally, the district operates an FCC-licensed low power FM Radio Station and related programming and transmission equipment. The district has plans that address use of streaming and archived web content.

During the budget development cycle, as codified by the district technology committee and as submitted by the IT department and the educational administration, various committees define and iterate a standard for desktops, servers, and portables (See Appendix A for matrices for grade levels and areas and Appendix B for Initiative Template)

Short medium and long term goals align with the District Strategic Plan and the annual budget cycle. The standard includes technical specifications, configurations, and loaded costs for software and support. The IT team then evaluates each school or administrative unit's inventory of computers in the following manner:

- Evaluate the oldest workstations in regards to CPU, RAM and HD to determine if it should be replaced entirely or upgraded partially or migrated to thin client

- Evaluate performance of workstations, speed, dependability, compatibility with national and state mandates and appropriateness for the duty assigned
- Assess appropriateness of “grandfathering” items out of the specification of the standard platform or replacing them
- Assess impact of acquiring or not acquiring requested equipment
- Employ a policy of computer refresh
- Make an effort to assure progress toward achieving the ratios stated in the NH Educational Technology Plan Goals

Once evaluated, using our template initiative process (see Appendix B), requests are vetted. Any exceptions to the standard are noted. Requests also include necessary software to utilize the hardware. Instructional software requests and web-based services and content are evaluated according to the criteria established by School Board Policy IIAC (Selection and Acquisition of Instructional and Library Resources). Both instructional and management software are evaluated to address SIF, the software interoperability framework standard. Web resources are evaluated according to the stability and reliability of network infrastructure to support delivery.

An ongoing review of the revised requirements and initiatives from each of our schools indicate that areas for acquisition include the continued updating of a number of computers (including thin client solutions), additional networked printers, additional digital cameras, additional data projectors, expanded use of wireless portable laptop labs and AlphaSmarts, and the use of electronic white board technology, student response systems, MP3 Players and PDA's.

### **Instructional and Support Resources:**

The Londonderry School District has consistently provided instructional and support resources to advance the use of technology. The district has standardized the versions, configurations and use of operating systems, utilities and primary suites of professional level software applications and also licenses numerous other application software. Wherever appropriate we network them to support a variety of curriculum areas. In addition, all labs are outfitted with desktop management software to provide instructors with improved control capabilities.

The entire collection of all online, print, digital and other format-media resources available (instructional and library) is evaluated annually based on criteria established by the Curriculum Coordinating Council and Library Media Program. Collections are comprehensive, current, catalogued, well-organized, managed and accessible. Collection mapping occurs to ensure alignment with curriculum goals and objectives. Decisions are made on changes or adjustments to collections accordingly.

The Londonderry School District Library Media & Technology Program working with specialists in curriculum, instruction and assessment strive to insure that all students and staff are effective users of ideas, information and technology as part of the instructional and learning process.

The program provides:

- Intellectual and physical access to the Library Media Center and technology resources.
- Information literacy and technology skills, developed through assured learning experiences.
- Lifelong appreciation of learning promoted through reading, viewing and listening.

- That Library Media Specialists, Technology Trainer/Integrationist and Computer Education Assistants work in partnership with teachers to plan, develop, implement and evaluate instructional units.
- That teachers, Library Media Specialists, Technology Trainer/Integrationist and Computer Education Assistants share responsibility for the integration of information literacy skills and technology skills within the curriculum.
- That Library Media Specialists, Technology Trainer/Integrationist and Computer Education Assistants work in partnership with school administrators to effectively articulate and implement program goals and objectives

### **Software and Online Resources:**

Curriculum, administrative needs and user interests govern the acquisition of resources. The primary purpose of software acquisitions is to meet user needs and interests in the most timely and cost-effective way. The intended use of software and online resources is to develop content, deliver an educational experience, to assess the effectiveness of our delivery, and to communicate between our four basic audiences (students, educators, administrators and parents) and to support the overarching district goals in the areas of curriculum instruction and assessment, operations, communications, instruction, staff development, space needs.

A continual assessment will be undertaken to review how technology is applied in the achievement of the above goals. Assessment will be reviewed in conjunction with the district's curriculum committee and aligned to district benchmarks and refinements of the same.

### **Hardware alignment with State requirement:**

The Londonderry School District will continue to align our technology plan with our strategic plan, professional development plan and thereafter with the NH Technology Plan. Our plan will continue to seek to meet/exceed the state guidelines whenever possible. For example, we provide all kindergarten, first and second grade classrooms with a modern computer. In addition using mobile labs, AlphaSmarts, PDA's, electronic white boards or school library technology resources, specific curriculum needs are met.

### **Technology Support Personnel:**

The IT staff is comprised of the following:

*Information Technology Director*

*Network Administrator:* Major duties include network management and security, network design, email accounts, backup and disaster recovery plans;

*Software and Database Administrator:* Major duties include software management and support of all district wide programs (Student Management System, Financial Management, Facility Scheduling, Assessment System, Benchmark System, Strategic Plan System, and Preventative Maintenance Program)

*3 Hardware Support Techs:* Major duties include support and maintenance of all computers and some support to maintenance of AV, connectivity to the network and other peripherals.

Interns are also employed and this results in the provision of an additional 400 hours of time to attend to various maintenance and seasonal tasks during the summer and school recess periods. The district also

contracts for outside service when and if necessary and takes advantage of volunteer services from community members when available.

In addition to the above, the district employs 1.5 video/web technicians reporting to the Director of Library Media and Technology Services. These employees work collaboratively with IT in order to address a wide variety of technology related service issues. Our building based Educational Computer Assistants also provide first response/diagnosis assistance whenever possible and work in cooperation with IT at all times.

Currently, our ratio of computers to support is:  $[(783)/300] + [(395)/100] = 6.56$ .

## **Connectivity and Reliability:**

### **1. LAN and WAN**

Appendix D, which provides an overview of current topology, is included in support of our plan. We currently have a bonded T-1 line to service Internet connectivity to all buildings (and) have a fiber optic line for data transmission within our Intranet. All of our schools have a LAN. All the schools and our district office participate in a segmented network as per our topology drawing

### **2. Electrical:**

See Item 1 (LAN description). In addition, we provide UPS/surge protection on all servers. All backup and power systems are evaluated on an annual basis and appropriate action taken to maintain and improve systems. The acquisition, maintenance and replacement are the same as for all hardware. Each time we buy an additional server we include dollars for maintenance and power as necessary.

## **Network Support:**

Please see above a more detailed description of IT personnel. However please note the district does employ a full-time, full-year IT Director, network administrator, and a full time data base administrator. The district uses a web-based program to track, evaluate and prioritize systems repair, maintenance and support issues. This information is used to assist in developing budget recommendations for hardware, software, infrastructure and support.

All IT staff enhance their technical prowess using on the job training, self study, and off site courses. All external resources used by the district are required to transfer knowledge to internal staff and document their efforts. While performing IT tasks, all internal staff seek to educate others and transfer and share their knowledge. In addition the district has training staff.

# TECHNOLOGY LITERACY

## **Personnel for Training and Integration:**

The district currently employs one full-time Trainer integrationist and 6 full-time equivalent educational technology assistants whose efforts are exclusively directed to assisting teachers, special educators and other educational staff in the integration of technology across the curriculum and the achievement of the district's benchmarks and graduation standards.

In addition, the district annually budgets \$25,000 in support of an in-house professional development institute (Teachers' Academy) directed at providing opportunities for Londonderry teachers to improve their knowledge and skills in the use of technology. Many of the instructors employed are Londonderry teachers who have developed high-end skills. Also, our school library media specialists (nine) serve the schools with one-on-one instruction for teachers as well as providing workshops and tutorials for educators

## **ICT Literacy Competency 1-12**

The district has a graduation requirement for information and technology literacy which states that “Students will be effective and ethical users of ideas, information and related computer technologies across disciplines.” We have developed an integrated ICT curriculum which provides for development of basic skills sets in the primary grades and then scaffolds to develop higher order thinking skills and technology skills constructed around an assured guided inquiry/research experience at each of grades 4 -8. Students at the high school level also have assured opportunities at grade 9 (Science) and Grade 11 (English). The district is investigating the development of an assured opportunity at Grade 10 (U.S. History) and a senior research project at Grade 12.

We have recently revised grade level benchmarks in ICT to align our efforts with national standards and guidelines including *Standards for the 21<sup>st</sup> Century Learner/AASL*, *National Educational Technology Standards for Students/ISTE* and *Framework* and *the Milestones for Improving Learning and Education (MILE) Guide for 21<sup>st</sup> Century Skills/Partnership for 21<sup>st</sup> Century Skills*. A benchmark checklist is completed annually through grade 5 with a formal assessment rubric completed at the end of Grade 5, and Grade 8. Student portfolio work is also collected and the district has created an ICT/Student Portfolio review team in order to align our efforts with state standards in this area. On an annual basis assessment data is reviewed and adjustments to curriculum are made in order to better ensure student achievement.

ICT BENCHMARKS FOR GRADE 1

Londonderry Elementary Schools

Londonderry School District Benchmark	Skills Included	AASL	ISTE	P21
Understand the basic organizational structure of a book	<ul style="list-style-type: none"> <li>Identify spine, spine label, and title page</li> <li>Identify author, title, and illustrator</li> <li>With assistance, identify copyright page and symbol</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p>		<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p>
Recognize the two categories of books	<ul style="list-style-type: none"> <li>With assistance, distinguish between fiction and non-fiction</li> <li>Distinguish between fiction and non-fiction call numbers</li> <li>Locate the non-fiction and fiction sections of the library</li> <li>Select fiction and informational books of personal interest</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>		<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p>
Frame simple questions related to a topic of interest or assignment	<ul style="list-style-type: none"> <li>With assistance, ask “I wonder” questions about a topic (teacher and/or librarian directed)</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research information fluency</p>	<p><b>Learning &amp; Innovation Skills Critical Thinking and Problem Solving:</b> Identify and ask significant questions that clarify various points of view and lead to better solutions.</p>
Observe the gathering of information and communicating with others using telecommunications	<ul style="list-style-type: none"> <li>Observe the use of e-mail (or other Web 2.0) tools to communicate with experts (teacher and/or librarian directed)</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p>	<p><b>Standard 2</b> Communication and Collaboration</p>	<p><b>Media Literacy:</b> Understand both how and why media messages are constructed and for what purpose</p> <p><b>Communication and Collaboration:</b> Articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of forms and contexts.</p> <p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p>
Understand how to navigate a variety of resources in order to use them effectively	<ul style="list-style-type: none"> <li>With assistance, use multimedia resources (interactive books, educational software, multimedia encyclopedias, and websites)</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p>	<p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p>
Understand how to use classroom technology	<ul style="list-style-type: none"> <li>Use input devices and output devices (mice, and keyboards) to operate computers, and other technologies</li> <li>Demonstrate the proper handling of hardware and software</li> </ul>		<p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p>

ICT BENCHMARKS FOR GRADE 2

Londonderry Elementary Schools

Londonderry School District Benchmark	Skills Included	AASL	ISTE	P21
Understand the basic organizational structure of a book	<ul style="list-style-type: none"> <li>Identify the index</li> <li>With assistance, demonstrate the use of a table of contents</li> <li>Locate the copyright page and draw the copyright symbol</li> </ul>	<b>Standard 1</b> Inquire, think critically, and gain knowledge		<b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).
Understand the organization of the library	<ul style="list-style-type: none"> <li>Locate fiction and non-fiction sections of the library</li> <li>With assistance, locate and retrieve print materials in the library</li> <li>Select fiction and informational books of personal interest</li> <li>Begin to understand the use of the on-line catalog</li> </ul>	<b>Standard 1</b> Inquire, think critically, and gain knowledge <b>Standard 4</b> Pursue personal and aesthetic growth		<b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).
With assistance, identify questions needed to solve and information problem	<ul style="list-style-type: none"> <li>With assistance, develop questions based on background knowledge</li> <li>Ask "I wonder" questions about a topic</li> <li>With assistance, identify keywords about the topic, problem or question</li> </ul>	<b>Standard 1</b> Inquire, think critically, and gain knowledge <b>Standard 4</b> Pursue personal and aesthetic growth	<b>Standard 3</b> Research and Information Fluency	<b>Critical Thinking and Problem Solving:</b> Identify and ask significant questions that clarify various points of view and lead to better solutions.
Demonstrate the ethical use of information	<ul style="list-style-type: none"> <li>Write and/or state a simple citation (author and title) to indicate an information source</li> </ul>	<b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society <b>Standard 4</b> Pursue personal and aesthetic growth	<b>Standard 5</b> Digital citizenship	<b>Information &amp; Communication Technologies (ICT):</b> Apply a fundamental understanding of the ethical/legal issues surrounding the access and the use of information technologies.
With assistance, gather information and communicate with others using telecommunications	<ul style="list-style-type: none"> <li>With assistance, use e-mail (or other web 2.0 tools) to communicate with experts (teacher and/or librarian directed)</li> </ul>	<b>Standard 1</b> Inquire, think critically, and gain knowledge <b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society	<b>Standard 2</b> Communication and Collaboration	<b>Media Literacy:</b> Understand both how and why media messages are constructed and for what purpose. <b>Communication and Collaboration:</b> Articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of forms and contexts. <b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.
Understand how to navigate a variety of multimedia resources in order to use them effectively	<ul style="list-style-type: none"> <li>With assistance, use multimedia resources (interactive books, educational software, multimedia encyclopedias, and websites)</li> </ul>	<b>Standard 1</b> Inquire, think critically, and gain knowledge	<b>Standard 6</b> Technology and Concepts	<b>Information Literacy:</b> Manage the flow of information from a wide variety of sources

Understand how to use classroom technology	<ul style="list-style-type: none"> <li>• Use input and output devices (mice and keyboards) to operate computers and other technologies</li> <li>• Demonstrate the proper handling of hardware and software</li> <li>• Insert media such as text, pictures, sound and graphics</li> <li>• Edit Multimedia presentations</li> </ul>		<b>Standard 6</b> Technology and Concepts	<b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.
With assistance, create simple multimedia products		<b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge	<b>Standard 1</b> Creativity and Innovation <b>Standard 6</b> Technology and Concepts	<b>Information Literacy:</b> Use information accurately and creatively for the issue or problem at hand.

**ICT BENCHMARKS FOR GRADE 3**

Londonderry Elementary Schools

<b>Londonderry School District Benchmarks</b>	<b>Skills Included</b>	<b>AASL</b>	<b>ISTE</b>	<b>P21</b>
With assistance, identify questions needed to solve an information problem	<ul style="list-style-type: none"> <li>• With assistance develop questions and follow-up questions</li> <li>• With assistance identify key-words about the topic, problem or question</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p>	<p><b>Critical Thinking and Problem Solving:</b> Identify and ask significant questions that clarify various points of view and lead to better solutions.</p>
With assistance locate, evaluate and select appropriate information sources to answer questions	<ul style="list-style-type: none"> <li>• Identify a variety of information sources- books, periodicals, electronic resources, Internet</li> <li>• Demonstrate the use of an atlas, dictionary, and encyclopedia</li> <li>• Determine the appropriate source for the information question</li> <li>• With assistance locate and retrieve print materials in the library</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research Information Fluency</p>	<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p> <p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources</p>
Understand the basic organizational structure of a book for accessing information	<ul style="list-style-type: none"> <li>• Demonstrate the use of the table of contents</li> <li>• With assistance, use alphabetical indices or menus to access print and electronic resources</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>		<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p>
Demonstrate the ethical use of information	<ul style="list-style-type: none"> <li>• With assistance, complete a bibliography citation</li> <li>• With assistance, identify keywords and phrases to record information (note-taking)</li> <li>• Define plagiarism</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 5</b> Digital Citizenship</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Apply a fundamental understanding of the ethical/legal issues surrounding the access and the use of information technologies.</p> <p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources</p>
Use classroom technology effectively	<ul style="list-style-type: none"> <li>• Demonstrate basic knowledge of a computer keyboard</li> <li>• Identify basic components of a computer</li> <li>• Demonstrate proper handling and use of computers and software</li> <li>• Demonstrate use of (word processing, graphic organizers, and multimedia software)</li> <li>• Save documents to the appropriate place</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p>	<p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p>

Use word processing to create a written product	<ul style="list-style-type: none"> <li>• Create, edit, save, and print a word processing document</li> <li>• Demonstrate appropriate use of formatting tools (Font, size, color, margins)</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p>	<p><b>Standard 1</b> Creativity and Innovation <b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p>
With assistance, create a multimedia presentation	<ul style="list-style-type: none"> <li>• Insert media such as text, pictures, sound and graphics</li> <li>• Edit Multimedia presentations</li> <li>• Play multimedia presentations</li> </ul>	<p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p>	<p><b>Standard 1</b> Creativity and Innovation <b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p> <p><b>Information Literacy:</b> Use information accurately and creatively for the issue or problem at hand.</p>

**ICT BENCHMARKS FOR GRADE 4**

Londonderry Elementary Schools

Londonderry School District Benchmark	Skills Included	AASL	ISTE	P21
With assistance, identify questions needed to solve an information problem	<ul style="list-style-type: none"> <li>Brainstorm to develop a set of questions, which are carefully aligned and focused on a main idea or essential question</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and information fluency</p> <p><b>Standard 4</b> Critical thinking, problem solving, and decision making</p>	<p><b>Critical Thinking and Problem Solving:</b> Identify and ask significant questions that clarify various points of view and lead to better solutions.</p>
Identify and locate the appropriate sources of information	<ul style="list-style-type: none"> <li>Search an on-line catalog to locate materials</li> <li>Understand how to use call numbers to locate materials</li> <li>With assistance use search engines and data bases to locate appropriate web sites</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p>	<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p> <p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources.</p>
Demonstrate the ability to access specific information from within a variety of resources	<ul style="list-style-type: none"> <li>With assistance identify keywords for locating information</li> <li>With assistance demonstrate the use of an index and the table of contents within print resources</li> <li>With assistance navigate within a web site to locate specific information</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p>	<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p> <p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources.</p>
Extract and organize appropriate information about a problem, topic or question	<ul style="list-style-type: none"> <li>With assistance, identify keywords and phrases to record information (note-taking)</li> <li>Organize notes and ideas to support the topic or question</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p>	<p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources</p>
Demonstrate the ethical use of information	<ul style="list-style-type: none"> <li>With assistance, complete a bibliography citation</li> <li>With assistance, identify keywords and phrases to record information (note-taking)</li> <li>Define plagiarism</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p> <p><b>Standard 5</b> Digital Citizenship</p>	<p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources.</p> <p><b>Information &amp; Communication Technologies (ICT):</b> Apply a fundamental understanding of the ethical/legal issues surrounding the access and the use of information technologies.</p>
Present information from multiple sources to answer an information problem	<ul style="list-style-type: none"> <li>Identify facts which support main idea</li> <li>Draw conclusions based on facts</li> <li>Create new knowledge and</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p>	<p><b>Standard 1</b> Creativity and Innovation</p>	<p><b>Critical Thinking and Problem Solving:</b> Identify and ask significant questions that clarify various points of</p>

