Derry Cooperative School District

SAU 10

Technology Plan for Years: 2016-2019

June 2016

School board approved: **June 7, 2016**
Contact info: Raymond Larose Director of Technology

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School Board Approval

The following plan was approved by the School Board of the Derry Cooperative School District on June 7, 2016.

I. Introduction

This Technology plan will provide the guide to implement and support the technology necessary to achieve the mission of the district. The plan will support the educational and administrative goals for our students and staff to be successful now and in the future.

Technology Committee Members

The Technology Planning Committee includes representatives from elementary and middle schools. It is comprised of administrators, teachers, and technology assistants. Each brings a unique perspective to the planning discussion.

Caroline Sindoni	Grinnell School	Assistant Principal
Mitchell Edwards	West Running Brook	Assistant Principal
Leah Manchester	South Range	Computer Assistant
Kimberly Parsons	Gilbert H Hood	Teacher / Technology Leader
Monica Cataldo	East Derry Elementary	Teacher / Technology Leader
Pamela Englehardt	Derry Village	Teacher / Technology Leader
Pamela McDonald	Grinnell School	Teacher / Technology Leader
Diane Pius	Gilbert H Hood	Classroom Teacher
Tracy Graham	District	Network/Web Administrator
Nancy Hoffman	District	Student Data Coordinator
David Minkle	District	Media Coordinator
Dan Scanlon	District	Computer Technician
Raymond Larose	District	Director of Technology

Demographics

Derry is located 40 miles northwest of Boston. Its proximity to Boston and Interstate 93 enables many of its residents to commute to jobs in the metropolitan area. The estimated current population is 33,211 (2013 Census), the fourth largest in the state.

Derry's industrial and commercial base is disproportionately small. Eighty-two percent of adult residents work outside of the community. When Derry's taxes are equalized, it ranks 183 highest in the state's 224 communities (2013). Its average pupil expenditure (2013-14) of $13,106.79 is slightly below the state average of $14,001.08 (NH DOE 2014).

The Derry Cooperative School District is comprised of 5 elementary schools grades K-5 and 2 middle schools grades 6-8. Derry's high school students attend either the Next Charter School or Pinkerton Academy, a public/private school located in Derry that serves the towns of Derry, Auburn, Chester, and Hampstead. The tuition to Pinkerton is funded in the school district's budget. Derry students account for 1,897 of the 3,054 students at Pinkerton Academy.

School Enrollment (2015-2016)

Derry Village Elementary School	Grades K-5	445
East Derry Memorial Elementary School	Grades K-5	387
Ernest P. Barka Elementary School	Grades K-5	587
Grinnell Elementary School	Grades K-5	396
South Range Elementary School	Grades K-5	345
Gilbert H. Hood Middle School	Grades 6-8	691
West Running Brook Middle School	Grades 6-8	550
Derry Early Education Program	Preschool	156
Total District Enrollment		3401

You can learn more about the Derry School District on our website: http://sau10.org

District Mission Statement

The Derry Cooperative School District's mission for school age children is to create a safe and successful learning environment for all students; one that fosters challenging situations, promotes self worth, encourages learning as a lifelong activity, and produces healthy young adults who will contribute to society.

Technology Mission Statement: The Derry School District will provide its learning community with the skills necessary to live and work in the technology based 21st Century.

Purpose and Vision:
The purpose of the technology plan of the Derry School District is to identify and facilitate the technology resources necessary to accomplish the mission of the district. We believe that technology can make a positive impact on student learning, engaging students in learning that is challenging and relevant.

Specifically technology will:
- support a rigorous curriculum for all students to succeed in our global economy and society.
- create a positive learning environment promoting excellence in education for all students.
- support meaningful professional development necessary to ensure effective teachers
- provide a resource and a means for information gathering, problem solving, decision making, creativity, and self-expression.
- promote efficiency in administrative functions.
- promote family and community involvement.

II. Goals

The Derry School District is committed to achieving goals in the area of educational technology during the 2016 - 2019 school years. Goals support a district vision to provide teachers with the best training and tools available to provide students with the skills necessary to succeed in our schools and in their future. Information and Computer Technology Standards (ICT) are an essential component of a quality education. Our technology goals reflect the National Education Technology Standards for Students (NETS).

