

Greater Lowell Technical High School Technology Plan (School Year 2010 through 2013)

Technology Plan Vision Statement

The Technology Plan is designed to support two goals:

- 1) Provide the technological tools for our students to fully develop career skills in teamwork, critical thinking, and problem-solving.**
- 2) Provide the tools that are necessary for our teachers to collaborate effectively; model teamwork, critical thinking, and problem-solving for our students; and to create an effective environment for learning.**

We concur with the Education Technology Advisory Council and the following assumptions concerning learning for all students:

“That technology should be integrated into teaching and learning so that its use extends opportunities and potential for all students.”

“That the effective use of technology involves the many elements specified in the [School Technology Readiness] chart by the 23 columns. Technology in education, used appropriately and effectively, is a complex set of interactions of people, materials, infrastructure and continuous support. It is not a single investment at one time.”

“The chart strikes a balance between what is reasonable in schools given the current funding and what is desirable given our goals for student learning and the communities' expectations.”

Benchmark 1

Commitment to a Clear Vision and Implementation Strategies

- A. The district has a reasonable set of goals and implementation strategies that align with the district-wide school improvement plan.
 - 1. The district will keep its Computer Workstations up to date, able to support the software applications that run the business of the school, as well as the curriculum in the Academic areas and the 24 Technical areas that make up our educational portfolio. These software applications and the Hardware replacement plans are detailed further in **Benchmark 4**.
 - 2. The district will meet twice a year with Advisory Committee members, made up of business and industry leaders who operate within the area surrounding the district. The Advisory Council will keep the district abreast of new and emerging technologies that influence their industries, and the district will incorporate these technologies into the curriculum.
 - 3. The district will continue to roll out wireless connectivity to enable growth of technology in all areas of the building, enabling all students to have regular access to technologies that reside within the schools computer network as well as the internet, better preparing them for post secondary education, college, and/or business and industry.
 - 4. The district will foster further integration of Parents by expanding the parent advisory council and continue to offer access to the X2 Parent Portal. The district will provide an email address (parents@gltech.org) as a communication mechanism for the users of this secure access to their student's data and performance, enabling them to make suggestions and influence change to better fit their needs.
 - 5. The district will aggressively seek E-Rate reimbursement at 80% for anything that is eligible. We are a 58% low income district. We will ensure we are getting all the Federal dollars we can to help maximize the educational experience for our students. We will seek E-Rate funding for but not limited to the following areas:
 - A. Network switch maintenance
 - B. Telephony – Verizon
 - C. ISP – Verizon
 - 6. The district will develop a stronger student technology survey to assess mastery of the standards.

- B. The district has a technology team with representatives from a variety of stakeholder groups, including administrators, teachers, and information systems professionals. The technology team has the support of the district leadership team.

- C. Needs Assessment
 - 1. GLTHS utilizes online surveys and internet blogging to assess the technology products and services needed to improve teaching and learning.
 - 2. The GLTHS Technology Steering Committee meets at least twice a month to evaluate the schools progress in achieving the goals laid out in the District Technology Plan and to make corrections in response to new developments and opportunities as they arise.
 - 3. GLTHS will run staff surveys every May to assess the quality of services and

products that are currently being used and that the district plans to acquire. GLTHS will also use the archived information from the I.S. ticket system to assess software and hardware issues in the building.

D. The district has a CIPA-compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students. The policy is displayed and must be accepted every time a user logs into the network. The district also utilizes a CIPA Compliant Web Filtering software product.

E. Budget

1. GLTHS has a budget for its local technology plan with line items for technology in its operational budget.
2. The budget includes staffing, infrastructure, hardware, software, professional development, support, and contracted services (including telephone services).
3. The district leverages the use of federal, state, and private resources.
4. GLTHS plans to apply for E-rate reimbursement, line items in the budget will be utilized for the non-discounted portion of the costs for the services procured through E-rate.

F. Evaluation

1. GLTHS utilizes online surveys and internet blogging to assess the technology products and services needed to improve teaching and learning. (e.g. **Appendix A**)
2. The GLTHS Technology Steering Committee meets at least once a quarter to evaluate the schools progress in achieving its goals laid out in the District Technology Plan and to make corrections in response to new developments and opportunities as they arise.
3. The GLTHS General Technology Committee meets at least twice a year.