(synthesis)	understandings to complete the information task	<p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p> <p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 4</b> Critical thinking, problem solving, and decision making</p>	view and lead to better solutions.
Demonstrate proper keyboarding techniques	<ul style="list-style-type: none"> <li>• Use both hands when keyboarding</li> <li>• Hands are in the home row position</li> </ul>		<p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p>
Electronically edit and revise word-processing	<ul style="list-style-type: none"> <li>• Demonstrate appropriate use of formatting tools (Font, size, color, margins)</li> <li>• Appropriately use the on-line dictionary and thesaurus</li> <li>• Uses the edit functions appropriately (copy, paste, cut)</li> </ul>	<p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p>	<p><b>Standard 1</b> Creativity and innovation</p> <p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p>
Demonstrate and understanding of technology systems, concepts and operations	<ul style="list-style-type: none"> <li>• Save and locate files</li> <li>• Name files appropriately</li> <li>• Use “end task” or “forced quit” when appropriate</li> </ul>		<p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.</p>
Use spreadsheets to organize data and to produce charts/graphs	<ul style="list-style-type: none"> <li>• Enter data</li> <li>• Format charts/graphs</li> </ul>	<p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p>	<p><b>Standard 1</b> Creativity and innovation</p> <p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use digital technologies, communication/networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy.</p>
Create a simple multimedia presentation that includes text, graphics, and sound	<ul style="list-style-type: none"> <li>• Insert media such as text, pictures, sound, and graphics</li> <li>• Edit multimedia presentations</li> <li>• Present multimedia presentations</li> </ul>	<p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p>	<p><b>Standard 1</b> Creativity and innovation</p> <p><b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use digital technologies, communication/networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy.</p> <p><b>Communication and Collaboration:</b> Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts.</p> <p><b>Creativity and Innovation:</b> Develop, implement and communicate new ideas to others effectively.</p>

**ICT BENCHMARKS FOR GRADE 5**

Londonderry Elementary Schools

Londonderry School District Benchmark	Skills Included	AASL	ISTE	P21
Identify questions needed to solve an information problem	<ul style="list-style-type: none"> <li>Brainstorm to develop a set of questions, which are carefully aligned and focused on a main idea or essential question</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p> <p><b>Standard 4</b> Critical Thinking, Problem Solving, and Decision Making</p>	<p><b>Critical Thinking and Problem Solving:</b> Identify and ask significant questions that clarify various points of view and lead to better solutions.</p>
Identify and locate the appropriate sources of information	<ul style="list-style-type: none"> <li>Search an on-line catalog to locate materials</li> <li>Understand how to use call numbers to locate materials</li> <li>Use search engines and data bases to locate appropriate web sites</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p>Research and Information Fluency</p>	<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p> <p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources.</p>
Demonstrate the ability to access specific information from within a variety of resources	<ul style="list-style-type: none"> <li>Identify keywords for locating information</li> <li>Demonstrate the use of an index, table of contents, and glossary within print resources</li> <li>Navigate within a web site to locate specific information</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p>	<p><b>Information Literacy:</b> Access information efficiently (time) and effectively (sources).</p> <p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources.</p>
Extract and organize appropriate information about a problem, topic, or question	<ul style="list-style-type: none"> <li>Identify keywords and phrases to record information (note-taking)</li> <li>Organize notes and ideas to support the topic or question</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p>	<p><b>Information Literacy:</b> Manage the flow of information from a wide variety of sources.</p>
Demonstrate the ethical use of information	<ul style="list-style-type: none"> <li>Independently complete bibliography citations</li> <li>Identify keywords and phrases to record information (note-taking)</li> <li>Be able to define plagiarism</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 3</b> Research and Information Fluency</p> <p><b>Standard 5</b> Digital Citizenship</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Apply a fundamental understanding of the ethical/legal issues surrounding the access and the use of information technologies.</p>

Present information from multiple sources to answer an information problem (synthesis)	<ul style="list-style-type: none"> <li>Identify facts which support main idea</li> <li>Draw conclusions based on facts</li> <li>Create new knowledge and understandings to complete the information task</li> </ul>	<p><b>Standard 1</b> Inquire, think critically, and gain knowledge</p> <p><b>Standard 2</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge</p> <p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p> <p><b>Standard 4</b> Pursue personal and aesthetic growth</p>	<p><b>Standard 1</b> Creativity and Innovation</p> <p><b>Standard 4</b> Critical Thinking, Problem Solving, and Decision Making</p>	<p><b>Critical Thinking and Problem Solving:</b> Identify and ask significant questions that clarify various points of view and lead to better solutions.</p> <p><b>Critical Thinking and Problem Solving:</b> Synthesize and make connections between information and arguments.</p>
Demonstrate proper keyboarding techniques	Use both hands when keyboarding Hands are in the home row position		<b>Standard 6</b> Technology and Concepts	<b>Information &amp; Communication Technologies (ICT):</b> Use technology as a tool to research, organize, evaluate and communicate information.
Use spreadsheets to organize data and to produce charts/graphs	<ul style="list-style-type: none"> <li>Enter data</li> <li>Format chart/graph</li> </ul>		<b>Standard 6</b> Technology and Concepts	<b>Information &amp; Communication Technologies (ICT):</b> Use digital technologies, communication/networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy.
Use a database to access and organize information	<ul style="list-style-type: none"> <li>Explain what a “field” is</li> <li>Enter data</li> <li>Sort data</li> </ul>		<b>Standard 6</b> Technology and Concepts	<b>Information &amp; Communication Technologies (ICT):</b> Use digital technologies, communication/networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy.
Identify peripheral devices and demonstrate their uses (including but not limited to printer, scanners, and digital cameras)	<ul style="list-style-type: none"> <li>Use appropriate settings</li> <li>Transfer image to computer</li> </ul>		<b>Standard 6</b> Technology and Concepts	<b>Information &amp; Communication Technologies (ICT):</b> Use digital technologies, communication/networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy.
Demonstrate an understanding of technology systems, concepts, and operations	<ul style="list-style-type: none"> <li>Create, organize, store, and back-up data</li> <li>Name files appropriately</li> <li>Use “end task” or “forced quit” when appropriate</li> </ul>		<b>Standard 6</b> Technology and Concepts	

<p>Create a multimedia presentation that includes text, graphics, and sound</p>	<ul style="list-style-type: none"> <li>• Insert media such as text, pictures, sound and graphics</li> <li>• Edit multimedia presentations</li> <li>• Present multimedia presentations</li> </ul>	<p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p>	<p><b>Standard 1</b> Creativity and Innovation <b>Standard 6</b> Technology and Concepts</p>	<p><b>Information &amp; Communication Technologies (ICT):</b> Use digital technologies, communication/networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy. <b>Communication and Collaboration:</b> Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts. <b>Creativity and Innovation:</b> Develop, implement and communicate new ideas to others effectively.</p>
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ITC BENCHMARKS FOR GRADE 6

Londonderry Middle School

Londonderry School District Benchmark	Skills Included	AASL	ISTE	P21
Locate and use a variety of information resources to fulfill the research task.	<ul style="list-style-type: none"> <li>Find, evaluate and select appropriate print and /or digital resources to complete the research task.</li> <li>Evaluate information for accuracy and validity.</li> <li>Search the online library catalog to locate resources in the Library Media Center.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 4</b> Critical thinking, problem solving, and decision making <b>Standard 3</b> Research and information fluency</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving <b>Information, Media and Technology Skills</b> -Information Literacy</p>
With guidance, develop essential and open ended questions pertaining to topic.	<ul style="list-style-type: none"> <li>Develop and refine questions which are relevant to the topic.</li> <li>Develop questions which promote deeper understanding of topic.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 4</b> Critical thinking, problem solving, and decision making</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving</p>
Identify key words to locate relevant information from a variety of information resources.	<ul style="list-style-type: none"> <li>Use background knowledge as a context for new learning</li> <li>Extract information which is relevant to the specific question or topic.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 4</b> Critical thinking, problem solving, and decision making. <b>Standard 3</b> Research and information fluency</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving <b>Information, Media and Technology Skills</b> -Information Literacy</p>
Record information using keywords and phrases (note taking).	<ul style="list-style-type: none"> <li>Organize knowledge so it is useful to the research task.</li> <li>Demonstrate knowledge of graphic organizer.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 1:</b> Creativity and innovation. <b>Standard 3</b> Research and information fluency.</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving <b>Information, Media and Technology Skills</b> -Information Literacy</p>
Use the appropriate bibliography format for all resources used including quotations, images, and sound.	<ul style="list-style-type: none"> <li>Create a complete works cited page which acknowledges the use of a variety of resources.</li> </ul>	<p><b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.</p>	<p><b>Standard 5:</b> Digital Citizenship</p>	<p><b>Information, Media and Technology Skills</b> -Information Literacy</p>
Utilize the basic features of a word processing program in order to communicate new knowledge in a related content area.	<ul style="list-style-type: none"> <li>Use the writing process to express thoughts and ideas effectively.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 2:</b> Communication and Collaboration</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving - Communication and Collaboration</p>

<p>Create and present a multimedia product to convey new knowledge in a related content area.</p>	<ul style="list-style-type: none"> <li>• Use technology as a tool to research, organize and communicate information.</li> <li>• Use technology to create products which express thoughts and ideas effectively.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p> <p><b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.</p>	<p><b>Standard 2:</b> Communication and Collaboration</p> <p><b>Standard 4:</b> Critical Thinking, problem solving, and decision making.</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving - Communication and Collaboration</p> <p><b>Information, Media and Technology Skills</b> -Media Literacy</p>
<p>Use a spreadsheet to create and manipulate data to convey new knowledge in a related content area.</p>	<ul style="list-style-type: none"> <li>• Use technology as a tool to research, organize and communicate information.</li> <li>• Use technology to create products which express thoughts and ideas effectively.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 1:</b> Creativity and innovation</p>	<p><b>Information, Media and Technology Skills</b> -Information Literacy</p> <p><b>Life and Career Skills</b> -Productivity and Accountability</p>
<p>Use digital tools to communicate and work collaboratively to support content area learning.</p>	<ul style="list-style-type: none"> <li>• Use technology and other information tools to analyze and organize information.</li> <li>• Use technology, writing or speaking skills to express thoughts and ideas effectively.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p> <p><b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.</p>	<p><b>Standard 2:</b> Communication and Collaboration</p>	<p><b>Learning and Innovation Skills</b> -Communication and Collaboration</p> <p><b>Information, Media and Technology Skills</b> -Information Literacy</p> <p><b>Life and Career Skills</b> -Productivity and Accountability</p>
<p>Demonstrate ethical use of creative works and information when creating new products or communicating new knowledge</p>	<ul style="list-style-type: none"> <li>• Use information and technology ethically and responsibly.</li> <li>• Demonstrate knowledge of intellectual property and copyright restrictions for a variety of resources.</li> </ul>	<p><b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.</p>	<p><b>Standard 5:</b> Digital Citizenship</p>	<p><b>Life and Career Skills</b> - Leadership and Responsibility</p> <p><b>Core Subjects</b> -Civic Literacy</p>
<p>Read, views and listens for aesthetic and personal growth.</p>	<ul style="list-style-type: none"> <li>• Read a variety of genres</li> <li>• Make connections between self, text and world.</li> </ul>	<p><b>Standard 4:</b> Pursue personal and aesthetic growth.</p>		<p><b>Life and Career Skills</b> -Social &amp; Cross-Cultural Skills</p> <p><b>Core Subjects</b> -Global Awareness</p> <p><b>Learning &amp; Innovation Skills</b> -Creativity and Innovation</p>

ITC BENCHMARKS FOR GRADE 7

Londonderry Middle School

Londonderry School District Benchmark	Skills Included	AASL	ISTE	P21
Develop essential and open ended questions pertaining to topic.	<ul style="list-style-type: none"> <li>Develop a range of questions which are relevant to the topic.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 3</b> Research and information fluency <b>Standard 4</b> Critical thinking, problem solving, and decision making</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving</p>
Develop and refine research questions in response to information gathered.	<ul style="list-style-type: none"> <li>Refine questions so they are aligned with the main focus of the research topic.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 3</b> Research and information fluency <b>Standard 4</b> Critical thinking, problem solving, and decision making</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving <b>Information, Media and Technology Skills</b> -Information Literacy</p>
Use advanced search tools in digital information resources.	<ul style="list-style-type: none"> <li>Determine useful keywords.</li> <li>Determine specific information needs of research task, e.g. currency of information or source.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 3</b> Research and information fluency <b>Standard 4</b> Critical thinking, problem solving, and decision making</p>	<p><b>Information, Media and Technology Skills</b> -Information Literacy <b>Learning and Innovation Skills:</b> -Critical thinking and problem solving</p>
Evaluate digital information resources on the basis of accuracy and validity.	<ul style="list-style-type: none"> <li>Select resources which are appropriate and meaningful to topic.</li> <li>Evaluate information for misconceptions or bias.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 3:</b> Research and information fluency</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving <b>Information, Media and Technology Skills</b> -Information Literacy</p>
Create and present a multimedia product to convey new knowledge in a related content area.	<ul style="list-style-type: none"> <li>Use technology as a tool to research, organize and communicate information.</li> <li>Use technology to create products which express thoughts and ideas effectively.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 2:</b> Communication and Collaboration <b>Standard 4:</b></p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving - Communication and Collaboration <b>Information, Media and Technology Skills</b></p>

		<b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.	Critical Thinking, problem solving, and decision making.	-Media Literacy
Use a spreadsheet to create and manipulate data to convey new knowledge in a related content area.	<ul style="list-style-type: none"> <li>• Use technology as a tool to research, organize and communicate information.</li> <li>• Use technology to create products which express thoughts and ideas effectively.</li> </ul>	<b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.	<b>Standard 1:</b> Creativity and innovation	<b>Information, Media and Technology Skills</b> -Information Literacy <b>Life and Career Skills</b> -Productivity and Accountability
Demonstrate ethical use of creative works and information when creating new products or communicating new knowledge.	<ul style="list-style-type: none"> <li>• Use information and technology ethically and responsibly.</li> <li>• Demonstrate knowledge of intellectual property and copyright restrictions in a variety of resources.</li> </ul>	<b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.	<b>Standard 5:</b> Digital Citizenship	<b>Life and Career Skills</b> - Leadership and Responsibility <b>Core Subjects</b> -Civic Literacy
Reads, views and listens for aesthetic and personal growth.	<ul style="list-style-type: none"> <li>• Read a variety of genres</li> <li>• Make connections between self, text, and world.</li> </ul>	<b>Standard 4</b> Pursue personal and aesthetic growth.		<b>Life and Career Skills</b> -Social & Cross-Cultural Skills <b>Core Subjects</b> -Global Awareness <b>Learning &amp; Innovation Skills</b> -Creativity and Innovation

ITC BENCHMARKS FOR GRADE 8

Londonderry Middle School

Londonderry School District Benchmarks	Skills Included	AASL	ISTE	P21
Identify misconceptions, conflicting information, and point of view or bias from information resources.	<ul style="list-style-type: none"> <li>Engage in inquiry based research by applying critical thinking skills.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 3:</b> Research and information fluency</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving <b>Information, Media and Technology Skills</b> -Information Literacy -Media Literacy</p>
Select the most useful information resources to fulfill specific research needs.	<ul style="list-style-type: none"> <li>Find, evaluate and select appropriate resources to fulfill research task.</li> <li>Evaluate information for accuracy and validity.</li> </ul>	<p><b>Standard 1:</b> Inquire, think critically, and gain knowledge.</p>	<p><b>Standard 3:</b> Research and information fluency. <b>Standard 4:</b> Critical thinking, problem solving, and decision making</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving <b>Information, Media and Technology Skills</b> -Information Literacy</p>
Use a variety of note taking strategies.	<ul style="list-style-type: none"> <li>Utilize appropriate format to organize knowledge so that it is useful to the completion of the research task.</li> <li>Draw conclusions and develop solutions based on information.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 1:</b> Creativity and innovation <b>Standard 3:</b> Research and information fluency</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving</p>
Create and present a multimedia product to convey new knowledge in a related content area.	<ul style="list-style-type: none"> <li>Use technology as a tool to research, organize and communicate information.</li> <li>Use technology to create products which express thoughts and ideas effectively.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge. <b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.</p>	<p><b>Standard 2:</b> Communication and Collaboration <b>Standard 4:</b> Critical Thinking, problem solving, and decision making.</p>	<p><b>Learning and Innovation Skills:</b> -Critical thinking and problem solving - Communication and Collaboration <b>Information, Media and Technology Skills</b> -Media Literacy</p>
Use a spreadsheet to create and manipulate data to convey new knowledge in a related content area.	<ul style="list-style-type: none"> <li>Use technology as a tool to research, organize and communicate information.</li> <li>Use technology to create products which express thoughts and ideas effectively.</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 1:</b> Creativity and innovation</p>	<p><b>Information, Media and Technology Skills</b> -Information Literacy <b>Life and Career Skills</b> -Productivity and Accountability</p>

<p>Use digital tools to communicate and work collaboratively to support content area learning.</p>	<ul style="list-style-type: none"> <li>• Use technology and other information tools to analyze and organize information.</li> <li>• Use technology, writing or speaking skills to express thoughts and ideas effectively</li> </ul>	<p><b>Standard 2:</b> Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p> <p><b>Standard 3:</b> Share knowledge and participate ethically and productively as members of our democratic society.</p>	<p><b>Standard 2:</b> Communication and collaboration.</p> <p><b>Standard 6:</b> Technology operations and concepts.</p>	<p><b>Learning and Innovation Skills</b> -Communication and Collaboration <b>Information, Media and Technology Skills</b> -Information Literacy -ICT Literacy</p>
<p>Read, views and listens for aesthetic and personal growth.</p>	<ul style="list-style-type: none"> <li>• Read a variety of genres</li> <li>• Make connections between self, text and world.</li> </ul>	<p><b>Standard 4:</b> Pursue personal and aesthetic growth.</p>		<p><b>Life and Career Skills</b> -Social &amp; Cross-Cultural Skills <b>Core Subjects</b> -Global Awareness <b>Learning &amp; Innovation Skills</b> -Creativity and Innovation</p>