Access to Technology Resources

To increase access to technology throughout the district in order to:
- Maintain secure and reliable access to information stored on district computer systems and with authorized cloud partners.
- Implement physical, hardware, and software security solutions to protect data from unauthorized use and damage such as viruses, etc.
- Have the means to archive mission critical data. Policies and procedures will be implemented to determine when and if data should be retained or destroyed.
- Provide the latest content and keyword filtering in accordance with the Children's Internet Protection Act (CIPA) and No Child Left Behind (NCLB).
- To meet or exceed New Hampshire State Ed 306.08 Instructional Resources for school approval. Facilitate access to resources for student and faculty use, such as data storage, remote access accounts, and technology devices.
- Continue to provide staff and students access to the latest technology through annual hardware and software purchases, building a common 21st Century Classroom throughout the district.
- Move staff towards 1:1 mobile presentation systems (projector, cart, AppleTV, document cameras)
- Add accessibility to mobile devices in elementary schools
- Upgrade infrastructure required for VoIP communications and e911. Areas of concern include cabling, bandwidth, and intermediary networking devices.
- Upgrade and increase bandwidth through increased internet speeds and modern WiFi by running private and dedicated fiber WAN (eRate upgrade).

Literacy

Technology will continue to be integrated in the classroom in order to:
- Develop knowledge of digital citizenship use of technology and tools.
- Use technology to access, manage, integrate, evaluate, and create information to support Common Core Standards initiatives.
- Gain a level of basic technical knowledge of hardware, software / cloud applications, networks, and digital technology.

- Develop digital portfolios showcasing K-8 accomplishments in accordance with state recommendations.

Professional Development

Staff will have access to the technology resources and know how to:
- Integrate technology into the curriculum to enhance student learning.
- Access monthly technology training and workshops through 1-1 and flipped training.
- Design and Develop Digital Age Learning Experiences and Assessments.
- Access and assess student progress data.
- Engage in Professional Growth and Leadership.
- Provide an online collaborative environment for all district staff to work together.

Community Involvement

The Derry School District will:
- Keep parents informed about student progress and school activities.
- Update the community about school events.
- Maintain technology that will allow parents 24/7 direct access to pertinent student information.
- Update/Implement new technology that will allow school administrators to quickly communicate with parents in emergency situations.

III. Action Plan

Access to Technology Resources

The following action plan is based on current technology resources and strategies to increase student and teacher access. Planned acquisitions are steps toward the state goal of 1:1 ratio of students and teachers to technology tools. We will continue to maintain our current staffing levels of six full-time technology personnel and seven technology leaders for our 350+ teachers and 250+ professional staff to ensure attainment of all outlined instructional goals. A librarian will serve on the district Technology Task Force as a liaison in accordance with New Hampshire State Ed 306.08 Instructional Resources.

Current Status
The Derry School District migrated to cloud-based Google Apps for Education in the 2012-2013 school years giving all staff the ability to collaborate live on documents from anywhere, on any device. Teaching staff were all given MacBook Pro laptops in the 2015-2016 school year to increase technology accessibility.

- Hardware/Software model at Elementary Schools
    - Teacher MacBook Pro running Mac OS X connected to the building network and internet via WiFi
    - Networked laser printer per grade level, access to a network laser color printer and high-speed copier
    - Mobile presentation station per grade level which includes an LCD projector, cart and few with optional MacMini
    - Computer lab with 30 iMacs, network printer, mobile presentation station
    - Mobile cart with 25 wireless Chromebooks for students
    - Student and Staff access to Google Drive for collaboration / storage of files
    - Daily backup of critical servers

- Hardware/Software model at Middle Schools
    - Teacher MacBook Pro running Mac OS X connected to the building network and internet via WiFi
    - Networked laser printer per grade level, access to a network laser color printer and high-speed copier
    - Mobile presentation station per grade level which includes an LCD projector, cart and a few with optional MacMini
    - 3 open computer labs with 30 iMacs, network printer, mobile presentation station
    - Classroom computer lab (1 at WRB, 2 at GHH) with 30 iMacs, network printer, mobile presentation system