Benchmark 2

Technology Integration and Literacy

A. Technology Integration

1. Outside Teaching Time - 100% of Greater Lowell Technical High School teachers use technology everyday outside of teaching time including some of the following areas: lesson planning, administrative tasks, communications, and collaboration. Greater Lowell Technical High School teachers also share information about technology uses with their colleagues through a variety of after school and in-service workshops offered during the school year.
2. For Teaching and Learning - At least 50% of Greater Lowell Technical High School teachers use technology appropriately with students each week, including some of the following areas: research, multimedia, simulations, data interpretation, communications, video and audio streaming and collaboration

B. Technology Literacy

1. At least 80% of Greater Lowell Technical High School teachers are working to meet the proficiency level in technology and 24% of teachers have reached the proficiency level as defined by the Massachusetts Technology Self-Assessment Tool (TSAT).
2. The district has a CIPA -compliant Acceptable Use Policy (AUP) regarding Internet use for students and all staff.

C. Staffing

1. The district has at least one full-time district-level technology networking manager.
2. The district has at least one full-time district-level technology data and software manager.
3. The district provides at least one instructional technology teacher per 40-80 instructional staff.

NOTE: Greater Lowell Technical High School has integrated the use of technology to facilitate parental access to student information through the implementation of the X2 software program. A pilot group of parents can go online to view student attendance, discipline reports, grading reports and student schedules. In addition Greater Lowell Technical High school is utilizing the “Connect-Ed” automated telephone system to enhance parental communication and will continue to expand its use and options.

Benchmark 3 Technology Professional Development

- A. At the end of three years, at least 85% of district staff will have participated in 45 hours of high quality professional development that includes technology skills and the integration of technology into instruction.**

The district plans on providing professional development in the area of integrating Interactive White Board training for teachers and paraprofessionals. The district has introduced Smart technologies full day training masters programs. The district seeks to provide specific subject i.e. mathematics, science, language arts and history Smart technologies training in order to create lesson and unit plans. This initiative designed to maximize the potential of using these Smart Boards in the classroom.

- B. Technology professional development is sustained and ongoing and includes coaching; modeling best practices, district based monitoring, study groups, and online professional development. The professional development includes concepts of universal design and scientifically based researched models.**

In order to reinforce topics introduced in In-Services and those identified as areas of need from the TSAT and other district based surveys, the district has initiated workshops in the following areas: Apple operating systems including iLife, iWeb, iDVD, iPHOTO, iMovie; Designing lesson plans using the websites and Internet searching; Microsoft PowerPoint and Excel; Chief Architect software; Smart Board and Senteo training; and digital photography and scanning. In order to support the Technology Enhancement Grant, the district will also provide training in Senior Project and BIG 6 research methods with a special emphasis on developing instruction and curriculum with

one-to-one laptops. The district will also continue to offer WebX trainings with Aqua Browser and Smart Technologies. The district will encourage teachers and support staff to enroll in MASS ONE based activities such as FOCUS opportunities.

The district also seeks to develop assistive technologies for students with disabilities including classroom audio enhancement devices and document imaging cameras. The district is committed to implementing quality professional development in order to ensure that these technologies are effectively utilized.

C. Professional development planning includes an assessment of district and teacher's needs. The assessment is based on the competencies listed in the Massachusetts Technology Self Assessment Tool (TSAT).

Professional development planning is comprised of a 20 member committee that includes both technical and academic teachers and district administrators. For the past two years, the district has implemented ½ day In-Service per month. The professional development activities initiated during the monthly In-Services are based on assessments and district needs identified from TSAT, district based media and technology surveys, routine blogs, the School Improvement Plan, and the Professional Development Plan.

D. Administrators and teachers consider their own needs for technology professional development, using the technology self-assessment tools provided by the Massachusetts Department of Education or similar tools.

Surveying teachers with the TSAT, Massachusetts School Library Media Association Model School Rubrics, and other district based tools. The district will continue to implement these assessments annually in order to provide data to create the district yearly Professional Development Plan and School Improvement Plan.

The Technology plan and Professional Development plan are in concert with this objective; that teachers will routinely adapt to their students area of need.