**ICT BENCHMARKS FOR GRADES 9 – 12**

Londonderry High School

Londonderry School District Benchmark	Skills Included	AASL	ISTE	P21
Independently formulates topic, question or problem to be researched, incorporating existing knowledge and revising topic according to information gathered.	<ul style="list-style-type: none"> <li>• Developing questions</li> <li>• Determining topics/subtopics</li> <li>• Determining keywords</li> <li>• Revising questions when needed</li> </ul>	<p><b>Standard 1</b></p> <p>Inquire, think critically and gain knowledge</p>	<p><b>Standard 1</b> Creativity and Innovation  <b>Standard 3</b> Research and Information Fluency  <b>Standard 4</b> Critical Thinking, Problem Solving, and Decision Making</p>	<p><u>Learning &amp; Innovation Skills</u>                      -Creativity &amp; Innovation                      -Critical Thinking &amp; Problem Solving</p> <p><u>Life &amp; Career Skills</u>                      -Initiative &amp; Self Direction</p>
Develops appropriate search strategies to efficiently locate information in digital or other formats and evaluates and selects information appropriate to the topic.	<ul style="list-style-type: none"> <li>• Recognizing type of information needed</li> <li>• Identifying a variety of sources of information</li> <li>• Understanding the organization of digital and print information sources</li> <li>• Determining relevancy of information</li> <li>• Determining authority/credibility</li> <li>• Determining bias</li> <li>• Determining currency</li> </ul>	<p><b>Standard 1</b></p> <p>Inquire, think critically and gain knowledge</p>	<p><b>Standard 3</b> Research and Information Fluency  <b>Standard 4</b> Critical Thinking, Problem Solving, and Decision Making  <b>Standard 6</b> Technology Operations and Concepts</p>	<p><u>Information, Media &amp; Technology Skills</u>                      -Information Literacy                      -Media Literacy</p> <p><u>Learning &amp; Innovation Skills</u>                      -Critical Thinking &amp; Problem Solving</p>
Uses appropriate digital tools to collect, organize and analyze information and/or data related to question or problem to be researched	<ul style="list-style-type: none"> <li>• Selecting appropriate digital tool or application for task</li> <li>• Selecting and using method for recording information and data</li> <li>• Keeping accurate records for data and resources used.</li> <li>• Using digital tools to share information and work collaboratively with others</li> </ul>	<p><b>Standard 2</b></p> <p>Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 2</b> Communication and Collaboration  <b>Standard 3</b> Research and Information Fluency  <b>Standard 4</b> Critical Thinking, Problem Solving, and Decision Making  <b>Standard 6</b> Technology Operations and Concepts</p>	<p><u>Information, Media &amp; Technology Skills</u>                      -Media Literacy                      -ICT Literacy</p> <p><u>Life and Career Skills</u>                      -Productivity &amp; Accountability</p>
Synthesizes facts, opinions, and/or data appropriate to the question or problem and develops new understanding	<ul style="list-style-type: none"> <li>• Drawing conclusions based on information</li> <li>• Developing solutions or making decisions based on information</li> <li>• Collaborating with others to exchange ideas</li> <li>• Creating products that express ideas effectively</li> </ul>	<p><b>Standard 2</b></p> <p>Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.</p>	<p><b>Standard 1</b> Creativity and Innovation  <b>Standard 2</b> Communication and Collaboration  <b>Standard 3</b> Research and Information Fluency  <b>Standard 4</b> Critical Thinking, Problem Solving, and Decision Making</p>	<p><u>Learning &amp; Innovation Skills</u>                      -Critical Thinking &amp; Problem Solving                      -Creativity and Innovation</p> <p><u>Life and Career Skills</u>                      -Flexibility and Adaptability</p>
Uses information and technology responsibly and ethically	<ul style="list-style-type: none"> <li>• Using complete bibliographic citations to acknowledge intellectual property of others</li> <li>• Adhering to copyright restrictions for print and digital sources</li> <li>• Using technology in a safe, legal and responsible manner</li> </ul>	<p><b>Standard 3</b></p> <p>Share knowledge and participate ethically and productively as members of our democratic society</p>	<p><b>Standard 5</b> Digital Citizenship</p>	<p><u>Life and Career Skills</u>                      -Leadership &amp; Responsibility</p> <p><u>Core Subjects</u>                      -Civic Literacy</p>

<b>Londonderry School District Benchmark</b>	<b>Skills Included</b>	<b>AASL</b>	<b>ISTE</b>	<b>P21</b>
Communicates and/or demonstrates the knowledge gained	<ul style="list-style-type: none"> <li>• Utilizing appropriate format/organization</li> <li>• Adapting to needs or characteristics of audience</li> <li>• Using appropriate digital tool to display or communicate new knowledge.</li> <li>• Conveying the knowledge in ways others can use and assess.</li> </ul>	<p><b>Standard 3</b> Share knowledge and participate ethically and productively as members of our democratic society</p>	<p><b>Standard 2</b> Communication and Collaboration <b>Standard 6</b> Technology Operations and Concepts</p>	<p><u>Life and Career Skills</u> -Productivity &amp; Accountability -Flexibility and Adaptability</p> <p><u>Information, Media &amp; Technology Skills</u> -Media Literacy</p>
Reads, views and listens for aesthetic and personal growth	<ul style="list-style-type: none"> <li>• Reading widely in various formats and genres</li> <li>• Making connections to self and the larger community</li> <li>• Using creative and artistic formats to develop knowledge and understanding of new areas of interest</li> </ul>	<p><b>Standard 4</b> Pursue personal and aesthetic growth</p>		<p><u>Life and Career Skills</u> -Social &amp; Cross-Cultural Skills</p> <p><u>Core Subjects</u> -Global Awareness</p> <p><u>Learning &amp; Innovation Skills</u> -Creativity and Innovation</p>

## Londonderry School District ICT Benchmarks: Glossary

**Advanced Search Tool** - tools to narrow the search to obtain specific information being requested.

**Bibliography** - list of information resources used.

**Bibliographic format** - specific arrangement of publication details for information resources used in research. Examples of major formats are MLA, and APA. The MLA format is the one primarily used by students in the Londonderry School District.

**Content area** - subjects studied as part of the school curriculum: ex. language arts, social studies, science, math etc.

**Digital file** - information stored in digital format such as a word processing document, spreadsheet, graphic organizer, image or sound.

**Digital Information Resource** - information found on the world wide web, in software, in information databases or an online catalog.

**Digital Tool** - any computer-related means to manipulate information. This includes software applications, devices such as calculators and probes, online environments such as wikis, blogs, information storehouses and videoconferencing.

**Essential question** - question that does not have an answer that can be easily found; rather it requires critical thinking and creativity to construct the answer.

**Formatting** - The appearance or presentation of a document. It can include such things as fonts, alignment, spacing, margins and bullets.

**Information resource** - textual, visual or audio information in digital or print format.

**Intellectual property** - creative works or ideas such as music, literature or images which come under the ownership of the copyright holder.

**Key word** - a descriptive or significant word that relates to the topic being studied. It is a word that can be used to search for other words or information related to the topic.

**Multimedia Product** - A product which contains multiple types of media and may incorporate textual information, visual, and audio components.

**New knowledge** – the ability to express new personal thoughts and ideas effectively.

**Note Taking** - recording relevant information using keywords and phrases.

**Open ended question** - broad questions which require more than one or two word responses and encourages a full, meaningful answer.

**Plagiarism** - using someone else's words or ideas as though they were your own; not giving credit to the originator of the information.

**Primary source** - a work that was created during the time period being studied, or written or produced by an eye-witness to the event. These may include diaries, personal narratives, photographs, sound recordings, video, newspaper reports or numerical data.

**Print Resource** - information conveyed through traditional printed methods: books, newspapers, magazines, journals, pamphlets, brochures, etc.

**Research Task** - A learning or inquiry activity which utilizes information resources to solve a problem, answer a question, build understanding and/or construct new knowledge.

**Spreadsheet** - a computer program used for organizing and analyzing data. A spreadsheet will allow you to organize numbers, make calculations, and create graphs.

**Telecommunications** - The exchange of voice and/or digital information over distance by electronic means, whether point-to-point or within a networked environment.\

**Traditional Tools** - Research tools which do not use electronic or digital capabilities (i.e. a face to face interview).

**With assistance** - a one on one teaching experience.

**With guidance** - a small group teaching activity experience.

## **ICT Curriculum Integration:**

The district has developed and continues to update instructional guides including lesson plans (K-12) for all curriculum areas. These guides address specific benchmarks and the means by which technology will be used to achieve and assess them. Again note that *Standards for the 21<sup>st</sup> Century Learner/AASL*, *National Educational Technology Standards for Students/ ISTE* and *Framework* and *the Milestones for Improving Learning and Education (MILE) Guide for 21st Century Skills/Partnership for 21<sup>st</sup> Century Skills* and the NH state frameworks were used as the basis for developing the benchmarks.

## **Distance and Web-Based Learning:**

The district currently provides distance-learning opportunities at Londonderry High School and at Londonderry Middle School. Our continuing evolution of this technology has been very successful and well supported by the School Board and the community. In particular, the Steering Committee will further investigate the use of distance education combined with web-based solutions to provide for access to the curriculum for SPED and other students who may require additional assistance in order to achieve their potential.

The Steering Committee recognizes that technology is and will continue to be a critical and pervasive educational resource. It is very likely that a convergence of web-based and digital technologies, combined with meta data and information sources, will alter social and educational structures. Those best prepared will be able to seize the new opportunities. Therefore, it is recommended that the district continue to investigate new and emerging ways of learning with and conducting business with technology. Areas to further expand and explore include:

- Online Research and Databases
- On demand video (content, staff and professional development)\
- Streaming audio and video (original content and subscription services)
- Online/cloud communication and collaboration tools (blogs, wikis, electronic communities)
- Online content management
- Online Teacher Training and Professional Development
- Distance and Asynchronous Learning
- Video Teleconferences
- Video Field Trips
- Interactive Television
- Information Management
- Podcasting
- Video on Demand
- Remote Access
- Just in Time Learning

# PROFESSIONAL DEVELOPMENT

## **Correlation to Strategic and Professional Development Plans:**

Our plan for ongoing professional development and training in the area of technology integration is aligned with both our District Strategic Plan and with our Professional Development Plan.

One of the major goals of our District Strategic Plan is “ to achieve and sustain the highest level of professional competence of all staff, consistent with the strategic plan.” We believe to assure no student is left behind, we must assure no teacher or administrator working with that student is left behind. To that end, the following activities outlined in the strategic plan, are also an integral part of our technology plan:

- District/School/Professional development goals based on the Strategic and Professional Development Plan
- Teacher goals reflect school and district initiatives including Danielson’s Frameworks for Teaching and the four domains of teaching responsibility
- Develop school professional activities to support Strategic Plan
- Assessment and monitoring of teacher progress
- Teacher feedback to determine future needs
- Continued implementation of District Master Professional Development Plan
- Expansion and Sustainment of an Action Research Model
- Provision of targeted Staff Development
- Continued Implementation of Teacher Academies for Technology and incorporation of Teacher’s Academy to Go activities (24/7, portable and/or remote activities)
- Continued year-long new teacher induction program
- Annual administration of teacher technology skills and integration assessment and related analysis of results (LOTI equivalent assessment)

## **District plans for professional/staff development activities:**

We have developed a local technology needs assessment (based on the Mankato scale as well as questions related to integration and instructional practice). We also administer an evaluation instrument at the end of each in-service professional development activity. In addition, we annually review the utility/application of other independent assessment tools and make a determination as to whether additional data is needed. Based on the information available to us, we disaggregate and layer the data in order to inform our planning. We also use tracking of support issues to indicate types and personnel in need of training. Then we provide training or education to meet the need.

## **Professional Development aligned with Best Practice Criteria:**

A goal of the Londonderry School District is to ensure that its teachers are prepared to integrate technology in the instructional program for the benefit of all students. To that end, the district seeks to identify, promote, leverage and publish best practices wherever they can be found in the district. We also seek to find those unique individuals who will create the next generation of best practices. We hire, train and retain faculty in accordance with the following standards, which align with the ISTE standards for teachers:

- Use computer hardware, terminology, telecommunication and networking
- Identify, evaluate, and select the types, sources, and uses of quality instructional technologies as related to one's subject area and/or grade level
- Model appropriate behaviors related to equitable, ethical, legal and human issues of technology

- Apply technology tools for developing the instructional process and classroom administration
- Infuse technology into the classroom to facilitate teaching and life-long learning

The district also subscribes to use of essential elements of the *National Staff Development Council's Standards for Staff Development*, Revised Edition (2001), which provide the framework from which to "increase the achievement of all students." To that end, the areas of context, process and content are taken into account in the design and delivery of professional development opportunities:

Context: the environment in which professional development is delivered, adequate resources to carry it out and school leadership that is supportive of the activity.

Process: use of data to determine learning priorities and monitor progress; use of data to inform decision making; use of learning strategies appropriate to the learning goal; application of knowledge about human learning and change; provide knowledge and skills to foster collaboration.

Content: prepare educators to understand and appreciate all students, create safe, orderly and supportive learning environments and hold high expectations for achievement; deepen educators' knowledge and provide them with research-based instructional strategies and assessments; provide educators with knowledge and skills to involve families and other stakeholders.

We have and will continue to develop training materials and other work products that are stored and accessible for repeated use and iteration assuring lowest cost in time and money for repetitive training. Materials focused on maintaining and using the district standard workstations to accomplish identified daily activities are being produced. Web-based, distance, and asynchronous training opportunities have been implemented and we will continue to expand these.

### **Training Resources:**

The following sources of training and technical assistance will be utilized in order to ensure on-going, sustained professional development for teachers, administrators, library media specialists and staff:

- Teachers Academy – in house institute
- Vendor support for software initiatives
- Consultants hired by the District
- SERESC (Southeastern Regional Educational Consortium – general technical assistance and teacher training)
- NHSTE (NH Society for Technology in Education), NHSLA (NH School Library Association), and NESLA (New England School Library Association) – professional conferences, workshops and seminars funded by the school district )
- Greater Manchester Regional Professional Development Center
- Rivier College Masters Program based on Londonderry's profile
- Knowledge Tree (Software training and technical assistance through School Board/Vendor cooperative agreement)
- Additional sources will be sought out as appropriate

### **Training Timeline:**

Based on data collected, Londonderry teachers/support staff have clearly indicated a preference for professional development delivered during scheduled release time, during the summer recess or immediately after school. Based on this, we provide Teachers' Academy offerings K-12 during the

month of August and then at least quarterly throughout the school year in 3-hr workshop format. Our training timeline is also aligned to support the achievement of the goals of the district strategic plan. We also provide for release time during the school day for teams of grade level teachers to meet with the District Trainer/Integrationist in targeted professional development aimed at assisting them with technology integration strategies to achieve both technology/information literacy benchmarks as well as content area benchmarks.

It is our intention to continue with this basic timeline for in-house opportunities as well as utilize a web-based system to inform staff of both in-district and outside opportunities. Our training is a mix of remediation, cutting edge technologies and integration strategies.

### **Time for Technology Training:**

We conduct most of our technology training in-house, with teachers learning on their own computers in their own schools. This allows us to tailor our training to the specific needs of our staff. The position of integrationist allows the focus to be on curriculum, provides flexibility, and gives the ability to work collaboratively with teachers. Use of online resources and distance educational technology to deliver training with an evolving emphasis on assistive/adaptive technology with a variety of service providers enables us to reach a wide audience in a time efficient and cost effective manner.

### **Strategies that integrate technology effectively into curricula and instruction, based on scientific research and leading to improvements in student academic achievement:**

It is intended that grade level and subject area teachers observe a district process to evaluate, select, and test software and other learning resources that may be of particular assistance in meeting our local benchmarks and learning goals and objectives. Before any software or any version of any software becomes part of the standard it is tested on the standard platforms for functionality and compatibility. The district has adopted a minimum suite of baseline applications as our standard in order to facilitate communications, minimize support / training costs, and leverage financial resources. These are articulated in the Matrices (Appendix A).

Current scientific studies related to the integration of technology are reviewed and best practices based on this evidence implemented as appropriate. The following studies have informed our decision-making:

Agodini, Roberto, Mark Dynarski *The Effectiveness of Educational Technology: Issues and Recommendations for the National Study*. US Department of Education, Washington, D.C, 2003.

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- Partnership for 21<sup>st</sup> Century Skills. *Transition Brief: Policy Recommendations for Preparing Americans for the Global Skills Race*. Partnership for 21<sup>st</sup> Century Skills, Tucson, AZ, 2008.  
[http://www.21stcenturyskills.org/documents/p21\\_presidential\\_transition\\_paper\\_nov\\_2008.pdf](http://www.21stcenturyskills.org/documents/p21_presidential_transition_paper_nov_2008.pdf)
- Partnership for 21<sup>st</sup> Century Skills. *21<sup>st</sup> Century Learning Environments*. Partnership for 21<sup>st</sup> Century Skills, Tucson, AZ, 2009.  
[http://www.21stcenturyskills.org/documents/le\\_white\\_paper-1.pdf](http://www.21stcenturyskills.org/documents/le_white_paper-1.pdf)
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<http://www.ed.gov/G2K/bridge.html>

### **Other areas of development include:**

- Portable professional development through Teachers' Academy To Go Modules
- On demand video (content, staff and professional development)\
- Streaming audio and video (original content and subscription services)

- Online communication and collaboration tools (blogs, wikis, electronic communities)
- Online content management
- Smart objects
- Use of MP3 Technology
- Use of NEO Alpha Smart Technology
- Electronic Assessment Results and disaggregation
- Electronic Curriculum Mapping and Planner
- Online Textbooks
- Web-Based Enhanced Library Union Catalog
- Subscription databases and resources
- Teacher Web Pages

The district has created a culture of collaboration and communication that leverages technology, throughout the district through development of a connected electronic community using email, blogs, wikis and other collaborative work resources and spaces as means of professional dialog and discourse. Overall, our philosophy is that the use of technology is transparent, and the way we do business.

# COMMUNITY COLLABORATION

Information regarding the district's efforts to deliver curriculum, instruction, and assessment through technology integration is shared with the community on a regular basis and especially with parents through a variety of communications vehicles, including local educational access television programming and the parent resource portion of the district's web site. In addition to requesting input and participation from parents, we also solicit feedback and keep other various local constituencies and interest groups informed and updated about initiatives through numerous communications vehicles and mail groups. We invite and solicit the opinions of computer hardware and software vendors, professional associations, and members of the business community for applicable use of current and emerging technologies. For example, we continue to encourage and invite teachers to attend the annual Christa McAuliffe technology conference and to reflect on and share information regarding their experiences and participation so that we can learn from best practice and research. A peer-to-peer technology professional development academy also provides opportunities for teachers to connect with technologies and to provide input regarding integration strategies.

One of the most successful aspects of the district previous multi-year Technology Plans was the provision of access to the technology by the community at large. Through the efforts of the Access subcommittee and a dedicated corps of volunteer trainers, annual Fall and Spring Adult Training Series (hardware use, software application, introduction to the Internet and Web) were well-received and attended. Subsequently, the district contracted to provide expanded Adult Education opportunities for technology on an enrollment basis. With our current investigation and exploration of improving asynchronous and online learning opportunities, we are also developing a community education component, which will provide both free and fee-based aspects.

In addition, summer Computer Camp and special events like Internet Safety Night were also successful. The Access subcommittee will continue its efforts and explore new opportunities for connecting the members of the community to their technology investment and the learning community it supports.