- 2 Mobile carts with 25 wireless Chromebooks for students
- Student and Staff access to Google Drive for collaboration / storage of files
- Daily backup of critical servers

Technology Plan Timeline

Action Item	2016-2017	2017-2018	2018-2019
Upgrade labs with Chromebox Systems		Upgrade 3 middle school labs	Upgrade 2 elementary labs and 1 middle school lab
Migrate lab iMacs to Libraries		3 middle off-lease iMacs to Library	2 elementary, 1 middle
Migrate PowerSchool to Cloud			Move from local servers to Pearson Hosted
Install InfoSnap		Begin paperless registration	
Move viable 21st Century pilot programs to district		Evaluate and implement viable pilots	Evaluate and implement viable pilots
Upgrade Infrastructure		Upgrade filtering + firewalls at GHH	
Replace Admin Laptops			Replace 35 admin laptops with modern devices
Replace Special Ed Laptops		Replace 35 aging SpEd laptops	
Upgrade Chromebook Carts			Upgrade 5 elementary schools with modern Chromebooks (25 each)
Additional Chromebook Carts		Add Chromebook cart to EPB and DVS	Add Chromebook cart to GRS, SRS and EDS

Build towards 1:1 projectors for staff		Purchase 21 projectors / carts	Purchase 21 projectors / carts
Replace aging printers		Replace 4 network printers with standard model	Replace 4 network printers with standard model
Install WiFi @ SAU			SAU
Upgrade aging wireless AP's			WRB+GHH
Build towards 1:1 Document Cams for mobile carts		Purchase 100 document cameras	Purchase 100 document cameras

Technology Literacy

The K-8 Technology curriculum is updated on a cyclical basis to maintain alignment with current ICT standards. All teachers are participants in the implementation of ICT standards through the integration of technology into all curricula. The digital portfolio is designed to apply technology literacy and skills to demonstrate knowledge supporting common core standard initiatives through the collection of student artifacts from various content areas. The cumulative portfolio in grade 8 will be used to show competency of ICT skills.

The NETS can be viewed at: http://www.iste.org/standards.aspx

To improve academic achievement in all students as well as increase the technology literacy in staff to incorporate into their instruction, the Derry School District will:

- Technology Curriculum committees will review and revise the current Technology Standards and benchmarks including the plan for the continued development of digital portfolios and implement any changes.
- On a yearly basis, staff will revisit the NH ICT Literacy Standards as required by Ed. 306.42 and become familiar with the revised National Educational Technology Standards for Students NETS. (NETS Refreshed Project)
- Continue to educate staff through workshops and students through curriculum on the ethical and responsible use of district technology. (306.42(a)(1))
- Collaborate with Pinkerton Academy and sending schools to review current research

and state initiatives on evaluation of student electronic portfolios at the completion of 8th grade. (306.42(a)(5), 306.42(b))
- Begin *evaluation* of network, hardware and security/management of 1:1 vs BYOD initiatives for staff and students. Consider laptops VS tablets as well.
- Continue to encourage teachers and staff to utilize the mobile carts, open lab computers, and interactive projectors as an extension of instructional resources to become proficient in the use of 21st Century tools. (306.42(a)(2))
- Expand the integration of technology into common core curriculum. (306.42(a)(3))
- Expand the use of technology knowledge in instruction in all content areas. (306.42(a)(4))
- Investigate alternative learning opportunities for elementary and middle school students through distance learning consistent with the state standards of Ed 306.22.

Professional Development

Opportunities for current technology and integration training will be provided by Technology Leaders embedded within each building in the district, on teacher workshop days, early release days or through "Flipped Training" videos created by the team. Optional professional development with the technology leaders on a monthly schedule will be provided during after school workshops. Opportunities for online professional development will be encouraged. Adjustments to the actions outlined below will be made as indicated by annual assessments conducted by the professional development committee, the district technology committee, school and district administrators.

With the majority of our servers moved out to the cloud and the district-wide use of Google Apps for Education, there will be frequent training both online and in afterschool workshops. Areas of concentration will be with online collaboration, communication through Google Sites and Google Classroom, effective use of Google Drive and integration of technology into the classroom.