E. Summarize your technology professional development activities during the period July 1, 2009 to June 30, 2010 and describe your technology professional development plan for the year beginning July 1, 2010 ending June 30, 2011

During the 2009/2010 school year Greater Lowell Technical High School continued a comprehensive plan to have the district to participate in high quality professional development that includes technology skills and the integration of technology into instruction. Greater Lowell Technical High School built on past professional development In-Services, workshops, courses, and study groups to strengthen technology skills and integration. As in past years, the district provided professional development in the area of integrating Smart Board and Senteo training for teachers and paraprofessionals. The district has also continued to use Career Cruising, which is now an essential component in the 9th grade program of studies. The district also received a Title IID Competitive Technology Enhancement Grant. This grant, in partnership with Wilmington Public Schools, trained 15 teachers in Verizon Thinkfinity's online Train the Trainer program. The district's focus will be on improving literacy for the Formerly Limited English Proficient (FLEP) and Limited English Proficient (LEP) students. The TRN course was conducted via MassOne with Moodle. The district has continued Year 2 Title IID Competitive Technology Enhancement Grant. The school year technical and academic teachers are able to be trained in Verizon Thinkfinity. The district has continued to include software and hardware technologies in the academic and technical areas. The district will continue to develop and train teachers for specific software applications

endemic to their teaching areas. The district plans to build an additional computer 25 seat lab. In addition, laptop carts have been acquired to be used in Title 1 and Inclusion classrooms. Recently, the district recently has invested in its Learning. It's Learning, the Individual Learning Platform, is an Internet based learning platform that incorporates all the tools necessary to create, deliver, and manage engaging learning experiences in the class.

Benchmark 4

Accessibility of Technology

A. Hardware Access

1. GLTHS has a ratio of 1.9 students per high capacity, instructional use, internet-connected computer. The Information Systems Department will work with stakeholders to review the capacity of the computer network on an annual basis. (The goal is to have a one-to-one, high-capacity, Internet-connected computer ratio.)
2. GLTHS has a technology procurement policy that ensures usability, equivalent access, and interoperability.

TECHNOLOGY PROCUREMENT PROTOCOL

- A. Define technology requirement and/or need (instructors and cluster chairs)
 - B. Research Hardware and Software options with Information Systems
 - C. Teachers request for technology is made to Cluster Chair
 - D. Cluster Chair informs Director
 - E. Director brings technology request before the Technology Steering Committee
 - F. Engineering subcommittee reviews and plans appropriate action
 - G. Requisitions are entered and go through the school purchase approval process
3. GLTHS has a computer replacement cycle goal of 4 years. (**Appendix B**)

B. Internet Access

1. GLTHS provides connectivity to the Internet in all classrooms. GLTHS has 95% building coverage in wireless connectivity.
2. GLTHS Provides bandwidth of at least 10/100/1000 GB to each classroom. The network card for each computer is at least 10/100 GB.
3. District goal to increase the ISP Bandwidth with a by 10MBPS each year to support on line video to the classrooms. Goal for 2011-12, 20 MBPS Networking (LAN/WAN)

C. Networking (LAN/WAN)

1. GLTHS provides a minimum 100mb Cat 5 switched network and/or 802.11b/g wireless network.
2. GLTHS provides access to servers for secure file sharing, backups, scheduling, email, web publishing, internally or through contracted services. (**Appendix C**)

D. Access to the Internet Outside the School Day

1. GLTHS works with the local Boys Club, the Armand P. Mercier Center of Lowell and the Hellenic Center through the Work and Learning Program to ensure that students have off site access to the internet. The library is also open after school for student internet use. Staff is allowed to use school computers after school hours.
2. The library schedule is posted on the library web site <http://www.glttech.org/library>.
3. The library online catalog (<http://search.aquabrowser.com/greaterlowell/>) is available through the library website as well as periodical databases, brain pop including encyclopedia Britannia and the Annuals of American History.

E. Staffing

1. GLTHS has a network manager
2. GLTHS provides in classroom support through the Information Systems Department. Information Systems has help desk ticketing software where the end user can enter their technical problem and view the status of their issue at any time. Information Systems provides a help desk telephone number as well as a help desk email address.
3. GLTHS has two full time computer support specialists as well as a network manager, an application manager and various co-op and intern staff members supporting 1200 computers and 27 servers.