The district will continue to expand its communication effort with internal and external audiences by further development of the educational cable access channel and electronic bulletin board (LEO 21) and through a more dynamic web presence. The expanded web site will include areas for:

- minimum specifications for community equipment contributions
- items needed by the district
- services and skills needed
- links to content for distance learning and continuing education, accessible by any and all community members who choose to view the district web site

The district library media program will also continue to collaborate with the Town's Public Library in order to provide access by the entire community to the combined resources of both agencies through ongoing inter-library loan efforts.

# DATA COLLECTION

## **Process:**

The district h completes the annual DOE Technology survey as required and copies are maintained for evaluation and planning purposes. In addition the district maintains a fixed asset inventory and has implemented a web based inventory and management system. This system tracks trouble tickets and manages an inventory of all technology resources, including maintenance and repair logs to help inform evaluation and planning.

We also use a locally developed survey based on the Mankato scale. Please see our response under Training and Support, subsection Activities for additional information on the survey.

Additionally, at the elementary level, data is collected on the utilization of mobile labs and AlphaSmart technology including software utilized and related curriculum integration. Likewise similar data is collected at the Middle School and High School regarding use of curriculum labs, AlphaSmart technology, distance learning activities and technology rich classrooms.

In any Action Research project undertaken in the district, data collection and analysis of technology components is a requisite.

## **Timeline and Evaluation**

The Technology Task Force Steering Committee regularly prepares and updates a synthesis of subcommittee preliminary reports and make specific recommendations (multi-year plan) regarding:

1. Assistive/Adaptive Technologies
2. Curriculum and Instruction
3. Connectivity and Infrastructure (Network, Electrical, Facilities)
4. Software, E-Business Solutions (Online and Web Based) Web Presence
5. Hardware, peripherals and other technology tools
6. Standards and Protocols (Donations, Minimum Hardware Requirements, Record Retention, Security)
7. Professional Development
8. Training, support and technical assistance
9. Community access and collaboration

Within the context of subcommittee reports themselves, recommendations regarding the following are made:

- integration (as per benchmarks)
- equipment acquisition
- possible future direction
- principles and policies

The multi-year plan is laid out so that goals will be reached by the end of 2012, however, the steering committee will conduct an annual review/assessment and make appropriate adjustments accordingly.

# BUDGET

Our focused technology plan has been in place and sustained since the mid 90s, and we have no reason to believe this will change in the future. As the Londonderry School District wishes to continue to meet the current and future needs of its students, we will proceed to improve the delivery of instruction and related services through the planned use of technology. There is a point of critical mass, which the district is attempting to reach in order to achieve the effective and efficient use of technology in the learning and management environments.

In addition to regular personnel costs, current budget for **09-10** includes the following considerations:

- \$ 21,273 - New and replacement AV equipment including vcr/dvd players, data projectors, digital cameras and digital camcorders
- \$34,500 - Replacement workstations (PC and Mac)
- \$15,000 – New and Replacement Servers
- \$1,500 – Laser Printers
- \$ 2,000 - Workstations for Identified SPED Students
- \$ 60,000 - ongoing cost of MSO licenses
- \$ 184,800- ongoing software maintenance/upgrade agreements (Filtering software, library automation, Financials, etc.)
- \$ 2,500 - Consultant Services for tech support
- \$ 35,550 - Educational software and supplies
- \$ 32,500 – ISP and bonded T-1
- \$ 25,000 - Teachers' Academy support (instructors and teacher attendance)

## **Projected Budget FY 10-11**

- \$ 22,000 - New and replacement AV equipment including vcr/dvd players, data projectors, digital cameras and digital camcorders
- \$ 34,500 - Replacement workstations (PC and Mac)
- \$ 10,000 – New and Replacement Servers
- \$ 2,000 – Laser Printers
- \$ 2,000 - Workstations for Identified SPED Students
- \$ 60,000 - ongoing cost of MSO licenses
- \$190,300- ongoing software maintenance/upgrade agreements (Filtering software, library automation, Financials, etc.)
- \$ 2,500 - Consultant Services for tech support
- \$ 36,650 - Educational software and supplies
- \$ 33,475 – ISP and bonded T-1
- \$ 25,000 - Teachers' Academy support (instructors and teacher attendance)

## **Projected Budget FY 11-12**

- \$ 22,660 - New and replacement AV equipment including vcr/dvd players, data projectors, digital cameras and digital camcorders
- \$ 34,500 - Replacement workstations (PC and Mac)
- \$ 10,000 – New and Replacement Servers
- \$ 2,000 – Laser Printers
- \$ 2,000 - Workstations for Identified SPED Students
- \$ 60,000 - ongoing cost of MSO licenses

\$196,000- ongoing software maintenance/upgrade agreements (Filtering software, library automation, Financials, etc.)

\$ 2,500 - Consultant Services for tech support

\$ 36,650 - Educational software and supplies

\$ 34,480 – ISP and bonded T-1

\$ 25,000 - Teachers' Academy support (instructors and teacher attendance)

In addition to the above, all IT and Ed Tech staff positions are maintained.

The committee will continue to refine its plan annually and bring forward to the board its recommendation in the fall for the remaining two years of the plan. The committee will make proposals for the budget and may make proposals for a special warrant article at some point.

Please see our response in the section Evaluation and Assessment for further information about our process to align the annual district technology budget and to prioritize technology expenditures based upon actual funds available.

There are a number of additional funding sources, which can continue to be utilized and/or explored as our community underwrites the cost of the technology plan. These include:

- Regular Budget
- Consideration to be given to a percentage set aside to implement and /or maintain certain areas of the plan and/or continuing lease/purchase options.
- Categorical and Entitlement Funds
- Funding sources such as ESEA ,IDEA or Federal Stimulus dollars when available can be used to purchase hardware, software and provide staff development/training opportunities.
- E-Rate reimbursement
- School Support Organizations
- Londonderry has always enjoyed unparalleled support from its PTA's, Boosters, Friends of Music and similar school support groups who endeavor to assist with the acquisition of resources and materials to supplement (not supplant) commitments supported through the School Board's budget. We should continue our collaboration and emphasize our needs in the area of technology.
- Foundation Grants
- College and Business Collaboration
- We seek the active participation of local colleges and businesses as partners in our educational endeavors. The creation of a "team effort" to assist with funding and/or donation of property, goods or services may be achievable
- Vendor Contributions
- The district investigates donation programs provided by hardware and software vendors for "pilot" testing of products (if appropriate).
- Community Contributions
- Underwriting Guidelines
- The Board authorized Underwriting Guidelines for LEO and the district uses this sustainable revenue to support communications efforts using cable, web, and radio.

# POLICIES AND PROCEDURES

## **Acceptable Use Policy:**

*As per RSA 194:3-d School District Computer Networks*

The Londonderry School Board has adopted two Acceptable Use Policies - one for staff available at [http://www.londonderry.org/assets/documents/lmt/accept\\_use\\_staff.pdf](http://www.londonderry.org/assets/documents/lmt/accept_use_staff.pdf) and one for students available at: [http://www.londonderry.org/assets/documents/lmt/accept\\_use\\_student.pdf](http://www.londonderry.org/assets/documents/lmt/accept_use_student.pdf). These are also submitted as Appendix F and G.

## **Copyright and Fair Use Policy:**

The Londonderry School District adheres to the Copyright Law. A copyright handbook has been developed as a legal guideline for the reproduction and fair use of resources. In addition, all employees of the Londonderry School District are required to sign a Software Code of Ethics ensuring that they will use software only in accordance with license agreements. All staff and students (or legal guardians) are also required to sign an Acceptable Use Policy (AUP) Agreement Form, which also addresses copyright issues. The library media staff assumes responsibility for the education of staff and students as to the copyright law.

A copy of the district's handbook (includes Software Code of Ethics form and AUP) is accessible at: [http://www.londonderry.org/assets/documents/lmt/copyright\\_handbook.pdf](http://www.londonderry.org/assets/documents/lmt/copyright_handbook.pdf)

An abbreviated guide/brochure is available at:

[http://www.londonderry.org/assets/documents/lmt/copyright\\_brochure.pdf](http://www.londonderry.org/assets/documents/lmt/copyright_brochure.pdf)

and a related FAQ brochure at: [http://www.londonderry.org/assets/documents/lmt/copyright\\_faq.pdf](http://www.londonderry.org/assets/documents/lmt/copyright_faq.pdf)

## **Data Retention Policy**

The Londonderry School Board has an adopted Internet Log, Email and Voice Mail Retention Policy (EDDA) which is available at:

[http://www.londonderry.org/assets/documents/lmt/electronic\\_retention\\_policy%20.pdf](http://www.londonderry.org/assets/documents/lmt/electronic_retention_policy%20.pdf) and also

included as Appendix E of this plan.

## **Extended Learning Opportunities Online/Virtual Education Policy**

The Londonderry School Board has adopted an Extended Learning Opportunities Online/Virtual Education Policy (INAA) which is available at: [www.londonderry.org](http://www.londonderry.org) by clicking *School Board Policies* in the right frame and which is also included as Appendix H of this Plan

## **ISP and DNS Information**

The School District Internet Service Provider is Paetec, Inc., Manchester, NH and the main bonded T1 lines are located at Londonderry High School. There are also servers located at each of the individual schools and at the district office. Please refer to our topology plan for additional information.

## **Security Policy**

*Firewall:* Sonic Wall 4100

*Filtering:* The district is in compliance with CIPA requirements and is using the latest version of iPrism content filtering software.

*Data Backup:* Nightly tape back up via VERITAS Backup Exec of District critical data.

*Facility Security:* Most district buildings have fire/life safety systems; the high school and middle school and North Elementary School have sprinkler systems; all schools are equipped with motion detector systems with door alert back up; the high school is equipped with video security cameras.

*COPPA Compliance:* Addressed in AUP

*FERPA:* Addressed in AUP

*Passwords:* Addressed in AUP and required by all users for network and/or Internet access

*E-Mail:* Provided to all professional staff upon receipt of signed AUP; provided to support staff upon request of appropriate administrator and receipt of a signed AUP; no student accounts are provided unless requested by an administrator and then, only under extraordinary circumstances (i.e. exchange student, etc.)

*Computer Use:* Addressed in AUP

*Network Access:* Addressed in AUP

# APPENDICES

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# **APPENDIX A**

## **Matrices**

LEEP Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
Students	Use age appropriate software	Requirements of IEP	Access to computers  Age appropriate software  Software and/or hardware to meet IEP requirements  Access to printers	One computer connected to network and Internet  Software •Word Processor •Spreadsheet •Database •Multimedia software  Access to printers	Software updates  Troubleshooting software issues  Complexity of devices and software required by IEPs is outside the ability of staff Lack of standardization
Teachers	Word Processing Email Web page	Web page Teach benchmarks Use Student Management System for Attendance and Report Cards Enter data to INFO site	Software •Word Processor  Computer connected to network and Internet  Access to printers	Software •Word Processor •Spreadsheet •Database •Multimedia software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers	

Kindergarten Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
Students	Use software to support content Benchmarks	No computer Technology Benchmarks	Access to computers  Software •Word Processor •Multimedia software •Software to support content benchmarks  Access to printers	One computer connected to network and Internet  Software •Word Processor •Spreadsheet •Database •Multimedia software •Video editing software •Web browser on one computer with appropriate plug-ins to support interactive web sites •Graphic Organizers  Access to printers	Web sites that require the latest browser and plug-ins  Installing appropriate plug-ins  Software updates  Troubleshooting software issues

Teachers	Word Processing Email Web page Teach benchmarks Multimedia presentations Use technology to support teaching of content benchmarks Report Cards	Web page Teach benchmarks Report Cards Use Student Management System for Attendance and Report Cards Enter data to INFO site	Software •Word Processor •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers	Software •Word Processor •Spreadsheet •Database •Multimedia software •Video editing software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers	
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1 <sup>st</sup> & 2 <sup>nd</sup> Grade Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
Students	Word Processing Multimedia Internet Interactive web sites Video Editing Graphic Organizers Access online textbook	<p><b>1<sup>st</sup> Grade</b></p> <ul style="list-style-type: none"> <li>Observe the gathering of information and communicating with others using telecommunications</li> <li>Understand how to navigate a variety of resources in order to use them effectively</li> <li>Understand how to use classroom technology</li> </ul> <p><b>2<sup>nd</sup> Grade</b></p> <ul style="list-style-type: none"> <li>Observe the gathering of information and communicating with others using telecommunications</li> <li>Understand how to navigate a variety of resources in order to use them effectively</li> <li>Understand how to use classroom technology</li> <li>With assistance, create simple multimedia products</li> </ul>	<p>Access to computers connected to network and Internet</p> <p>Software</p> <ul style="list-style-type: none"> <li>Word Processor</li> <li>Multimedia software</li> <li>Web browser with appropriate plug-ins to support interactive web sites</li> <li>Software to support content benchmarks</li> </ul> <p>Access to printers</p>	<p>One connected to network and Internet</p> <p>Access to Mobile Lab (20 laptops 800 MHz G3, 256 MB, 30 GB Hard Drive, running OS 10.3)</p> <p>Software</p> <ul style="list-style-type: none"> <li>Word Processor</li> <li>Spreadsheet</li> <li>Database</li> <li>Multimedia software</li> <li>Painting</li> <li>Presentation</li> <li>Photo &amp; video editing software</li> <li>Web browser on one computer with appropriate plug-ins to support interactive web sites</li> <li>Graphic Organizers</li> </ul> <p>AlphaSmarts</p> <p>Access to printers</p>	<p>Web sites that require the latest browser and plug-ins</p> <p>Installing appropriate plug-ins</p> <p>Software updates</p> <p>Troubleshooting software issues</p> <p>Printing</p>

Teachers	<p>Word Processing Email Web page Teach benchmarks Multimedia presentations Video editing Use technology to support teaching of content benchmarks Report Cards Scan images Digital pictures Access online textbook</p>	<p>Web page Teach benchmarks Use Student Management System for Attendance and Report Cards Enter data to INFO site</p>	<p>Software •Word Processor •Multimedia software •Photo &amp; video editing software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers Access to scanners Access to digital cameras</p>	<p>Software •Word Processor •Spreadsheet •Database •Multimedia software •Painting •Presentation •Photo &amp; video editing software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Laptops for 5 teachers (tech rich) 16-64MG, etc.  Access to printers</p>	
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Grade 3 Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
Students	<p>Word Processing Multimedia Internet Interactive web sites Video Editing Graphic Organizers Keyboarding Access online textbook</p>	<ul style="list-style-type: none"> <li>• Use classroom technology effectively</li> <li>• Use word processing to create a written product</li> <li>• With assistance, create a multimedia presentation</li> </ul>	<p>Access to computers connected to network and Internet  Software •Word Processor •Multimedia software •Web browser with appropriate plug-ins to support interactive web sites •Software to support content benchmarks  Access to printers</p>	<p>One connected to network and Internet  Access to Mobile Lab (20 laptops 800 MHz G3, 256 MB, 30 GB Hard Drive, running OS 10.3)  Software •Word Processor •Spreadsheet •Database •Multimedia software •Painting •Presentation •Photo &amp; video editing software appropriate plug-ins to support interactive web sites •Graphic Organizers  AlphaSmarts  Access to printers</p>	<p>Web sites that require the latest browser and plug-ins  Installing appropriate plug-ins  Software updates  Troubleshooting software issues  Printing</p>

Teachers	<p>Word Processing Email Web page Teach benchmarks Multimedia presentations Video editing Use technology to support teaching of content benchmarks Report Cards Scan images Digital pictures Access online textbook</p>	<p>Web page Teach benchmarks Use Student Management System for Attendance and Report Cards Enter data to INFO site</p>	<p>Software •Word Processor •Multimedia software •Photo &amp; video editing software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers Access to scanners Access to digital cameras</p>	<p>Software •Word Processor •Spreadsheet •Database •Multimedia software •Painting •Presentation •Photo &amp; video editing software •appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers</p>	
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4 <sup>th</sup> Grade Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
Students	<p>Word Processing Multimedia Internet Interactive web sites Video Editing Graphic Organizers Keyboarding Access online textbook</p>	<ul style="list-style-type: none"> <li>• Demonstrate proper keyboarding techniques</li> <li>• Electronically edit and revise word-processing</li> <li>• Demonstrate and understanding of technology systems, concepts and operations</li> <li>• Use spreadsheets to organize data and to produce charts/graphs</li> <li>• Create a simple multimedia presentation that includes text, graphics, and sound</li> </ul>	<p>Access to computers connected to network and Internet  Software •Word Processor •Multimedia software •Web browser with appropriate plug-ins to support interactive web sites •Software to support content benchmarks  Access to printers</p>	<p>5 Computers connected to network and Internet  One computer connected to large monitor  Access to Mobile Lab  Software •Word Processor •Keyboarding •Spreadsheet •Database •Painting •Presentation •Multimedia authoring software •Photo &amp; video editing software • appropriate plug-ins to support interactive web sites •Graphic Organizer •Variety of software (teacher preference and/or content based)  AlphaSmarts  Access to printers</p>	<p>Web sites that require the latest browser and plug-ins  Installing appropriate plug-ins  Software updates  Troubleshooting software issues  Printing</p>

Teachers	<p>Word Processing Email Web page Teach benchmarks Multimedia presentations Video editing Use technology to support teaching of content benchmarks Report Cards Scan images Digital pictures Access online textbook</p>	<p>Web page Teach benchmarks Use Student Management System for Attendance and Report Cards Enter data to INFO site</p>	<p>Software •Word Processor •Multimedia software •Photo &amp; video editing software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers Access to scanners Access to digital cameras</p>	<p>Software •Word Processor •Spreadsheet •Database •Multimedia software •Painting •Presentation •Photo &amp; video editing software • appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers</p>	
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5 <sup>th</sup> Grade Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
Students	<p>Word Processing Multimedia Internet Interactive web sites Video Editing Graphic Organizers Keyboarding Access online textbook \ </p>	<ul style="list-style-type: none"> <li>• Demonstrate proper keyboarding techniques</li> <li>• Use spreadsheets to organize data and to produce charts/graphs</li> <li>• Use a database to access and organize information</li> <li>• Identify peripheral devices and demonstrate their uses (including but not limited to printer, scanners, and digital cameras)</li> <li>• Demonstrate an understanding of technology systems, concepts, and operations</li> <li>• Create a multimedia presentation that includes text, graphics, and sound</li> </ul>	<p>Access to computers connected to network and Internet</p> <p>Software •Word Processor •Multimedia software •Web browser with appropriate plug-ins to support interactive web sites •Software to support content benchmarks  Access to printers</p>	<p>5 Computers connected to network and Internet  One computer connected to large monitor  Access to Mobile Lab  Software •Word Processor •Keyboarding •Spreadsheet •Database •Painting •Presentation •Multimedia authoring software •Photo &amp; video editing software • appropriate plug-ins to support interactive web sites •Graphic Organizer •Variety of software (teacher preference and/or content based)  AlphaSmarts  Access to printers</p>	<p>Web sites that require the latest browser and plug-ins  Installing appropriate plug-ins  Software updates  Troubleshooting software issues  Printing</p>