We encourage staff and educators to attend NHSTE events such as the Christa McAuliffe Technical Conference, Open NH and NHSTE organized technical events. As events become available and are relevant we distribute this information to all staff via email.

Actions to Support our Professional Development Goals:
1. Increase the expectations for level of technology proficiency for all staff by providing in-service workshop training, online learning incentives, and encouraging the use of the NH Local Education Support Center Networks.
2. Require grade level participation on the building technology curriculum committee which meets monthly to share relevant research, instructional ideas, and innovative teaching strategies.
3. Encourage attendance at monthly Technology Workshops, hosted in all buildings by the

Technology Leaders.

4. Revise middle school schedule and computer lab use to extend integration of technology into common core content areas and encourage grade level team collaboration in this area.
5. Provide professional development training as it relates to electronic portfolios using Google Apps for Education (Google Sites).
6. Relay knowledge from PowerSchool University to staff for improved use and communications via the PowerSchool software.
7. Evaluate technology professional development for staff and educators by conducting district professional development surveys to assess training needs.
8. Ensure that the educators are familiar with the ISTE NETS indicators.
9. Engage the educators in developing curriculum activities that also involves the use of technology.
10. Encourage and support attendance at technology-related conferences, in-service programs, and/or workshops including but not limited to the Christa McAuliffe Conference, NHSTE workshops, SERESC offerings, NHEON offerings and work through other qualified sources.
11. Promote organizing and scheduling Virtual Field Trips and Distance Learning utilizing the available shared equipment.

Community Collaboration

Technology provides avenues for communication and collaboration with the community. District, school and teacher email and web pages provide anytime access to information for all members of the community. AlertSolutions, a rapid response system, is used to provide emergency information to parents, as well as notifications of upcoming school events. The parent/student portal of the PowerSchool student information system available at middle school provides parents access to academic and attendance information for their children. School Twitter accounts are used to put out real time information, such as school news, building announcements, cancellations community information.

Action to support Community Collaboration:
1. Increase the awareness of school activities and events through the continual updating of the website and Twitter / Facebook and other social media feeds.
2. Increase communication between parents and teachers by leveraging existing PowerSchool assets to improve school to community communications.
3. Upgrade the alert system as an alternative means of voice, text and email communications to the parents and students.
4. Continue to improve the annual Internet Safety Night which is held in collaboration with the Derry Police Department. Additional community participants include BeNetSafe, an organization based in Derry, and community Internet providers. Financial support is provided by school PTAs.

5. Work with the 21st Century Learning Community Corporation to provide annual grants for innovative technologies for instruction to our staff.
6. Support Derry's Educational TV Channel to provide live broadcasts of school board meetings as well as scheduled re-broadcasts to allow community members to stay informed of district activities. Many school events are taped and televised to provide community members an opportunity to view school events and activities.
7. Establish and maintain relationships within the community to leverage expertise, resources, and opportunities for mentorship.
8. Collaborate with Pinkerton Academy (PA) and its sending schools in the towns of Auburn, Chester and Hampstead to ensure the optimal use of technology resources.

IV. Budget Guide

The Derry School District technology budget is funded primarily through local school district funds, but funds from Title V, Title I (for Title I program support), and private sources such as the 21st Century Corporation are needed to implement the plan. Federal grants are used, when available, to supplement the local budget. The technology budget is prepared by the Technology Director, the Media Director and the Library Director. The budget is presented to the school board for approval each fall and the final school budget is voted upon by citizens of the town of Derry.

The budget for school year 2016-2017 was approved by the school board and the town.