F. Software

1. GLTHS provides a variety of software programs to ensure students have a wide range of educational options. (**Appendix D**)

Benchmark 5

E-Learning and Communications

- A. GLTHS plans on offering online technology courses in specific subjects through the Massachusetts Department of Education FOCUS Academy. GLTHS also plans on offering summer online workshops and discussion boards on a variety of professional development topics. GLTHS currently utilizes “Camtasia” for professional development programming and plans to increase this application for student use as well.
- B. GLTHS has installed an IP based distribution system. This video distribution system is utilized for accessing video content in academic and technical classes, storing academic and technical DVD content, and the streaming of content with the district.
- C. The district currently offers a full year Exploratory Related course to 100% of 9th grade students which provides foundation skills in the use of technology. As part of the core curriculum in several subjects the district employs specialized software in a variety of courses. Read 180 is taught to students reading below grade level. Larson Learning is integral part of 10th grade mathematics curriculum. Chief Architect software is being introduced into the construction cluster. In the automotive curriculum, All Data and Mitchell

On-Demand is an integral component. Library and classroom applications include periodical databases i.e. Proquest eLibrary science, eLibrary Literature, Historical Newspapers, Culture Grams, libraries' online Aqua Browser catalog, and several research databases i.e. Annals of American History and Britannica On-Line, all of which can be accessed in school and at home. 100% of 12th grade student develop/apply their technology skills in a Problem Based Integrated Research course.

- D. The district maintains an up-to-date web site (www.gltech.org) that includes information for parents and community members, as well as separate intranet sites for both staff and students. Through the school website parents have access to teacher email addresses, teacher voicemail extensions and the teacher after school help schedule. Staff access to SharePoint and other student information is available off campus.

- E. GLTHS informs staff and students that any information distributed over the district or school network may be a public record through a notice of use that must be accepted to log in to any system on the school network.

Appendix A

Teacher Survey (from Benchmark 1 – F1)

* indicates a required field

(1) Do you use technology in the following areas (check one or more), and how often? *

Lesson Planning (always)
Lesson Planning (sometimes)
Lesson Planning (never)
Administrative Tasks (always)
Administrative Tasks (sometimes)
Administrative Tasks (never)
Communications/Collaboration (always)
Communications/Collaboration (sometimes)
Communications/Collaboration (never)

(2) Do your students use the following technologies in the classroom (check one or more), and how often? *

Basic Computer use (always)
Basic Computer use (sometimes)
Basic Computer use (never)
Word Processing/Desktop Publishing (always)
Word Processing/Desktop Publishing (sometimes)
Word Processing/Desktop Publishing (never)
Database (always)
Database (sometimes)
Database (never)
Spreadsheet (always)
Spreadsheet (sometimes)
Spreadsheet (never)
Internet, Networking, Online Communication (always)
Internet, Networking, Online Communication (sometimes)
Internet, Networking, Online Communication (never)
Multimedia and Software Applications (always)
Multimedia and Software Applications (sometimes)
Multimedia and Software Applications (never)
Web Authoring (always)
Web Authoring (sometimes)
Web Authoring (never)

(3) How many hours of Technical Professional Development have you participated in over the last 3 years? *

0
1-10
11-20
21-30
31-40
41-50
Over 50

(4) Do you have a television set in your classroom? *

Yes
No

(5) Does your television set work?

Yes
No
N/A

(6) Is your TV hooked up to media retrieval? *

Yes
No

Appendix A – page 2

(7) How often do you use media retrieval? *

- Daily
- Weekly
- Monthly
- Quarterly
- I do not use media retrieval

(8) Do you have Video Click installed on your computer? *

- Yes
- No

(9) How often do you use Video Click?

- Daily
- Weekly
- Monthly

(10) Do you have a Smart Board in your classroom? *

- Yes
- No

(11) If you answered Yes to question 10, how often do you use the Smart Board?

- Daily
- Weekly
- Monthly
- Quarterly

(12) How often do you have students use the Smart Board? *

- Daily
- Weekly
- Monthly
- I do not let students use the Smart Board.
- I do not have a Smart Board

(13) How do use the Smart Board (check one or more of the following)?