Teachers	<p>Word Processing Email Web page Teach benchmarks Multimedia presentations Video editing Use technology to support teaching of content benchmarks Report Cards Scan images Digital pictures Access online textbook</p>	<p>Web page Teach benchmarks Use Student Management System for Attendance and Report Cards Enter data to INFO site</p>	<p>Software •Word Processor •Multimedia software •Photo &amp; video editing software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers Access to scanners Access to digital cameras</p>	<p>Software •Word Processor •Spreadsheet •Database •Multimedia software •Painting •Presentation •Photo &amp; video editing software • appropriate plug-ins to support interactive web sites  Computer connected to network and Internet  Access to printers</p>	
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SPED Students Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
SPED Students	<p>Word Processing Spreadsheet Database Multimedia Internet Interactive web sites Video Editing Keyboarding</p>	<p>Requirements of IEP  Save &amp; locate files Edit and revise documents Use spreadsheet to organize data and create graphs Use a simple database Create a multimedia presentation Demonstrate proper keyboarding techniques Locate information in electronic resources Use searching techniques of electronic resources</p>	<p>Access to computers  Software •Word Processor •Keyboarding •Spreadsheet •Database •Multimedia software •Web browser with appropriate plug-ins to support interactive web sites  Access to printers  Assistive adaptive devices as requires by IEP</p>	<p>4 or 5 connected to network and Internet and Internet  Access to Mobile Lab (20 laptops)  Software •Word Processor •Keyboarding •Spreadsheet •Database •Multimedia software •Photo &amp; video editing software •Web browser on one computer with appropriate plug-ins to support interactive web sites •Software as required by the IEP  AlphaSmarts  Access to printers</p>	<p>Web sites that require the latest browser and plug-ins  Installing appropriate plug-ins  Software updates  Troubleshooting software issues  Complexity of devices and software required by IEPs is outside the ability of staff  Lack of standardization</p>

Specialist (SPED, Reading, Music, Art, P.E., Special Curriculum, Math) Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
SPED Teachers	Word Processing Email Web page	Web page IEPs	Software •Word Processor •Testing/evaluation software  Computer connected to network and Internet Access to printers	Software •Word Processor •Keyboarding • Spreadsheet  Computer connected to network and Internet (some have laptops)  Access to printers	
Specialist Teachers	Word Processing Email Web page	Web page Use Student Management System for Attendance and Report Cards Enter data to INFO site	Access to computer Software •Word Processor •Spreadsheet •Database •Web browser  Access to computer connected to network and Internet  Access to printers	Software •Word Processor •Spreadsheet •Database •Multimedia software •Photo & video editing software •Web browser with appropriate plug-ins to support interactive web sites  Computer connected to network and Internet (some have laptops) Access to printers	Web sites that require the latest browser and plug-ins  Installing appropriate plug-ins  Software updates  Troubleshooting software issues

LMS Stakeholders	What they do	What they're required to do	What They Need	What They Have	Major Support Issues
Students	<p>Word Processing  Spreadsheet  Multimedia  Desktop Publishing  Internet  Interactive web sites  Keyboarding  Graphic Organizers  Search &amp; Evaluate web sites  Textbooks online  Variety of software (teacher preference and/or content based)  Scanning  Digital pictures  Distance Learning  <u>Music</u>  Sibelius software  Connect keyboards to computer</p> <p><u>P.E.</u>  Fitness Gram</p> <p><u>SpEd</u>  Assistive/adaptive &amp; developmentally appropriate hardware/software</p> <ul style="list-style-type: none"> <li>•Intellitools</li> <li>•Boardmaker</li> <li>•EdMark</li> <li>•Magnifiers</li> <li>•Dragon Naturally Speaking</li> </ul>	<p><u>6th Grade</u>  Locate and use a variety of information resources to fulfill the research task. With guidance, develop essential and open ended questions pertaining to topic  Identify key words to locate relevant information from a variety of information resources.  Record information using keywords and phrases (note taking).  Use the appropriate bibliography format for all resources used including quotations, images, and sound.  Utilize the basic features of a word processing program in order to communicate new knowledge in a related content area.  Create and present a multimedia product to convey new knowledge in a related content area.  Use a spreadsheet to create and manipulate data to convey new knowledge in a related content area.  Use digital tools to communicate and work collaboratively to support content area learning.  Demonstrate ethical use of creative works and information when creating new products or communicating new knowledge.  Read, views and listens for aesthetic and personal growth.</p> <p><u>7th Grade</u>  Develop essential and open ended questions pertaining to topic.  Develop and refine research questions in response to information gathered.  Use advanced search tools in digital information resources.  Create and present a multimedia product to convey new knowledge in a related content area.  Use a spreadsheet to create and manipulate data to convey new knowledge in a related content area.  Demonstrate ethical use of creative works and information when creating new products or communicating new knowledge.  Read, views and listens for aesthetic and personal growth.</p> <p><u>8th Grade</u>  Identify misconceptions, conflicting information, and point of view or bias from information resources.  Select the most useful information resources to fulfill specific research needs.  Use a variety of note taking strategies.  Create and present a multimedia product to convey new knowledge in a related content area.  Use a spreadsheet to create and</p>	<p>Access to computers</p> <p>Software</p> <ul style="list-style-type: none"> <li>•Word Processor</li> <li>•Keyboarding</li> <li>•Spreadsheet</li> <li>•Multimedia software</li> <li>•Web browser with updated appropriate plug-ins to support web sites</li> <li>•Software to support content benchmarks</li> </ul> <p>Access to printers</p> <p>Access to scanners</p> <p>Access to digital cameras</p>	<p>Access to computers in the following locations:</p> <ul style="list-style-type: none"> <li>•2 Curriculum Labs (one mobile)</li> <li>•Related Arts Labs (three)</li> <li>•Media Center (24)</li> <li>•Classroom computers</li> <li>•AlphaSmarts (50 + 3 Neo Labs)</li> </ul> <p>Software</p> <ul style="list-style-type: none"> <li>•Word Processor</li> <li>•Keyboarding</li> <li>•Spreadsheet</li> <li>•Desktop Publishing</li> <li>•Multimedia software</li> <li>•Graphic Organizer</li> <li>•PDF creator</li> <li>•Office 2007 Compatibility patch</li> <li>•Web browser with appropriate plug-ins to support web sites</li> </ul> <p>Access to printers</p> <p>Access to projection devices (data projector or large monitor)</p> <p><u>ESL</u>-Laptop  <u>BAS</u>-Laptop (grant), 5 desktops (grant)</p>	<p>Web sites that require the latest browser and plug-ins</p> <p>Installing appropriate plug-ins</p> <p>Software updates (Windows &amp; Office)</p> <p>Troubleshooting software issues</p>

		<p>manipulate data to convey new knowledge in a related content area. Use digital tools to communicate and work collaboratively to support content area learning. Read, views and listens for aesthetic and personal growth.</p> <p>Digital Portfolios Shared Folders</p>			
Teachers	<p>Word Processing Email Web page Multimedia presentations Internet X2 (grades &amp; attendance) Textbooks online Integrate technology benchmark into curriculum Use technology to support teaching of content benchmarks Video editing (minimal) Networked classroom instruction software (NetOp) in 3 labs</p>	<p>Email Web page X2 (grades &amp; attendance)</p> <p>Integrate technology into the curriculum Shared Folders Intranet</p> <p>Enter data to INFO site Report problems to School Dude</p>	<p>Access to computers connected to network and Internet</p> <p>Software •Word Processor •Multimedia software •Web browser with appropriate plug-ins to support web sites •Email • X2 (grades &amp; attendance)</p> <p>Access to printers</p>	<p>Software •Word Processor •Keyboarding •Spreadsheet •Database •Multimedia software •Email •X2 •PDF creator •Office 2007 Compatibility patch •Web browser with appropriate plug-ins to support web sites •Limited access to video editing software Computer connected to network and Internet</p> <p>Access to printers P.E.-Laptop (grant)</p>	

Overview	Benchmarks	Londonderry High School
<p><b>Students</b></p> <p>-</p>	<p><b>Benchmarks for all students:</b>            Uses information and technology responsibly and ethically.            Uses appropriate digital tools to collect, organize and analyze information and/or data related to question or problem to be researched.            Develops appropriate search strategies to efficiently locate information in digital or other formats and evaluates and selects information appropriate to the topic.            Communicates and/or demonstrates the knowledge gained. (using appropriate digital tool)</p> <p><b>Curriculum specific benchmarks:</b>  <b>English:</b>            “Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate...” understanding (NCTE).  <b>Social Studies:</b>            Develop and interpret maps, charts, graphs, and political cartoons which show key information.  <b>Science:</b>            Design and conduct controlled scientific investigations, selecting and using technology and equipment suited for the task. Use technology and mathematics to improve scientific investigations.  <b>Business and Computer Education:</b>            Uses common productivity and web based software.            Uses a variety of multimedia software and equipment.            Configures computers and basic network configurations.            Applies programming concepts used in software development.</p>	
<p><b>Faculty</b></p> <p>-</p>	<p><b>General computer use:</b>            Internet research, word processing, presentations, e-mail, teacher web pages and general curriculum work, X2 Grading &amp; attendance Software</p>	
<p><b>Administration &amp; Support Staff</b></p>	<p><b>General computer use:</b>            MS Office Suite, Internet Explorer, Munis, X2</p>	

<b>What is needed to run the software (specifications):</b>		
-	Vendor recommended hardware specifications for software installations are used as a guideline	
<b>Software:</b>		
	<p><b>Base software configuration installed on all computers:</b>  <u>Purchased software licensing:</u> Windows XP, Microsoft Office Professional Suite, includes Outlook, Word, Excel, Access, PowerPoint, Publisher; Internet Explorer, Windows Media Player and Microsoft Movie Maker; Inspiration; Deep Freeze</p>	
<b>Computers and equipment currently in use: (What they have)</b>		
<b>Computers:</b>	<p><b>General Access:</b> Curriculum Lab, Library Media Center and classroom computers</p> <p><b>Faculty Access:</b> Three faculty rooms, LMC faculty area, four department offices, SpEd Offices, classroom computers and faculty assigned laptops</p> <p><b>Specialty Areas:</b> Business &amp; Computer Labs; Tech Rich Classrooms; Robotics; Biotechnology; Technology Education Labs; School-to-Career Center, Physics &amp; Music Lab</p> <p><b>Administrators and support staff:</b> Individually assigned desktop computers or laptops</p>	
<b>Portable Devices:</b>	<p><b>Used in English Tech Rich classroom</b> 24 Neosmarts - portable word processors - on a cart</p> <p><b>Used in English Tech Rich classroom</b> 24 Neosmarts on a cart</p> <p><b>Used in At Risk World Studies Class (SS/Eng. double-classes):</b> 24 Neosmarts on a cart</p> <p><b>Used in Special Education:</b> 10 AlphaSmarts 4 Pocket PCs - handheld computers</p> <p><b>Available in the LMC:</b> 1 AlphaSmart, 1 Neos</p>	

Support Issues:	
-	<p><b>General Support Issues:</b>            Teachers experience times when they are unable to schedule their classes into the Curriculum Lab and the Library due to heavy use.            Updated versions of software need to be purchased on a timely basis, along with the supporting hardware requirements, in order to support the curriculum.            50 sub-level computers need to be replaced.            Computers need to be upgraded to accommodate digital media streaming for next school year.            Appropriate amount of bandwidth is necessary as well.</p>
-	<p><b>Curriculum Software Support Issues:</b>            The IT Department needs to forecast and give one year's notice prior to the purchase and installation of upgrades to the Windows operating system, to Microsoft Office and to specific software titles used in Business and Computer Education and in other areas of the curriculum. Prior notice to teachers ensures that the planning and budgeting process for learning materials and text books proceeds correctly. It also gives teachers time to learn and plan the course work.            The Windows operating system and specific software titles used in the curriculum need to be upgraded on a timely basis, in order to teach to current industry standards and to be in alignment with the career pathways; plus upgrades to supporting hardware.</p>

NH School Technology Survey 2008-09 Computer Levels			
	PC	MAC	
Level 0	< 1 GHz	< G4	
Level A	= 1 GHz	G4	
Level B	> 1 GHz up to 2 GHz	G5	
Level C	> 2 GHz; Duo; Quad	Intel	

Stakeholders (By area)	Courses, Coursework Description or Technology Use Description (What they do)	Software (What they use / do)	What is needed to run the software (specifications):	Computers in use: (What they have by level & pentium)
<b>Labs</b>				
<b>Business &amp; Computer Technology CISCO Lab 173</b>		Standard software installations Cisco Software, Adobe Creative Suites, yearbook software	25 level B	25 Level C
<b>Business &amp; Computer Technology Labs Lab 174,407 and 411</b>	AP Computer Science C++ Structured Programming I,II Animation for the Web	Standard software configuration Programming software, Accounting, Creative Suite software	80 Level C	80 Level C
<b>Curriculum Lab Room 218</b>	Used by classes across the curriculum and by the newspaper students; used for staff training	Standard software installations, Adobe Reader, Adobe Acrobat & Distiller, Adobe Creative Suites, Guidance Central, Exam View Pro Test Generator, PDF Maker, FTP, Derive 5, Geometers Sketchpad, Inspiration, Key Train, MiniTab, Internet Explorer with plug-ins, MSOffice, MSActive Sync, NetOp, NIDA, Oregon Trail, Quicktime, Read Please, Water Pollution, WinZip, TI-InterActive!™ Integrated Learning Software, Audacity, Civilization	31 Level C	31 Level C

<b>English Tech Rich Classrooms Rooms 201, 206, 207, 219 &amp; 220</b>		Standard software installations, Creative Suites, Radio Production Software	30 Level C	30 Level C 18 Thin Client
<b>FACS Tech Rich Classroom Room 301</b>		Standard software installations, Banking Basics, Supermarket Bits, Real Care Baby	5 Level C	5 Level C
<b>Library Media Center</b>		Standard software installations, Visual Studio.net, Creative Suites, Key Train, Guidance Central, Derive 5, Geometers Sketchpad, Inspiration, Water Pollution, TI-InterActive!™ ILearning , Graphical Analysis, Robolab, Modelsmart1	57 Level C	57 Level C
<b>Stakeholders (By area)</b>	<b>Courses, Coursework Description or Technology Use Description (What they do)</b>	<b>Software (What they use / do)</b>	<b>What is needed to run the software (specifications):</b>	<b>Computers in use: (What they have by level &amp; pentium)</b>
<b>School-to-Career Center</b>		Standard software installations, Guidance Central, Bridges, Career Cruising	6 Level C	2 Level B, 4 Level C
<b>Science Tech Rich Rooms 505, 507, 519, 530, 531, 532</b>		Standard software installations, Water Pollution, Recycle City, Logger Pro, Graphical Analyzer, Sento Student Response Systems, Vernier Graphing	18 Level B, 24 Level C	2 Level B, 24 Level C, 16 Level 0
<b>Technology Education Labs Room 360, 308, 305, 307, 310, 311 Access Ctr</b>		Standard software installations, NetOp, AutoDesk Suite: Westpoint Bridge Designer, RoboPro, MD Solids, SSA 1000/ Architectural, Creative Suites, Mavis Beacon, MultiSIM, Explosion Art, Audacity, iTunes, iMovie, iDVD, iPhoto, iLife, Soundtrack, Live Type, Final Cut	74 Level C	60 Level C, 9 Level B, 1 Level 0, 4 Level A

<b>General Classrooms</b>		Standard software installations and some specialized software like Creative Suites, TI Interactive, Accounting and Language Software	91 Level B	8 Level 0, 6 Level A, 14 Level B, 63 Level C
<b>Literacy Lab &amp; Math Lab Room 166, 210</b>		Standard software installation, TI Interactive	2 Level B	2 Level C
<b>Music Room 315</b>		Standard software installation, Sibelius software, Alfred Music Software, Smart Music	18 Level C	18 Level C
<b>Science Room 530</b>		Standard software installation, smartboard software	2 Level C	2 Level C
<b>Special Education Classrooms</b>		Standard software installation, Co-Writer, Boardmaker,	11 Level B	9 Level C, 10 Level B, 1 Level A
<b>Special Education Faculty</b>		Standard software installation,	12 Level B	11 Level B, 1 Level 0
<b>Special Education Admin</b>		Standard software installation, CELF 4, WISC-III & WIAT-II, CASL Assist	7 Level B	2 Level B, 5 Level C
<b>District Guidance Office ESL</b>		Standard software installation	1 Level B	1 Level B
<b>Spec. Ed. Multi-sensory program for district room 109</b>		Standard software installation, Comfy First Steps, Type to Learn	1 Level B	1 Level 0
<b>Faculty Offices</b>		Standard software installation	Level B & Level C total= (36)	17 Level B, 19 Level C
<b>Stakeholders (By area)</b>	<b>Courses, Coursework Description or Technology Use Description</b>	<b>Software (What they use / do)</b>	<b>What is needed to run the software (specifications):</b>	<b>Computers in use: (What they have by level &amp; pentium)</b>

	(What they do)			
<b>Administrative &amp; Support Staff</b>				
<b>Gym</b>		Standard software installation, Schedule Star.net, Quicken and Video Surveillance security	Level B & Level C total = (11)	1 Level A, 5 Level B, 5 Level C
<b>House 1, 2, 3, 4</b>		Standard software installation	16 Level B	13 Level B, 3 Level C
<b>Attendance, Cafeteria, Custodian, Nurse</b>		Standard software installation, Crystal reports, Maintenance Direct	8 Level B	1 Level A, 7 Level B
<b>Career Ctr, Curr. Office, Main Guidance, School to Community, Main Office, School Resource Officer</b>		Standard software installation, PageMaker, eGuidance, Munis	Level B & Level C for total of 14	9 Level B, 5 Level C
<b>Technology Office Room 535</b>		Standard software installation, Web Master / LEO TV slideshow, Studio MX Cold Fusion	4 Level C	4 Level C
<b>IT</b>		Standard software installation	2 Level C	2 Level C
<b>LMC Admin</b>		Standard software installation, Destiny, Netop, Overdrive, Audacity, Munis	4 Level C	4 Level C

# **APPENDIX B**

## Initiative Template

# Initiative Template FY'10

<b>Overview:</b>	
Initiative name:	
Definition (full sentence on what it is):	
Fiscal Year(s) for implementation:	
Sponsor (Who is asking for this):	
Manager (Who owns responsibility for this):	
Correlation to Goals, Strategic Plan or Tactical Plan: Strategic Plan -	
Expected benefits (Educational, Efficiency, Reduced cost, maintain functionality, etc):	
Professional recommendation (Technical and Educational):	
<b>Implementation Plan (Calendar Months &amp; milestones &amp; resource assignments):</b>	
Study Phase Starting Date: / Ending Date	
Recommendation Phase Starting Date: / Ending Date	
Testing and Modeling against the standards Starting Date: / Ending Date:	
Implementation: Starting Date: / Ending Date:	
Evaluation: Starting Date: / Ending Date	
Basic Procedure (show basic detail of how it will be done including automation or steps):	
Disaster Plan to recover or maintain functionality if initiative execution falters or fails	
<b>Training plan:</b>	
Who will be trained (teachers, students, administrators, etc)	
Who will do the training (Internal trainer, external trainer training in house, external trainer training external facility)	
When will the training take place? (During school day, After school ,Early release ,Teacher workshop day, Summer)	
How long will the training take (total in hours)	
How will the training be leveraged (video, FAQ, CD, Non real time, distance, etc)	
<b>Quality Control &amp; Assessment plan (How will you know it worked):</b>	
<b>Maintenance and update plan (Who and how will this be maintained):</b>	
<b>Costs Fill in Summary Sheet XLS Table:</b>	
Hardware External Purchases \$\$	
Software Licenses \$\$	