3 Year Budget

Action Item	2016-2017	2017-2018	2018-2019
Annual Software			
WebPath Express	$3,000.00	$3,000.00	$3,000.00
State Standards	$3,000.00	$3,000.00	$3,000.00
Follett (Destiny)	$8,000.00	$8,000.00	$8,000.00
Net Trekker	$4,800.00	$4,800.00	$4,800.00
PowerSchool	$20,000.00	$20,000.00	$32,000.00
PS Support	$3,000.00	$3,000.00	$0
Alert Solutions	$5,500.00	$6,000.00	$6,000.00
BudgetSense	$26,000.00	$28,000.00	$28,000.00
Applitrack	$3,000.00	$3,000.00	$3,000.00
School Dude	$5,000.00	$5,000.00	$5,000.00
Eduplanet	$2,000.00	$2,000.00	$2,000.00
Visual PST	$250.00	$250.00	$250.00
Ebsco	$1,800.00	$2,000.00	$2,000.00
Gale Online (E+M)	$1,400.00	$1,400.00	$1,400.00
Overdrive	$2,000.00	$2,000.00	$2,000.00
World Book (E)	$2,100.00	$2,100.00	$2,100.00
Country Reports	$450.00	$450.00	$450.00
Cultregrams (M)	$1,000.00	$1,000.00	$1,000.00
BrainPOP (ESOL)	$700.00	$700.00	$700.00
A-Z - District	$7700.00	$7700.00	$7700.00
A-Z Raz Kids	$750.00	$750.00	$750.00
InfoSnap	$0	$18,000.00	$11,610.00
SNAP Live	$300.00	$0	$0
Proxy / Firewall	$10,000.00	$10,000.00	$10,000.00

Professional Memberships	$300.00	$300.00	$300.00
Professional Development	$6,000.00	$6,000.00	$6,000.00
Apple Lease (labs/laptops)	$124,000.00	$85,000.00	$90,000.00 (renew laptops)
Chromebox Labs	$0	$32,000.00	$32,000.00
Internet bandwidth	$42,000.00	$42,000.00	$42,000.00
VoIP	$8,000.00	$8,000.00	$8,000.00
Install WiFi	$0	$10,000.00	$0
Upgrade Wireless	$0	$0	$40,000.00
Admin Laptops	$0	$0	$45,500.00
Special Ed Laptops (remaining)	$0	$45,500.00	$0
Replace Printers	$0	$3,000.00	$3,000.00
Projectors	$0	$14,000.00	$14,000.00
Document Cameras	$0	$8,000.00	$8,000.00
Carts	$0	$3,200.00	$3,200.00
Chromebooks (additional)	$0	$14,000.00	$21,000.00
Chromebook Carts (additional)	$0	$1,600.00	$2,400.00
Web Filtering / Firewall Hardware	$0	$20,000.00	$0
Equipment Repairs	$15,000.00	$15,000.00	$15,000.00
Totals	$307,050.00	$437,750.00	$463,160.00

V: Evaluation

The implementation of the Technology Plan is supervised by the Director of Technology. Ongoing evaluation and assessment is accomplished through input from various sources. Opportunities for input include monthly meetings with:

- the District Technology Committee which consists of representatives from all schools, various grade level teachers administrators, and specialists. It monitors progress on technology integration and technology plan implementation. It makes adjustments as indicated. As new technologies emerge and are evaluated, adjustments to the implementation of the technology plan are made if warranted. An annual review of the technology plan is done by this committee.
- the Superintendent, Assistant Superintendent, Business Administrator, Human Resource Director, Director of Libraries, Director of Student Services, and Building Principals. Technology related issues are addressed.
- the Assistant Superintendent and Technology Leaders in regard to curriculum support, ICT standards, technology integration, digital portfolios

The Director meets weekly with the District Technology Department which includes the Network Administrator, Media Coordinator, Student Data Coordinator, and Technicians. Progress toward integration is monitored. Hardware/software problems and solutions are identified and implemented.

Data Collection:
1. A survey in conjunction with the Innovation Team will be used annually to survey staff on current instructional practices, levels of teaching innovation, needs and personal computer usage. Results of the survey will directly affect the direction of the Technology Department and Committee's plans for professional development activities and access to technology initiatives.
2. District Technology Department and technology staff will conduct a survey of all parents of students regarding technology usage and access in the home as well as technology and literacy related questions that can be used to drive instruction and support. The survey will be conducted annually and results will be shared with the Technology Committee and administration. Survey results will be used to drive technology plan revisions and adjustments.
3. The Technology Department will complete all three of the NH School Building Surveys and present the results to the Technology Committee. Survey results will be used to drive technology plan revisions and adjustments.
4. The Technology Director will meet monthly with the Technology Committee, technology teachers, and Technology Leaders to determine building issues and concerns. This information will be shared with the committee and administration.

VI: Policies and Procedures