- To place lecture notes on the Smart Board
- To correct and display student work
- To display video
- To do Flash Animation
- If you have other ways of using a Smart Board enter the text here:
Specify your own value:

(14) If you had the capability to "stream" video from approved websites, DVDs from your computer on to a TV or Smart Board how often would you use it? *

- Daily
- Weekly
- Monthly
- Quarterly
- I do not need to stream video

(15) Do you use cable television stations such as the Food Network, CNN, and Discovery in your teaching? *

- Yes
- No

(16) If you answered Yes to question 15, please explain how you use them in your teaching.

(17) If you have a Smart Board in your classroom answer the following question. Is the projector you use for the Smart Board mounted on the ceiling or on a cart?

- Mounted on the Ceiling
- Cart

Appendix A – page 3

(18) Do you use audio tapes or CDs while reading with students? *

Yes
No

(19) If you answered Yes to 18, what do you use to play the audio?

Tape Player
Ipod, MP3
CD Player
Computer

(20) Do you have speakers attached to your computers? *

<http://glweb:34017/sites/surveys/Lists/Teacher%20Surv...urveys%2FLists%2FTeacher%2520Survey%2Foverview%2Easpx> (3 of 7)11/7/2007 9:53:32 AM
Teacher Survey - New Item

Yes
No

(21) How often do you use digital cameras in your teaching? *

Daily
Weekly
Monthly
Quarterly
I do not use digital cameras
I would use digital cameras in my teaching if I had access to one

(22) How do you, or would you, use digital cameras in your teaching? *

(23) If you had a video camera in your technical area to record teaching, demonstrations, etc and then have the capability of playing the recording back onto a TV or Smart Board, how often would you use it? *

Daily
Weekly
Monthly
Quarterly
I would not utilize this technology

(24) How often do you have students do research on the web using Google? *

Daily
Weekly
Monthly
Quarterly
I do not have my students do research using the web.
If your students do not use Google, name the search engine do you use.
Specify your own value:

(25) Have you ever created a lesson plan around a specific website such as a museum, news agency, or business? *

Yes
No

(26) If you have students do research using the web, how often do you use the IMC computer lab?

Daily
Weekly
Monthly
Quarterly
I do not use the IMC computer lab

Appendix A – page 4

(27) If you have students do research using the web, how often do you use the construction SMC computer lab? *

Daily

Weekly

Monthly

Quarterly

I do not use the Construction SMC computer lab

(28) Please comment on the ease or difficulty in using the IMC computer lab and / or the Construction SMC computer lab. *

(29) Do you have your students write research papers? *

Yes

No

(30) If you answered No to question 29, please explain why?

(31) If you answered Yes to question 29, how many pages are the research papers?

2-4 pages

4-6 pages

6-8 pages

8 to 10 pages

More than 10 pages

(32) When having students write research papers, do they use the search engines such as Google?

Yes

No

(33) If you answered no to question 32, please explain why?

(34) When having students write research papers, do the students use library research databases such as ProQuest? *

Yes

No

(35) If your students use ProQuest databases, please explain how often they use the databases? *

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Teacher Survey - New Item

Daily

Weekly

Monthly

Quarterly

I do not use ProQuest

(36) If you answered no to question 34, please explain why?

(37) When having students write research papers, do the students use print sources such as non-fiction books, reference books, and magazines? *

Yes

No

(38) If you answered no to question 37, please explain why?

(39) How often do you use Blogs and Wikis in your teaching? *

Daily

Weekly

Monthly

I do not use Wikis or Blogs

(40) If you answered Yes to the above, please explain how you use them.

(41) If you answered No, please explain why

Appendix A – page 5

(42) Which technologies would you like more Professional Development time devoted to (check any that apply)? *

Apple Operating Systems
Career Cruising
Chief Architect
Excel
Film & Documentary Photography
Internet Sites & Searches
Outlook
PowerPoint
Pod Casting
Scanning & Digital Photography
SharePoint
Smart Board Training & Senteo & Scanning
Wikis & Blogs
Windows Operating Systems
Word

(43) How much In-Service Time would you like devoted to specific technologies *

5 Hour Workshop
10 Hour Workshop
3 Credit Course

(44) Would you be interested in Professional Development distance learning opportunities that you could access from home? *