External Services \$\$	
IT Tech Non Programming Time	
IT / Ed Tech programming Time	
Ed Tech Non Programming Time	
External Training \$\$	
Internal Training Hours	
<b>Impacts, Diligence &amp; Risks</b>	
Impact (on other initiatives, educational environment; etc):	
Risks associated with doing the initiative:	
Due Diligence (What did you check to assure details are right)	
Other options considered:	
:	

**Cost Dollars ( \$\$ ) and Hours Summary**

Technology Initiatives – Master List –					FY' Fill In					
Name	Maint. Support	Cal Yr. Launched	% of completion	Expected Compl Date MM/YY	Resources / Components expended in this FY					
					Hardware Purchase \$\$	Software License \$\$	External Services \$\$	IT Tech non programming hrs.	IT / Ed Tech Programming hrs.	Ed tech non programming hrs.
Fill In										
	External training \$\$	Internal Training hrs.	Est. or Actual FY 2007 External \$\$	Est. or Actual FY 2007 Internal Hours	Est. or Actual FY 2008 External \$\$	Est. or Actual FY 2008 Internal Hours	Est. or Actual FY 2008 External \$\$	Est. or Actual FY 2009 Internal Hours		
Fill In										

**Actual (after project is done, what were the real numbers)**

Actual outright cost in dollars:	
Actual labor costs in man hours:	
Actual recurring costs:	
Actual outside resource costs in dollars and hours:	

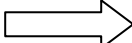


# **APPENDIX C**

# **Initiative Follow Up**

# **Template**

## Initiative Follow Up Template FY'10

<b>Overview:</b>	At Start	At Finish
Initiative name (from Initiative Doc):		
Definition (full sentence on what it is):		
Fiscal Year(s) implemented:		
Sponsor (Who asked for this):		
Manager (Who owns responsibility for this):		
Correlation to Goals, Strategic Plan or Tactical Plan: Strategic Plan -		
Expected benefits (Educational, Efficiency, Reduced cost, maintain functionality, etc):		
Professional recommendation (Technical and Educational):		
<b>Implementation Plan (Calendar Months &amp; milestones &amp; resource assignments):</b>		
Study Phase Starting Date: / Ending Date		
Recommendation Phase Starting Date: / Ending Date		
Testing and Modeling against the standards Starting Date: / Ending Date:		
Implementation: Starting Date: / Ending Date:		
Evaluation: Starting Date: / Ending Date		
Basic Procedure (show basic detail of how it will be done including automation or steps):		
Problems encountered		

Disaster Plan to recover or maintain functionality if initiative execution falters or fails		
<b>Training plan:</b>		
Who was trained (teachers, students, administrators, etc)		
Who did the training (Internal trainer, external trainer training in house, external trainer training external facility)		
When did the training take place? (During school day, After school ,Early release ,Teacher workshop day, Summer)		
How long did the training take (total in hours)		
How was the training leveraged (video, FAQ, CD, Non real time, distance, etc)		
<b>Quality Control &amp; Assessment plan (How did you know it worked well for the users):</b>		
<b>Maintenance and update plan (Who and how is this maintained):</b>		
<b>Costs Fill in Summary Sheet XLS Table:</b>		
Hardware External Purchases \$\$		
Software Licenses \$\$		
External Services \$\$		
IT Tech Non Programming Time	IT Summer Time: Part Time or Ed Tech Summer Time: IT Maintenance Time:	
IT / Ed Tech programming Time		
Ed Tech Non Programming Time		
External Training \$\$		
Internal Training Hours		
<b>Impacts, Diligence &amp; Risks</b>		

Impact (on other initiatives, educational environment; etc):		
Risks associated with having done the initiative:		
Due Diligence (What did you check to assure details are right)		
Other options considered:		
Other comments		
:		

### Cost Dollars (\$\$) and Hours Summary

Technology Initiatives – Master List –						FY' Fill In				
Name						Resources / Components expended in this FY				
	Maint, Support	Cal Yr. Launched	% of completion	Expected Compl Date MM/YY	Hardware Purchase \$\$	Software License \$\$	External Services \$\$	IT Tech non programming hrs.	IT / Ed Tech Programming hrs.	Ed tech non programming hrs.
Fill In										
	External training \$\$	Internal Training hrs.	Est. or Actual FY 2006 External \$\$	Est. or Actual FY 2006 Internal Hours	Est. or Actual FY 2007 External \$\$	Est. or Actual FY 2007 Internal Hours	Est. or Actual FY 2008 External \$\$	Est. or Actual FY 2008 Internal Hours		
Fill In										

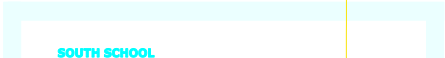
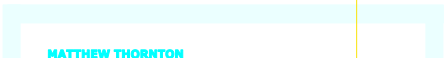
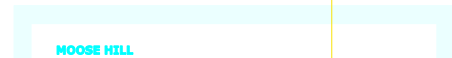
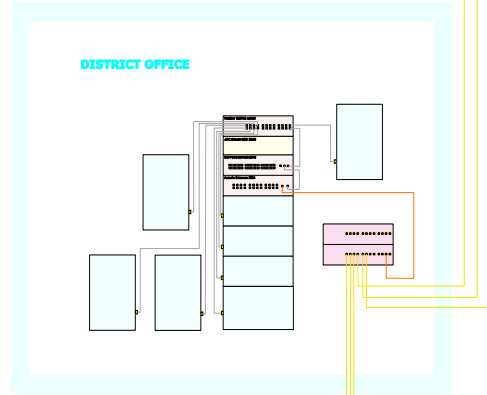
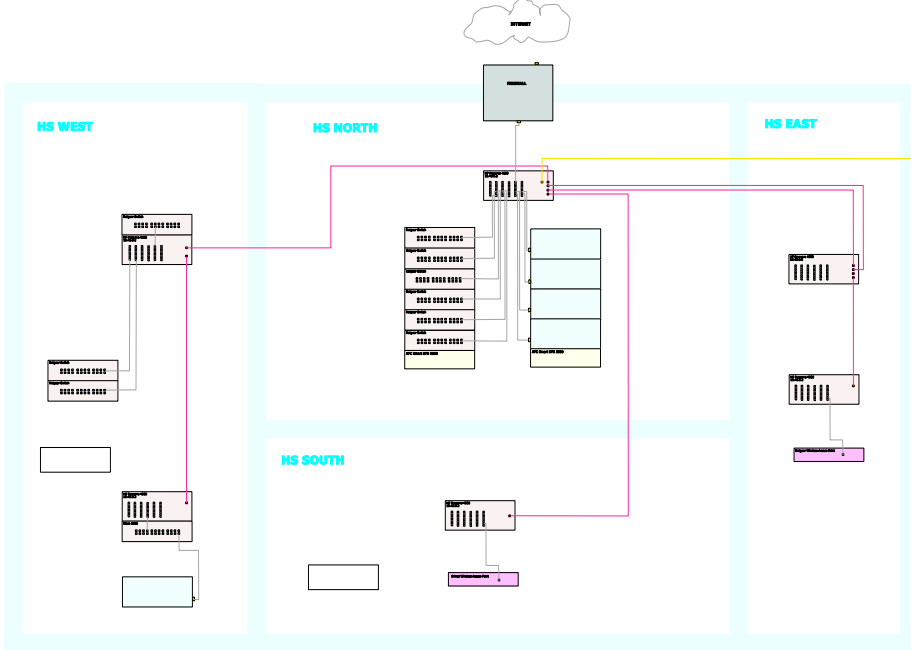
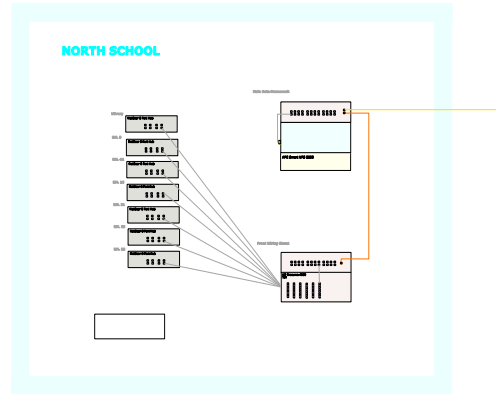
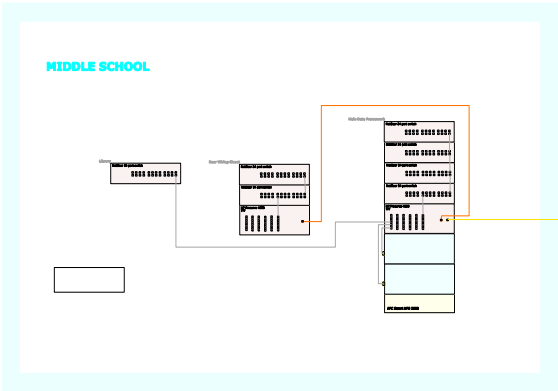
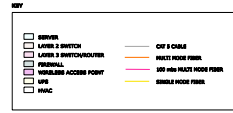
### Actual (after project is done, what were the real numbers)

Actual outright cost in dollars:	
Actual labor costs in man hours:	
Actual recurring costs:	
Actual outside resource costs in dollars and hours:	

# **APPENDIX D**

## **Network Topology**

# LONDONDERRY SCHOOL DISTRICT NETWORK



# **APPENDIX E**

## **Data Retention Policy**

**LONDONDERRY SCHOOL DISTRICT**  
**Internet Log/Email/Voice Mail Retention Policy**

**Introduction:**

In today's modern working environment, employees create and maintain an increasing portion of work product in electronic form. Competing for precious electronic disk space are other data files including, but not limited to, e-mail files, network and internet use logs, temporary internet files and other diagnostic files. Given the limited availability of electronic disk space, the School Board finds that it is not a prudent use of the Londonderry School District's resources to maintain many of these records indefinitely. Therefore, all personnel shall be responsible to manage their use of electronic disk space in accordance with this policy, state and federal law. The School Board specifically finds that computer use logs and email should be managed and deleted after its useful life span has expired. The purpose of this policy is to preserve institutional history, while at the same time preserving limited hardware resources so that identified unnecessary data is automatically purged from the system after its useful life span has expired.

**Computer Use Log Retention:**

1. It will be the policy of the school district to retain Internet and server use files (logs) for ten calendar days.
2. If a person or agency requests a copy of any file, they must submit a request in writing to the Business Administrator.
3. The district will charge the agency or person the hourly wage for the district's employee to recover the requested files.

**Voice/Email Retention:**

The Londonderry School District provides employees with voice and/or electronic mail (e-mail) accounts to help them communicate with others and be well informed. However, given the increasing sophistication of those inappropriately seeking to gain access to sensitive information, the District's voice/e-mail system should not be used to store such sensitive information. All e-mail should be deleted from the hard drive or network once it is reviewed. If an employee needs to retain a voice/e-mail message as an official record, the employee should make a printed copy or should transfer the message to an appropriate file/location. Any e-mail message that would be saved if it had been transmitted in paper form should be printed and retained in school records in accordance with the district's Records Retention Schedule. All e-mail messages should be deleted from the system by the e-mail user (after those messages that should be retained have been printed in hard copy) within 90 days after receipt of an e-mail message.

**ADMINISTRATIVE PERSONNEL WILL DELETE E-MAIL MESSAGES AND OTHER MISCELLANEOUS INTERNET DATA THAT IS IN EXCESS OF 90 DAYS OLD WITHOUT FURTHER NOTIFICATION.**

Staff members with questions regarding the retention of particular e-mail messages should obtain an opinion from their immediate supervisor.

**The following are limited guidelines for the responsible use of voice/e-mail:**

***I. Examples of voice/e-mail messages, which may be deleted without printing a hard copy or otherwise preserving:***

- A. Messages that address routine administrative, curricular and co-curricular matters, announcements of meetings, schedules of events, etc.
- B. Messages that take the place of informal discussion and which if they were printed would not be retained in school record.
- C. Messages that transmit generic information and are not specific to a student's educational program.
- D. Messages that address personal matters unrelated to the School District.

**II. Examples of voice/e-mail messages, which should be printed and retained or otherwise preserved:**

- A. Messages that address significant aspects of a specific student's educational program including, but not limited to, health, discipline, special education program, interaction with state agencies and the courts and communication with parents relating to specific aspects of the student's interaction with the school district.
- B. Messages that address and/or provide information used in making policy decisions, concerning curricular or co-curricular activities, personnel actions or that relate to the business transactions of the School District.
- C. Messages that address activities of significant interest in the community relating to the School District.

**Other voice/e-mail procedures and guidelines are outlined in the District's Acceptable Use policy, which is hereby incorporated by reference.**

LONDONDERRY SCHOOL BOARD

Adopted 6/13/2006

# **APPENDIX F**

## **AUP - STAFF**

## LONDONDERRY SCHOOL DISTRICT

### Acceptable Use Policy: Staff

For purposes of this policy, “staff” refers to Londonderry School District employees, contracted service personnel, SAU employees and any volunteers working within the District or schools.

The responsibility of the staff is to familiarize himself/herself with and abide by the rules of this Acceptable Use Policy, the Staff Handbook, Copyright Handbook and all other applicable school policies.

#### **Introduction**

Pursuant to New Hampshire Revised Statutes Annotated 194:3-d, this Acceptable Use Policy shall serve as a statement on the appropriate use of the various “technology resources” available to all authorized staff of the Londonderry School District including, but not limited to, the Londonderry School District computers, network, electronic mail system (e-mail), school district website ([www.londonderry.org](http://www.londonderry.org)) and Internet/Website access. It is the Londonderry School District’s goal to enhance educational excellence with the assistance of these technology resources.

#### **A. The Internet**

The Internet and the World Wide Web is a vast information network that links individuals, computers, networks and databases throughout the world. The Internet has the potential to serve as an invaluable resource because it allows immediate access to and download of educational material found at universities and colleges, government agencies and departments, non-profit organizations, private businesses and companies and even private residences. All staff must be aware that the Internet’s power to access limitless information resources also includes information or material that lacks educational value and can be inaccurate, controversial, objectionable, offensive defamatory and even illegal. The Londonderry School District does not condone the use of such materials at any time and prohibits the use of the Londonderry School District technology resources for these purposes. Yet, it is technologically impossible for the Londonderry School District to adequately filter or control the quality or content of the information available on the Internet while still retaining a meaningful connection to it. Therefore, all staff will be held responsible for ensuring that their activities adhere to the District’s Acceptable Use Policy and to generally accepted educational standards as outlined in other applicable District policies.

The Internet also provides new and exciting interactive communication technologies, such as e-mail, podcast, blogs, wikis, news groups, list servers, instant chat rooms and discussion groups. While these interactive technologies are exciting and hold great potential for the learning process, they are also very disruptive if improperly utilized. Staff use of Londonderry School District Network/ Internet access to participate in these interactive technologies must be related to District business or have an educational purpose and be sanctioned by the District.

Clearly, the Londonderry School District Internet access can serve as a means for improving, extending and enriching the teaching and learning in the Londonderry School District. Thus, the Londonderry School District firmly believes that the educational benefits to staff and students from access to the Internet, in the form of information resources and opportunities for collaboration or interaction, far exceed the disadvantages.

## **B Londonderry School District Web Presence**

The Londonderry School District's presence on the Internet has been established to communicate the happenings of the Londonderry School District with staff, students, parents, community members and the world. The District's sections of the Londonderry Website are intended to convey general information about the District's schools, events, curriculum or programs of study and policies and procedures. Since sections must be responsibly developed, all information or material posted must be professional, ethical and meet the standards required of other District publications. As such, it is not a forum for regularly hosting publications for non-Londonderry School District events or organizations. The District uniformly prohibits any unauthorized hyperlinks from its sections to other websites. Any unauthorized hyperlink to the school district or schools section is a violation of this policy, subject to disciplinary action.

All staff who wish to post information on or attach web pages (other than the teacher web page presence provided by the district) to the District's website sections must complete and submit to the District a signed copy of the Web Acceptable Use Policy Agreement Form, which will become a part of an individual's personnel file. If the proposed Web Acceptable Use Policy Agreement Form is approved by the Londonderry School District, then the information will be subject to review to ensure compliance with the District's Acceptable Use Policy and any other applicable District policies, as well as copyright laws. Staff must understand that the Web Acceptable Use Policy Agreement Form is a contract. As part of this contract, the Londonderry School District reserves the right to, at any time, without advance notice to staff, monitor access, modify, remove, review and/or retrieve the subject, content and appropriateness of any and all information stored or transmitted on the District's sections of the Londonderry Website, hyperlinks or web page attached to these sections. Original staff work that is posted will be protected by copyright laws and the District will act as an intermediary for any request for permission to use and/or publish staff work excluding those defined as "work for hire" for which the District is the copyright holder.

Employees may create electronic home pages, publication pages, information pages and personal pages that carry out official business in support of the District's mission. Contents of all such electronic pages must be consistent with district policies, procedures, regulations, and local, state and federal laws. Employees must advise the appropriate administrator of the site and request a review and authorization prior to the site/page being attached to the district web site section. Administration will review/respond within ten (10) days of the request. Naturally, strictly personal pages are not the purview of the District and no district resources may be utilized in the creation of these pages.

In order to maintain the safety of the Londonderry School District students, student work or materials, pictures of students, and any such other information that would allow for the identification of students, will only be allowed after the receipt of written permission from students and their parents or guardians. All information about students posted will comply with

the District's policy on student records, the Federal Family Education Rights and Privacy Act, and any other applicable state or federal law.

### **Responsibilities**

Staff is responsible for appropriate and professional behavior when using the Londonderry School District technology resources, just as they are in a classroom or other District function. As outlined in the Staff Handbook, general school rules for behavior and communications apply. The Londonderry School District technology resources are provided for staff to conduct research, gather information and communicate with others for educational purposes. The Londonderry School District technology resources shall not be utilized for recreational, personal, commercial or other non-educational purposes.

Acknowledging that the potential for abuse of the Network/Internet exists, all staff must sign the Londonderry School District Acceptable Use Agreement Form prior to accessing Londonderry School District technology resources. All staff shall assume full liability, whether legal, financial or otherwise, for their actions when using the Londonderry School District technology resources.