Yes
No

(45) Which types of technology Professional Development topics would you like to learn more of? Please describe. *

Finish

Appendix B

4 Year Technology Replacement Plan (from Benchmark 4 – A3)

Labs	Replacement Year			1 2010 – 2011	2 2011 – 2012	3 2012 – 2013	4 2013 – 2014	Computer Model
	PC Type	# of Computers						
1157 Child Care	A					1		Dell GX-270
	B	1						
	C							
1304 Auto Collision Related	A	2					2	HP 5700
	B							
	C							
1330 Marketing Mall Upstairs	A						5	Dell GX-270
	B	5						
	C							
1342 Marketing	A					2		Dell GX-270
	B	2						
	C							
1406 Automotive Related	A	20					20	HP 5700
	B							
	C							
1420 Machine Technology	A					7		Dell GX-270
	B	7						
	C							
1421 Machine Tech Related	A	4					4	HP 5800
	B							
	C							
1422 Metal Fab Shop	A							Dell GX-270
	B	3						
	C							
1422 Metal Fab Related	A			3				Dell GX-240
	B	3						
	C							
1444 Media Lab	A	26					26	HP 5700
	B							
	C							
1460 Painting & Decorating	A	1					1	Dell GX-520
	B							
	C							
1500 Automotive Shop	A					4		Dell GX-270
	B	4						
	C							
1503 Tops	A	2					6	HP 5700 (2) Dell GX-270
	B	4						
	C							
1545 Carpentry Related	A						2	Dell GX-270
	B	2						
	C							
2140 Health	A	4				4		HP 5700
	B							
	C							
2141 Health	A	4				4		HP 5700
	B							
	C							
2142 Health	A	4				4		HP 5700
	B							
	C							
2154 Science	A							Dell GX-270
	B	5				5		
	C							
2160 Technology	A			25				Dell GX-240
	B	25						
	C							
2162A Technology	A						23	Dell Dimension 2400
	B	23						
	C							
2162B Technology	A	25					25	HP 5800
	B							
	C							

Labs	Replacement Year			1	2	3	4	Computer Model
	PC Type	# of Computers	2010 – 2011	2011 – 2012	2012 – 2013	2013 – 2014		
2163 Technology	A	25				25	HP 5800	
	B							
	C							
2246 Technology	A	25				25	HP 5100	
	B							
	C							
2247 Technology	A	16		16			HP 5800	
	B							
	C							
2248 Technology	A			17			Dell GX-240	
	B	17						
	C							
2249 Technology	A	25		25			HP 5800	
	B							
	C							
Teacher's Resource Center	A	9			9		HP 5000 (5) HP 5700 (4)	
	B							
	C							
2271 Technology	A				25		Dell GX-240	
	B	25						
	C							
2285 Read 180	A	6				6	Dell GX-270	
	B							
	C							
2331 Science	A						Dell GX-240	
	B	4						
	C							
2340 Read 180	A	5				5	HP 6000	
	B							
	C							
2341 Technology	A	25				25	HP 6000	
	B							
	C							
2342 Freshmen Exploratory	A	24			27		Dell GX-520 (24) Dell GX-240 (3)	
	B	3						
	C							
2343 Media Center (Laptop Cart)	A	25				25	HP 6715b	
	B							
	C							
2344 Media Center (Laptop Cart)	A	25					HP 6715b	
	B							
	C							
2441 Graphics Pre-Press	A	13				14	iMac (5) / Mac Pro (4) Dell Vostro 220s (4) Dell GX-270 (1)	
	B	1						
	C							
2442 Graphics	A	19				21	iMac(15) / MacPro (1) HP 6000 (3) Dell GX-270 (2)	
	B	2						
	C							
2442A Scanning	A	4				4	HP 5800	
	B							
	C							
2521 Technology	A	25				25	HP 5700	
	B							
	C			25				
2540 English	A	7				7	HP 5700	
	B							
	C							
2544 Graphics	A	26				26	HP 6000 (26) Dell GX-270 (1)	
	B	1						
	C							
2560 CADD	A	25				25	HP 4600XW	
	B							
	C							
2561 CADD	A	25				25	HP 4600XW	
	B							
	C							