Responsible use of the Londonderry School District technology resources by staff includes, but is not limited to, the following:

- Not interfering with the normal and proper operation of the Londonderry School District computers, network, e-mail system website sections or Internet access;
- Not adversely affecting the ability of others to use equipment or services unless specifically authorized;
- Not conducting themselves in ways that are harmful or deliberately offensive to others;
- Not using the technology resources for illegal purposes;
- Not changing files that do not belong to the user unless specifically authorized;
- Not storing or transferring unnecessarily large files;
- Not creating, transferring or otherwise using or accessing any text, image, movie, sound recording or electronic or digital file that contains pornography, profanity, obscenity or language that offends or tends to degrade others, especially that deemed "harmful to minors";
- Not attempting to install any software on the computers;
- Not downloading software from the Internet;
- Not sharing personal passwords or personal information in violation of the District's Confidentiality Policy;
- Not leaving personal files open or leaving computer sessions unattended;
- Only using the technology resources when authorized to do so as outlined in this policy;
- Changing passwords regularly or whenever their current passwords may be known to others;
- Immediately notifying the principal or appropriate District Administrator when they know that others are utilizing the District's technology resources for unlawful or suspicious activities.

## **Privilege**

The use of the Londonderry School District technology resources is a privilege and not a right. Londonderry School District technology resources are only provided for educational purposes to students and staff of the District, and shall not constitute a public forum. Inappropriate use shall result in appropriate disciplinary action.

Behaviors and activities that shall result in appropriate disciplinary actions include, but are not limited to:

- Using the technology resources for commercial, financial and/or personal gain, including solicitation and business of any nature;
- Using the technology resources for Union business;
- Using the technology resources for political lobbying, except as expressly allowed during a school activity;
- Using the technology resources for promoting, supporting or celebrating religion or religious institutions;
- Using profanity, vulgarities, obscenity or other language which tends to be offensive or tends to degrade others;
- Accessing, viewing, storing or transferring obscene, sexually explicit or pornographic materials;
- Sending hate mail, anonymous messages or threatening messages;
- Sending “chain” type letters and unsolicited bulk mails (Spamming);
- Using harassing, racial, sexist or discriminatory remarks and other antisocial behaviors;
- Using e-mail, news groups, list servers, instant chat rooms and discussion groups for non-educational purposes;
- Wasting limited resources, including paper;
- Using invasive software such as “viruses”, “worms” and other detrimental activities;
- Using encryption or security measures to avoid monitoring or review in the ordinary course of business or routine maintenance by the system administrator;
- Attempts to log-on to the network as the system administrator;
- Using someone else’s password;
- Misrepresenting oneself as another user;
- Trespassing in another’s folders, work, files or e-mails;
- Revealing personal information in violation of the District’s Confidentiality Policy;
- Infiltrating, disrupting or interfering with others’ use of the Londonderry School District technology resources or infiltrating, disrupting or interfering with others’ use of outside computing systems or networks;
- Intentionally infringing upon the intellectual property rights of others in computer programs or electronic information, including plagiarism and/or unauthorized use or reproduction;
- Transferring, utilizing or storing material in violation of copyright laws or license agreements;
- Involvement in any activity prohibited by law or school district policy;
- Creating hyperlinks between the Londonderry School District sections of the Londonderry Website and other Internet sites;

- Off school premises computer use, web page creation and Internet access for the purpose of disrupting the learning process by any of the means listed above.

Use of the District's technology resources for any altruistic or charitable purpose must be approved in advance by the District. The Londonderry School District reserves the right to add and include additional behaviors and activities that can result in appropriate disciplinary action.

### **Intentional Violations**

The District is aware that violations of this policy may occur under circumstances where the staff is involuntarily routed to sites containing inappropriate information or material. Upon arriving at such sites, it is the responsibility of the staff member to immediately exit such site as quickly as possible. The District is also aware that commercial vendors may secure E-Mail addresses of staff members and use these addresses to propagate or otherwise deliver viruses, worms, commercial advertisements, solicitations, etc., under circumstances where the staff member has no control, intention or desire to access or transmit the offending information or material. Accordingly, disciplinary action under this policy shall only result from willful and intentional violations of this policy. Notwithstanding, the District reserves the right to discipline any staff member for violations of this policy where it is apparent that the staff member knew, or should have known, that violations of this policy were likely to occur as a result of the actions, or inactions, of the staff member in question. As soon as possible, staff shall take steps to delete the unwelcomed material and remove it from the District's computer systems, unless the preservation of such material is necessary to pursue disciplinary action against another staff member or student. Further, to the degree possible, staff should take appropriate steps to discourage and/or prevent further unwelcomed deliveries or transmissions, including, if necessary, reporting the situation to the system administrator so that appropriate steps can be taken to prevent further inadvertent and unintentional violations of this policy.

### **Disciplinary Actions**

- Staff violation of this Acceptable Use Policy and/or other Londonderry School District policies shall result in, but is not limited to, one or more of the following:
- Restriction, suspension or revocation of access privileges;
- Written warnings or a letter or reprimand in the personnel file;
- Other remedies, such as suspensions and terminations as covered under New Hampshire law;
- Referral to the appropriate legal authorities for possible criminal prosecution;
- Civil liability

### **Privacy**

Staff have no rights of privacy with regard to their use of the Londonderry School District technology resources, which includes but is not limited to, the Londonderry School District computers, network, electronic mail system (e-mail), website sections and Internet access. The Londonderry School District retains ownership and possessory control of its technology resources. The District does not guarantee and staff should not have any expectation of confidentiality, privacy, security or ownership of the content of any information accessed, sent, received, created or stored thereon. All staff should realize that electronic communications and

other information sent through the Internet are accessible by third parties, specifically the Internet Service Provider.

The Londonderry School District networked technology resources are maintained and managed by a system administrator in such a way as to insure its availability and reliability in performing the Londonderry School District educational mission. Staff are advised that the District's technology resources are treated as a shared filing system, which means that in the ordinary course of business, pursuit of educational purposes, routine maintenance, or in the course of an investigation to protect the health, welfare and safety of the District, its staff and students, a system administrator or other authorized District staff member may, at any time, without advance notice to students/teachers/staff, monitor, access, modify, remove, review, retrieve and/or disclose the subject, content and appropriateness of any and all information stored or transmitted on District technology resources, including information that may have been deleted but still exists on the system. All staff is put on notice that deleted messages are never completely removed and may be retrieved or restored. Staff should not save their personal work on computer hard drives or the network, but rather should use a personal disk for saving their work. All staff shall frequently delete old files. During routine maintenance the system administrator or designee may delete files stored on any of the Londonderry School District technology resources. Specifics regarding the data and email retention schedule adopted by the School Board are detailed in Board Policy EDDA and all staff must familiarize themselves with this information.

The District makes no warranties of any kind, whether express or implied, for the technology services it is providing. While the Londonderry School District will make every effort to preserve data, the responsibility for it lies with the staff. The District will not be held responsible for any damages staff may suffer, including but not limited to, loss of data resulting from delays, non-deliveries, mis-deliveries or service interruption caused by its own negligence or a staff's errors or omissions. The District specifically denies any responsibility for the accuracy or quality of information obtained through its technology resources. All staff must fully understand that the use of any information obtained through the Internet is at their own risk.

The Londonderry School District reserves the right to record all Internet addresses and electronic communications accessed by staff. Likewise, the District has the right to determine what information is posted on its website sections and it will routinely monitor all technology resources in order to maintain their integrity and to ensure compliance with this policy. Any and all violations of this policy detected by the system administrator will be reported to the school principal or appropriate District Administrator for disciplinary action

### **Copyrighted and Other Proprietary Materials**

It is the intent of the Londonderry School District to adhere to the provisions of the U.S. Copyright Act, and the license agreements and/or policy statements contained in software packages or other resources used by the District. All staff shall be responsible for reviewing An Educator's Guide to Copyright, which was prepared by the Londonderry School District Library, Media and Technology Services. All staff must sign the Londonderry School District Software Code of Ethics Agreement Form, which will become a part of an individual's personnel file. All staff shall respect the copyright and proprietary interest of any materials accessed through the Londonderry School District technology resources. Staff may not duplicate copyrighted

materials, graphics or software, including school owned software, without permission from the copyright holder, unless the use falls within the legal parameters of the Fair Use Doctrine, whether for personal use or for the use of others. The improper duplication or use of copyrighted materials is a violation of this policy and is subject to disciplinary action, as well as possible civil liability and criminal prosecution.

### **Complaints**

If violations of this policy occur all staff are required to immediately notify the school principal or appropriate District employee of the school where the infraction occurred, or where the staff person is based. The school principal or appropriate District Administrator shall document all complaints in writing. Every effort will be made to protect the anonymity of the reporting person, but it cannot always be guaranteed. The school principal or appropriate District Administrator shall conduct an investigation of the complaint and shall report any disciplinary action taken.

Staff who are disciplined as a result of this policy have the same appeal procedure as any disciplinary action, which is through the school principal or appropriate District employee, the Superintendent and the School Board.

### **Enforcement**

The Londonderry School District uses a technology protection measure that blocks or filters Internet access to some Internet sites that are not in accordance with District policy.

The technology protection measure that blocks or filters access may be disabled by appropriate personnel upon request for bona fide research purposes by an adult. Appropriate personnel may override the technology protection measure to access a site with legitimate educational value that is wrongly blocked by the technology protection measure.

### **Exemptions**

The District recognizes that the job requirements of several positions may conflict with the specific language of this Policy. Accordingly, the Superintendent may exempt such positions from the policy as necessary to carry out their individual responsibilities. It shall be the responsibility of Superintendent to develop a list of exempt positions and to identify the specific sections of the policy that are inapplicable. An addendum shall be attached to the employee's signed Acceptable Use Agreement Form indicating the nature and extent of the exemption. Among the positions recognized as entitled to an exemption are: Director of Library Media and Technology, IT Director, Business Administrator, Database/Software Administrator, Network Administrator, IT Technicians, Video/Web Technician (s), Computer Educators, Business Educators, Vocational Educators (CAD/Cam, Graphic Arts, and Video), Library Media Specialists, Trainer/Integrationist, Computer Assistants.

Appropriate personnel will monitor use of the Internet to ensure enforcement of the policy.

### **LONDONDERRY SCHOOL BOARD**

Adopted: January 22, 2002

Amended: September 7, 2004

Amended: May 6, 2008

**LONDONDERRY SCHOOL DISTRICT  
ACCEPTABLE USE POLICY AGREEMENT FORM**

THE FOLLOWING MUST BE COMPLETED BY ALL STAFF PRIOR TO  
ANY USE OF TECHNOLOGY RESOURCES.

1. I acknowledge that I have received, read and fully understand the Londonderry School District's Acceptable Use Policy.
2. It is clear to me that use of the District's "technology resources", such as the District's computers, network, electronic mail service, website sections and Internet access is designed for educational purposes only.
3. I agree to immediately report any misuse of the District's technology resources to the principal of the school where the infraction occurred, or where I am based.
4. I understand that my violation of the Londonderry School District Acceptable Use Policy may result in the restriction, suspension or cancellation of access privileges and may result in other disciplinary action, civil liability or criminal prosecution by the appropriate authorities.
5. I certify that the information contained in this form is true and accurate.

Staff Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Staff Name: \_\_\_\_\_ Date: \_\_\_\_\_  
(please print)

Home Address: \_\_\_\_\_

Home Phone Number: \_\_\_\_\_

LONDONDERRY SCHOOL BOARD  
Adopted: January 22, 2002  
Amended: September 7, 2004  
Amended: May 6, 2008

**LONDONDERRY SCHOOL DISTRICT  
WEB ACCEPTABLE USE POLICY AGREEMENT FORM**

THE FOLLOWING MUST BE COMPLETE BY ALL APPLICANTS AND APPROVED BY THE DISTRICT PRIOR TO ANY USE OF THE DISTRICT'S WEBSITE SECTIONS.

Applicant's Name: \_\_\_\_\_ (please print)

Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Department/Building/Program: \_\_\_\_\_

Home Address: \_\_\_\_\_

Home Phone Number: \_\_\_\_\_

Purpose of Project or Information Posted: \_\_\_\_\_

1. I acknowledge that I have received, read and fully understand the Londonderry School District's Acceptable Use Policy.
2. It is clear to me that use of the District's "technology resources", specifically the District's website sections, is designed for educational purposes only.
3. I am responsible for any and all information that I am posting on the District's website sections.
4. I agree to ensure information accuracy, relevance and timeliness.
5. I agree to notify the administration whenever changes are to be made to these pages.
6. I understand that all information or files stored in the District's website sections directory will be served to the World Wide Web and thus, are open to inspection by the District.
7. I understand that my violation of the Londonderry School District Acceptable Use Policy may result in the restriction, suspension or cancellation of access privileges and may result in other disciplinary action, civil liability or criminal prosecution by the appropriate authorities.
8. I understand that I am using the District's technology resources, specifically the District's website sections, at my own risk.
9. I hereby release, indemnify and hold harmless the Londonderry School District, its staff and any institutions with which it is affiliated, from any and all claims and damages of any nature arising from my use of or inability to use the District's technology resources, specifically the District's website sections.
10. I certify that the information contained in this form is true and accurate.

APPROVED: \_\_\_\_\_ DECLINED: \_\_\_\_\_

(Please send copy to Director of Library, Media & Technology)

Administrator's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

LONDONDERRY SCHOOL BOARD

Adopted: January 22, 2002

Amended: September 7, 2004

Amended: May 6, 2008

## LONDONDERRY SCHOOL DISTRICT SOFTWARE CODE OF ETHICS

All employees and students of the Londonderry School District shall use software only in accordance with its license agreements. Unless otherwise noted in the license, or in the event that the software arrived without a license agreement, any duplication of copyrighted software, except for back-up and archival purposes, is a violation of federal law and district policy. This signed Code of Ethics must be filed with the Building Principal and the Director of Library, Media and Technology Services.

1. I will use all software according to the provisions of license agreements.
2. I will not make unauthorized copies of software under any circumstances.
3. I recognize that the district will not tolerate the use of any illegal software copies on district computers.
4. I understand that anyone found copying software other than for back-up purposes is subject to district disciplinary actions.
5. I understand that anyone found making illegal software copies may be subject to civil and criminal penalties.
6. I will obtain approval of the school principal or other appropriate administrator (i.e. utilizing the Instructional Materials Approval Form) prior to use of any personally owned software within the district or on district property.

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EMPLOYEE SIGNATURE

DATE

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PRINT NAME, SCHOOL AND ASSIGNMENT

# **APPENDIX G**

## **AUP - Students**

**LONDONDERRY SCHOOL DISTRICT**  
**Acceptable Use Policy: Students**

**The responsibility of the students and the parents or guardians of students is to familiarize himself/herself with and abide by the rules of this Acceptable Use Policy, the Student Handbook and all other applicable school policies.**

**I. Introduction**

Pursuant to New Hampshire Revised Statutes Annotated 194:3-d, this Acceptable Use Policy shall serve as a statement on the appropriate use of the various “technology resources” available to all authorized students of the Londonderry School District including, but not limited to, the Londonderry School District computers, network, electronic mail system (e-mail), website (homepage) and Internet access. It is the Londonderry School District’s goal to enhance educational excellence with the assistance of these technology resources.

**A. The Internet**

The Internet, and the World Wide Web, is a vast information network that links individuals, computers, networks and databases throughout the world. The Internet has the potential to serve as an invaluable resource because it allows immediate access to and download of educational materials found at universities and colleges, government agencies and departments, non-profit organizations, private businesses and companies, and even private residences. Parents and guardians should be aware that the Internet’s power to access limitless resources also includes information or material that lacks educational value and can be inaccurate, controversial, objectionable, offensive, defamatory and even illegal. The Londonderry School District does not condone the use of such materials at any time and prohibits the use of the Londonderry School District technology resources for these purposes. Yet, it is technologically impossible for the Londonderry School District or any district staff member to adequately filter or control the quality or content of the information available on the Internet while still retaining a meaningful connection to it. Therefore, students will be held responsible for ensuring that their activities adhere to the District’s Acceptable Use Policy and to generally accepted educational standards as outlined in other applicable district policies.

The Internet also provides new and exciting interactive communication technologies, such as e-mail, news groups, listservs, instant chatrooms, podcasts, wikis, blogs and discussion groups. While these interactive technologies are exciting and hold great potential for the learning process, they are also very disruptive if improperly utilized. Students using Londonderry School District Internet access to participate in these interactive technologies without an educational purpose will immediately lose all Internet access privileges and may be subject to disciplinary action.

Clearly, the Londonderry School District Internet access can serve as a means for improving, extending and enriching teaching and learning in the Londonderry School District. Thus, the Londonderry School District firmly believes that the educational benefits to staff and students from access to the Internet, in the form of information resources and opportunities for collaboration or interaction, far exceed the disadvantages.

#### B. Londonderry School District Web Presence

The Londonderry School district's presence on the Internet has been established to communicate the happenings of the Londonderry School District with staff, students, parents, community members and the world. The District's Website ([www.londonderry.org](http://www.londonderry.org)) is intended to convey general information about the District's schools, events, curriculum or programs of study, and policies and procedures. Since sections must be responsibly developed, all information or material must be professional, ethical and meet the standards required of other district publications. As such, it is not a forum for regularly hosting publications for non-Londonderry School District events or organizations. The District uniformly prohibits unauthorized hyperlinks from its sections to other websites. Any unauthorized hyperlink to the school district or schools section is a violation of this policy, subject to disciplinary action.

Students or organizations who wish to post information on or attach web pages to the District's website sections must complete and submit to the District a signed copy of the Website/Home Page Acceptable Use Policy Agreement Form. If the proposed Web Acceptable Use Policy Agreement Form is approved by the Londonderry School District, then the information of the student or organization will be subject to review to ensure compliance with the District's Acceptable Use Policy and any other applicable District policies, as well as copyright laws. The student or organization understands that the Web Acceptable Use Policy Agreement Form is a contract. As part of this contract, the Londonderry School District reserves the right to at any time, without advance notice to students, monitor, access, modify, remove, review, and/or retrieve the subject, content, and appropriateness of any and all information stored or transmitted on the District's sections of the Londonderry Website, hyperlinks or web pages attached to these sections. Original student work that is posted will be protected by copyright laws and the District will act as an intermediary for any request for permission to use and/or publish student work.

In order to maintain the safety of the Londonderry School District students, student work or materials, pictures of students, and any such other information that would allow for the identification of students, will only be allowed after the receipt of written permission from students and their parents or guardians. All information about students posted will comply with the District's policy on student records, the Federal Family Education Rights and Privacy Act, and any other applicable state or federal law.

## II. Responsibilities

Students are responsible for appropriate behavior when using the Londonderry School District technology resources, just as they are in a classroom or a school hallway. As outlined in the Student Handbook, general school rules for behavior and communications apply. The Londonderry School District technology resources are provided for students to conduct research, gather information and communicate with others for educational purposes. The Londonderry School District technology resources shall not be utilized for personal, commercial or other non-educational purposes. In the first instance students shall be required to utilize the Londonderry School District technology resources under the supervision of the Londonderry School District staff. The Londonderry School District staff may, in its discretion, allow students to access the Londonderry School District technology resources without direct supervision if the students have demonstrated that they will act in a responsible manner.