Labs	Replacement Year		1	2	3	4	Computer Model
	PC Type	# of Computers	2010 – 2011	2011 – 2012	2012 – 2013	2013 – 2014	
2562 Health	A	3			3		HP 5700
	B						
	C						
2620 Electronics	A					10	Custom Built
	B	10					
	C						
262A Electronics	A	25				25	HP 4000
	B						
	C						
262B Electronics	A					13	Dell GX-260
	B	13					
	C						
Library	A	28				28	HP 5700
	B						
	C						
Library Word Lab	A	13				13	Dell Vostro 220s
	B						
	C						
3143 Medical	A	8				8	HP 5700
	B						
	C						
3340 Library Lab	A	20				20	Dell Vostro 220s
	B						
	C						
3563L SPED	A				8		Dell Dimension 2400
	B	8					
	C						
3564 Title I / ELE	A				8		Dell Dimension 2400
	B	8					
	C						
Teacher Workstations	A	200	50	50	50	50	Various Models
	B						
	C				6		

Appendix C
Server List (from Benchmark 4 – C2)

Server	Functions
Backup Servers (2)	Backup Server
Application Server	Secure Web Application Server
DHCP	DHCP Server Ghost Server
FIERY	Print Server for Canon CLC 4000
Camera Server	IP Camera Recording Server
Domain Controllers (2)	Windows 2003 Active Directory Domain Controller DNS
Financial Server	MUNIS Business Application Server
Web Filter	Web Filtering Server
File Servers (3)	File Sharing
Virtual Server	Microsoft HyperV Server
KANTECH	Electronic Access Control Server
Mail Servers (2)	Email Servers
Read180	Read 180 Application Server
SIS	Student Information System Server (X2 Aspen)
Database Server	Microsoft SQL Server
Voicemail	Mitel Voicemail Server
Call Accounting	Telephone Call Accounting Software
VBrick Servers (3)	Portal Server MPEG Server Windows Media Server
EZ Lobby	Visitor Management Server
Web Server	School Website Server

Appendix D
Software List (from Benchmark 4 – F1)

Cluster	Software
All	Adobe Acrobat Reader Adobe Flash Player Adobe Shockwave Player Apple QuickTime Brain Pop LanSchool Microsoft Office 2003/2007/2010 MicroType MyClasses Oracle Java SMART Board Software Sophos Suite Typing Master Pro X2 Aspen Student Information System
Adult Education	Delmar Nursing Skills NCLEX
Construction Technology	3D Home Architect Deluxe 3D Home Interiors Chief Architect TIP
ELE & ELA	Inspiration READ 180
Math and Science	Adobe Acrobat Professional Biology Cycles of Life Geometer's Sketchpad Larson's Math Series RM Easyteach Math
Personal Services	Delmar Nursing Skills Milady's Standard Cosmetology NCLEX
Physical Education and Social Studies	Baseball Manager StrataLogica
Special Education	Adobe Acrobat Professional BASC Excent Tera (Special Education IEP and Management Software) Inspiration Read 180 WIAT/WISC Phych. Report Writer Zoom Text
Technology	Adobe Acrobat Professional Adobe CS3 Adobe Illustrator 10 Adobe Snap Fashion Alice Alta Point Medical AutoDesk Design Academy Bamboo Basic Stamp – Robotics BlueJ Bungee Egg Challenge Certiport Cisco Packet Tracer Cisco Network Academy Crazy Machine's Wacky Contraptions DrJava Eclipse-Java Edison FlexiSign Pro Game Maker Javelin Stamp IDE KISS Medical Assisting Medical Manager Microsoft Robotics Studio Microsoft Visio 2003/2007 Microsoft Publisher 2003/2007 Microsoft Visual Studio 2008 Professional Microsoft Visual Studio.net Microsoft Web Expressions

Cluster	Software
	NetBeans IDE NIDA Oracle JAVA SE Development Kit Parallax Robots Pre-Op Alice Icreate Robots Roland Cut Choice SAM 2007 Scratch SolidWorks TINA Westpoint Bridge XNA
Title I	Inspiration Read 180 Skills Tutor
Transportation and Manufacturing	PartSmart Microsoft Visio 2003 ACDSee CCC Pathways Mitchel OnDemand NAPA Parts Catalog All Data AutoDesk Inventor Pro MasterCam Delmar Automotive Mega Tech