Acknowledging that the potential for abuse of network resources exists, all students and parents or guardians of students who are minors must sign the Londonderry School District Acceptable Use Agreement Form prior to accessing the Londonderry School District technology resources. All students and parents or guardians of students shall assume full liability, whether legal, financial or otherwise, for students' actions when using the Londonderry School District technology resources. Similarly, outside of school, parents and guardians bear responsibility for the appropriate guidance of their children on the Internet, as they do with other information sources such as television, telephones, movies, radio or other potentially offensive media.

Responsible use of the Londonderry School District technology resources by students includes, but is not limited to, the following:

- i. Not interfering with the normal and proper operation of the Londonderry School District computers, network, e-mail system, website or Internet access;
- ii. Not adversely affecting the ability of others to use equipment or services;
- iii. Not conducting themselves in ways that are harmful or deliberately offensive to others;
- iv. Not using the technology resources for illegal purposes;
- v. Not using school technology or network resources in "hacking" attempts or attempts to otherwise compromise system security;
- vi. Not using electronic mail, chat rooms and other forms of direct electronic communication unless in a supervised environment;
- vii. Not disclosing personal information such as name, school, address, personal email address, and telephone number outside of the school network other than to access school approved educational resources;
- viii. Not changing files that do not belong to the user;
- ix. Not storing or transferring unnecessarily large files;
- x. Not creating, transferring or otherwise using any text, image, movie or sound recording that contains pornography, profanity, obscenity or language that offends or tends to degrade others;
- xi. Not attempting to install any software on the computers;
- xii. Not downloading software from the Internet;

- xiii. Not sharing personal passwords or personal information with others;
- xiv. Not leaving personal files open or leaving computer sessions unattended;
- xv. Only using the technology resources when authorized to do so as outlined in this policy;
- xvi. Logging onto the network and using only your account
  
- xvi. Changing passwords regularly or whenever their current passwords may be known to others;
- xvii. Immediately notifying a parent, classroom teacher, principal or appropriate District employee if others are trying to contact them for unlawful or suspicious activities.

### III. Privilege

The use of the Londonderry School District technology resources is a privilege and not a right. The Londonderry School District technology resources are only provided for educational purposes to students and staff of the District, and shall not constitute a public forum.

Behaviors and activities that shall result in appropriate disciplinary action include, but are not limited to:

- i. Using the technology resources for commercial, financial and/or personal gain, including solicitation and business of any nature;
- ii. Using the technology resources for political lobbying, except as expressly allowed, during a school activity;
- iii. Using the technology resources for promoting, supporting or celebrating religion or religious institutions;
- iv. Using profanity, vulgarity, obscenity or other language which tends to be offensive or tends to degrade others;
- v. Accessing, viewing, storing or transferring profanity, vulgarity, obscene, sexually explicit or pornographic materials;
- vi. Sending hate mail, anonymous messages or threatening messages;
- vii. Sending “chain” type letters and unsolicited bulk mails (spamming);
- viii. Using harassing, racial, sexist or discriminatory remarks and other antisocial behaviors;
- ix. Using e-mail, news groups, list servers, instant chat rooms and discussion groups for non-educational purposes;
- x. Wasting limited resources, including paper;
- xi. Using invasive software such as “viruses”, “worms” and other detrimental activities;
- xii. Using encryption or security measures to avoid monitoring or review in the ordinary course of business or routine maintenance by the system administrator or District staff;
- xiii. Attempt to log-on to the network as the system administrator;
- xiv. Using someone else’s password;
- xv. Misrepresenting oneself as another user;
- xvi. Trespassing in another’s folders, work, files or e-mails;

- xvii. Revealing personal information about others;
- xviii. Infiltrating, disrupting or interfering with others' use of the Londonderry School District technology resources or infiltrating, disrupting or interfering with others' use of outside computing systems or networks;
- xix. Intentionally infringing upon the intellectual property rights of others in computer programs or electronic information, including plagiarism and/or unauthorized use or reproduction;
- xx. Transferring, utilizing or storing material in violation of copyright laws or license agreements;
- xxi. Involvement in any activity prohibited by law or school district policy;
- xxii. Creating hyperlinks between the Londonderry School District sections of the Londonderry Website and other Internet sites;
- xxiii. Off school premises computer use, web page creation and Internet access for the purpose of disrupting the learning process by any of the means listed above.

Use of the District's technology resources for any altruistic or charitable purpose must be approved in advance by the District. The Londonderry School District reserves the right to add and include additional behaviors and activities that can result in appropriate disciplinary action.

#### IV. Intentional Violations

The District is aware that violations of this policy may occur under circumstances where the student is involuntarily routed to sites containing inappropriate information or material. Accordingly, disciplinary action under this policy shall only result from willful and intentional violations of this policy. Notwithstanding, the District reserves the right to discipline any student for violations of this policy where it is apparent that the student knew, or should have known, that violations of this policy were likely to occur as a result of the actions, or inactions, of the student in question.

#### V. Disciplinary Actions

Student violation of this Acceptable Use Policy and/or other Londonderry School District policies shall result in, but is not limited to, one or more of the following:

- i. Restriction, suspension or revocation of access privileges;
- ii. Removal from a class activity;
- iii. Removal from a course;
- iv. Removal from an extracurricular activity;
- v. Detention, suspension or expulsion;
- vi. Referral to the appropriate legal authorities for possible criminal prosecution;
- vii. Civil liability.

## VI. Privacy

Students have no rights of privacy with regard to their use of the Londonderry School District technology resources, which includes but is not limited to the Londonderry School District computers, network, electronic mail system (e-mail), District sections of the Londonderry Website and Internet access. Londonderry School District retains ownership and possessory control of its technology resources. The District does not guarantee, and students should not have any expectation of, confidentiality, privacy, security or ownership of the content of any information accessed, sent, received, created or stored thereon. Students should realize that electronic communications and other information sent through the Internet are accessible by third parties, specifically the Internet Service Provider.

The Londonderry School District technology resources are maintained and managed by a system administrator in such a way as to insure its availability and reliability in performing the Londonderry School District educational mission. Students are advised that the District's technology resources are treated as a shared filing system, which means that in the ordinary course of business, pursuit of educational purposes, routine maintenance, or in the course of an investigation to protect the health, welfare and safety of the District, its staff and students, a system administrator or other authorized District staff member may, at any time, without advance notice to students, monitor, access, modify, remove, review, retrieve, and/or disclose the subject, content and appropriateness of any and all information stored or transmitted on District technology resources, including information that may have been deleted but still exists on the system. Students are put on notice that deleted files or messages are never completely removed and may be retrieved or restored. Students should not save their personal work on computer hard drives or the network, but rather should use a personal disk for saving their work. Students shall frequently delete old files. During routine maintenance the system administrator may delete files stored on any of the Londonderry School District technology resources.

The District makes no warranties of any kind, whether express or implied, for the technology services it is providing. While the Londonderry School District will make every effort to preserve data, the responsibility for it lies with the students. The District will not be held responsible for any damages a student may suffer, including but not limited to, loss of data resulting from delays, non-deliveries, mis-deliveries or service interruption caused by its own negligence or a student's errors or omissions. The District specifically denies any responsibility for the accuracy or quality of information obtained through its technology resources. Students must fully understand that the use of any information obtained through the Internet is at the student's own risk.

The Londonderry School District reserves the right to record all Internet addresses and electronic communications accessed by students. Likewise, the District has the right to determine what information is posted on its website and it will routinely monitor all technology resources in order to maintain their integrity and to ensure compliance with this policy. Any and all violations of this policy detected by the system administrator will be reported to the school principal or appropriate District Administrator for disciplinary action.

## VII. Copyrighted and Other Proprietary Materials

It is the intent of the Londonderry School District to adhere to the provisions of the U.S. Copyright Act, the license agreements and/or policy statements contained in software packages used by the District. All students shall be responsible for respecting the copyright and proprietary interest of any materials accessed through the Londonderry School District technology resources. Students may not duplicate copyrighted materials, graphics or software, including school owned software, without permission from the copyright holder, unless the use falls within the legal parameters of the Fair Use Doctrine, whether for personal use or for the use of others. The improper duplication or use of copyrighted materials is a violation of this policy and is subject to disciplinary action, as well as possible civil liability and criminal prosecution.

## VIII. Complaints

If violations of this policy occur, students and parents or guardians of students shall inform the classroom teacher, school principal or appropriate District Administrator. The classroom teacher, school principal or appropriate District employee shall document all complaints in writing. Every effort will be made to protect the anonymity of the reporting person, but it cannot always be guaranteed. The school principal or appropriate District Administrator shall conduct an investigation of the complaint and shall report any disciplinary action taken.

Students who are disciplined as a result of this policy have the same appeal procedure as any disciplinary action, which is through the school principal or appropriate District Administrator, the Superintendent and the School Board.

## IX. Enforcement

The Londonderry School District uses a technology protection measure that blocks or filters Internet access to some Internet sites that are not in accordance with District policy.

The technology protection measure that blocks or filters access may be disabled by appropriate personnel upon request for bona fide research purposes by an adult. Appropriate personnel may override the technology protection measure to access a site with legitimate educational value that is wrongly blocked by the technology protection measure.

Appropriate personnel will monitor use of the Internet to ensure enforcement of the policy.

LONDONDERRY SCHOOL BOARD

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Adopted: January 22, 2002  
Amended: September 7, 2004  
Amended: May 6, 2008

**LONDONDERRY SCHOOL DISTRICT  
ACCEPTABLE USE POLICY AGREEMENT FORM**

**THE FOLLOWING MUST BE COMPLETED BY THE PARENT OR GUARDIAN OF ALL STUDENTS UNDER THE AGE OF 18 PRIOR TO ANY USE OF TECHNOLOGY RESOURCES**

As the parent or guardian of \_\_\_\_\_, I acknowledge that I have received, read and fully understand the Londonderry School District's Acceptable Use Policy.

1. It is clear to me that use of the District's "technology resources", such as the District's computers, network, electronic mail service, website and Internet web access is designed for educational purposes only.
2. I have discussed and explained the Londonderry School District Acceptable Use Policy to my child.
3. I agree to immediately report any misuse of the District's technology resources to the District administration.
4. I understand that my child's violation of the Londonderry School District Acceptable Use Policy may result in the restriction, suspension or cancellation of access privileges, and may result in other disciplinary action, civil liability or criminal prosecution by the appropriate authorities.
5. I have emphasized to my child the importance of following this policy for reasons of his/her own personal safety and the safety of others.
6. I understand that I allow my child to use the District's technology resources at his/her own risk and at my own risk.
7. I hereby release, indemnify and hold harmless the Londonderry School District, its staff and any institutions with which it is affiliated, from any and all claims and damages of any nature arising from my child's use of or inability to use the District's technology resources.
8. I certify that the information contained in this form is true and accurate.
9. (Please check only one) I hereby \_\_\_give/\_\_\_do not give permission for my child to access the Londonderry School District technology resources.

Parent/Guardian Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Parent/Guardian Name: \_\_\_\_\_ Date: \_\_\_\_\_

(please print)

Home Address: \_\_\_\_\_

Home Phone Number: \_\_\_\_\_ Work Phone Number \_\_\_\_\_

LONDONDERRY SCHOOL BOARD

Adopted: January 22, 2002

Amended: September 7, 2004

Amended: May 6, 2008

**LONDONDERRY SCHOOL DISTRICT  
ACCEPTABLE USE POLICY AGREEMENT FORM**

**THE FOLLOWING MUST BE COMPLETED BY ALL STUDENTS, GRADES 6 THROUGH 12, PRIOR TO ANY USE OF TECHNOLOGY RESOURCES.**

- 1. I acknowledge that I have received, read and completely understand or have had explained to me by my parent or guardian the Londonderry School District's Acceptable Use Policy.**
- 2. I agree to use the District's technology resources, such as the District's computers, network, electronic mail service, website and Internet web access, for educational purposes only.**
- 3. I understand that any violation of the Acceptable Use Policy may result in the restriction, suspension or cancellation of access privileges, and may result in other disciplinary action, civil liability or criminal prosecution by the appropriate authorities.**
- 4. I agree to report any misuse of the District's technology resources to my classroom teacher.**
- 5. I acknowledge that the use of the District's technology resources is entirely at my own risk.**
- 6. I hereby release, indemnify and hold harmless the Londonderry School District, its staff and any institutions with which it is affiliated, from any and all claims and damages of any nature arising from my use of the District technology resources.**

**Student's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Student's Name:** \_\_\_\_\_

**(please print)**

**Date of Birth:** \_\_\_\_\_

**Home Address:** \_\_\_\_\_

**Home Phone Number:** \_\_\_\_\_

LONDONDERRY SCHOOL BOARD

Adopted: January 22, 2002

Amended: September 7, 2004

Amended: May 6, 2008

**WEB ACCEPTABLE USE POLICY AGREEMENT FORM**

THE FOLLOWING MUST BE COMPLETE BY ALL APPLICANTS AND APPROVED BY THE DISTRICT PRIOR TO ANY USE OF THE DISTRICT'S WEBSITE SECTIONS.

Applicant's Name: \_\_\_\_\_  
(please print)

Applicant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Department/Building/Program: \_\_\_\_\_

Home Address: \_\_\_\_\_

Home Phone Number: \_\_\_\_\_

Purpose of Project or Information Posted: \_\_\_\_\_

- 
1. I acknowledge that I have received, read and fully understand the Londonderry School District's Acceptable Use Policy.
  2. It is clear to me that use of the District's "technology resources", specifically the District's website sections, is designed for educational purposes only.
  3. I am responsible for any and all information that I am posting on the District's website sections.
  4. I agree to ensure information accuracy, relevance and timeliness.
  5. I agree to notify the administration whenever changes are to be made to these pages.
  6. I understand that all information or files stored in the District's website sections directory will be served to the World Wide Web and thus, are open to inspection by the District.
  7. I understand that my violation of the Londonderry School District Acceptable Use Policy may result in the restriction, suspension or cancellation of access privileges and may result in other disciplinary action, civil liability or criminal prosecution by the appropriate authorities.
  8. I understand that I am using the District's technology resources, specifically the District's website sections, at my own risk.
  9. I hereby release, indemnify and hold harmless the Londonderry School District, its staff and any institutions with which it is affiliated, from any and all claims and damages of any nature arising from my use of or inability to use the District's technology resources, specifically the District's website sections.
  10. I certify that the information contained in this form is true and accurate.

APPROVED: \_\_\_\_\_ DECLINED: \_\_\_\_\_

(Please send copy to Director of Library, Media & Technology)

Administrator's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

LONDONDERRY SCHOOL BOARD

Adopted: January 22, 2002

Amended: September 7, 2004

Amended: May 6, 2008

# **APPENDIX H**

## **EXTENDED LEARNING OPPORTUNITIES ONLINE/VIRTUAL EDUCATION POLICY**

## **EXTENDED LEARNING OPPORTUNITIES ONLINE/VIRTUAL EDUCATION POLICY**

It is the policy of the Board to allow extended learning opportunities as a means of meeting the diverse instructional needs of students with different talents, interests, and development. All such opportunities must be aligned with the school's educational goals and objectives.

Such opportunities may provide credit (*under provisions of the 24 credit policy for high school diploma/20 credit policy for adult education diploma*) or supplement regular academic courses. Credits can be granted for extended learning activities including independent study, internships, distance education, video-based, internet-based, on-line, virtual, and other courses approved by principal and/or designee. This policy does not exempt students from taking and completing core academic courses and requirements per Londonderry High School Program of Studies.

The written approval of the building principal and/or designee is required before a district student enrolls in independent study, internships, video-based, internet-based, online, virtual, and other courses that is intended to become part of their educational program. Students applying for permission to take any of the above extended learning opportunities must complete prerequisites (i.e. provide course descriptions and attend parental conference prior to course approval from an accredited institution approved by principal and/or designee) to confirm the student possesses the maturity level and necessary skills needed to function effectively in an independent study, internship, online or virtual learning environment. Unless otherwise recommended by the Superintendent and approved by the Board, under ordinary circumstances, students or their parents/guardians shall be responsible for any and all related expenses.

Approved courses must align with state and local standards, be delivered by staff licensed in the state where the course originates from, and contain provisions for feedback and monitoring of student progress. The district will require a syllabus, including prerequisites, specific learning goals and activities, student evaluation criteria, and teacher responsibilities to be submitted for review to principal and/or designee before the course is approved as part of the student's educational program.

Students taking approved extended learning opportunities and/or online/virtual courses must be enrolled in the district and must take the courses during the regular school day at the school site, unless the principal and/or designee has granted approval for remote access based on special circumstances. Extended learning opportunities and/or online/virtual courses may be taken in the summer under the same conditions as during the school year. The principal and/or designee will monitor student progress, grading of assignments, and testing.

Approved extended learning opportunities, online/virtual courses must comply with all federal and state statutes pertaining to student privacy and to public broadcasting of audio and video. Confidentiality of Student Record Information will be maintained throughout the process. This includes information shared between school district representatives and the virtual school or online teacher, information shared between the school district or online teacher with students and parents, and information shared between school district representatives, the virtual school or online teacher with others.

The school district will provide safeguards for students participating in online instruction activities through the Londonderry Acceptable Use Policy IIAE-STUDENTS will apply.

Students earning credit for extended learning opportunities, online/virtual courses shall participate in all assessments required by the statewide education improvement and assessment program. Credit courses will require students to meet similar academic standards as required by the district.

Credit for the course will be based on Carnegie Units as determined by the principal and/or designee and is not recognized until an official record of the final grade has been approved by them with input from the online teacher. Grades will be on a pass or fail basis. These grades will not be a part of the student's grade point average.

Students who violate any part of the policy or engage in any other activity that school authorities consider inappropriate are subject to disciplinary action consistent with Board policies and the student handbook.

The Superintendent and/or designee will establish regulations and procedures for implementing this policy that will include:

- Application, approval, appeals process
- Administrative supervision and oversight of individual students programs by certified personnel
- Requirements that each extended learning and online/virtual program be approved prior to its beginning and is consistent with the goals and objectives of the high school program
- Reasonable limits such as the number of certified personnel available will determine the number of approved extended learning opportunities that can be administered each school year - school-wide and per student
- Assurance of equal access for all students
- Compliance with state and federal laws pertaining to minors
- Approved learning opportunities consistent with all policies of this board

*Legal References:*

*NH Code of Administrative Rules, Section Ed. 306.04(a) (12), Distance Education*

*NH Code of Administrative Rules, Section Ed. 306.22, Distance Education*

*NH Code of Administrative Rules, Section Ed. 306.27(q), High School Curriculum, Credits, Graduation Requirements, and Co-curricular Program*

*NH Code of Administrative Rules, Section Ed. 306.04(a) (13), Policy Development*

*NH Code of Administrative Rules, Section Ed. 306.26 (f), Extended Learning Opportunities - Middle School*

*NH Code of Administrative Rules, Section Ed. 306.27(b) (4), High School Curriculum, Extended Learning Opportunities*

**LONDONDERRY SCHOOL BOARD**

Adopted: July 24, 2007