
Technology Plan

July 1, 2008 – June 30, 2011

Principal: Tonya Reed

School name: North Saginaw Charter Academy

2332 Trautner

Saginaw, MI 48604

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<http://northsaginaw.heritageacademies.com/>

District Code: 73910

School District: Saginaw ISD

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Technology Plan

June 30, 2008 – June 30, 2011

North Saginaw Charter Academy

School Contact Information

Intermediate District Name:	Saginaw ISD
District Name:	North Saginaw Charter Academy
School Name:	North Saginaw Charter Academy
School Code Number:	73910
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URL for technology plan on Web:	http://northsaginaw.heritageacademies.com/
Years covered by plan:	2008-2011
Start date of plan:	July 1, 2008
End date of plan:	June 30, 2011

Introduction

North Saginaw Charter Academy

School Technology Purpose Statement

Working in partnership with parents and community, the North Saginaw Charter Academy mission is to create an integrated approach to technology education within the school building. We expect our students to master the basic technology skills and realize their full academic potential in preparation for higher education and adulthood with the use of technology. The purpose of National Heritage Academies is “challenging each child to achieve”.

Vision

All students will be computer literate by Eighth Grade.

School History & Demographics

North Saginaw Charter Academy was founded in 1999 by local board of directors. Subsequently, National Heritage Academies was hired to provide professional services to Taylor Exemplar Academy. Since its opening, North Saginaw Charter Academy has an enrollment of North Saginaw Charter Academy. It is a one building facility with grade levels 1-8. The school has 33 teachers.

The population of the school reflects that of the surrounding community and is broken out as detailed below:

School Demographics

	Female	Male	Total
American Indian/ Alaska Native/Native Hawaiian	2	3	5
Asian American	5	7	12
Black/African American	155	120	275
Hispanic/Latino	45	41	86
White	116	116	232
Totals	323	287	610

Goals – High Student Achievement

A. Curriculum

Goal	Objective/ Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Teachers will use curricular lessons infused with technology to meet the requirements of both the NHA Technology Scope & Sequence and the Michigan Educational Technology Standards.	Complete a minimum of 12 lessons/projects that incorporates technology for each core subject area (Language Arts, Math, History, and Science).	Technology Facilitator. Academic Curriculum Resources. Technology Scope & Sequence. Appropriate network Hardware & Software.	Technology Facilitator. Individual Classroom Teacher.	North Saginaw Charter Academy annual technology operations budget.	September through June each year.	Teachers will use the Technology Skills Assessment Checklist quarterly to measure student skills. Student portfolios will be kept and updated to document projects.
2. Teachers will teach and reinforce skills specific to technology in the context of the regular academic curriculum.	Complete a minimum of 12 lessons/projects that incorporates technology for each core subject area (Language Arts, Math, History, and Science).	Technology Facilitator. Academic Curriculum Resources. Technology Scope & Sequence. Appropriate network Hardware & Software.	Technology Facilitator. Individual Classroom Teacher.	North Saginaw Charter Academy annual technology operations budget.	September through June each year.	Teachers will use the Technology Skills Assessment Checklist quarterly to measure student skills. Student portfolios will be kept and updated to document projects.
3. Teachers will be able to utilize online tools to manage and use curriculum resources for delivery of instruction to students.	Understand how to use NHA Curriculum Center. Understand how to use United Streaming	Technology Facilitator. Curriculum Center.	Technology Facilitator. Individual Classroom Teacher.	North Saginaw Charter Academy annual technology operations budget.	September through June each year.	Download and teaching of new curriculum resources.
4. Assist personnel in the creation and use of project-based, interdisciplinary units that integrate technology into all curricula.	Develop an understanding of regular academic curriculum and technology skills from the Scope and Sequence. Align technology skills with student projects from regular curriculum. Create and use projects that integrate technology.	Technology Facilitator Academic Curriculum Resources Technology Scope & Sequence Appropriate network Hardware & Software	Technology Facilitator Individual Classroom Teacher	North Saginaw Charter Academy annual technology operations budget.	September through June each year.	Teachers will use the Technology Skills Assessment Checklist quarterly to measure student skills. Student portfolios will be kept and updated to document projects.
5. Provide guidance to all teachers to develop effective formative evaluation processes.	Train teachers in the use of Technology infused lessons and assessment.	Technology Facilitator	Technology Facilitator	North Saginaw Charter Academy annual technology operations budget.	September through June each year.	Running records of technology skill achievement per student.

6. Schedule computer lab so that students and teachers can access resources and services at point of need.	Develop a computer lab schedule with open time slots for use when needed.	Technology Facilitator Computer Lab Schedule	Technology Facilitator	North Saginaw Charter Academy annual technology operations budget.	September through June each year.	Completion of computer lab log showing class accessibility and use of computers.
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Goals – High Student Achievement

B. Evaluation

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Continuously identify goals and assess progress of school level educational technology plan.	Monitor progress of goals on a monthly basis.	School Technology Plan. School Improvement Plan.	Principal Technology Facilitator	North Saginaw Charter Academy annual technology operations budget.	September through June each calendar year.	Revised educational technology plan.
2. Support the creation and use of teacher created rubrics to evaluate students' media and technology projects.	Train teachers in the use of a technology skill assessment checklist/rubric.	NHA Professional development Resources	Administrator LTS Teachers	North Saginaw Charter Academy annual technology operations budget.	September through June each calendar year.	Teacher use and submission of completed rubrics.
3. Corrections will be made to technology projects and/or plans as they are needed, based on formative assessments.	Measure student skill development during project completion.	Lesson Plans outlining formative assessment procedure(s). Technology skill checklist.	Classroom Teacher	North Saginaw Charter Academy annual technology operations budget.	September through June each calendar year.	Completion of skill checklist. Assessment of goals met each May.
4. Collect baseline data at the start of every media and technology initiative.	Create and administer a formative baseline technology skill assessment.	NHA Professional development Resources	LTS Administrator	North Saginaw Charter Academy annual technology operations budget.	September through June each calendar year.	Completion of skill checklist. Assessment of goals met each May. 8 th Grade Literacy Report to Michigan each June.

Goals – Strong Family, Community and Business Support

D. Parental Communications and Community Relations

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Promote parent collaboration in their child's education through the use and access of student data systems (atschool.com).	Hold a parent information meeting to highlight access, availability of online student assessment data.	Computers Student Data systems	Principal.	School operational technology budget	Ongoing throughout the calendar year.	List of parent applications for online access to the student assessment data.
2. Staff will be proficient in uploading their classroom/grade level newsletters through Atschool in order to provide an alternate vehicle for communication with parents.	Provide training/assistance for producing and uploading newsletters.	Technology Facilitator Computers	LTS	School operational technology budget.	Ongoing throughout the calendar year.	All grade levels will have weekly newsletters posted online.
3. Staff will be proficient in using electronic tools (i.e. Email) to communicate and collaborate with other people throughout the organization.	Provide training on Email use based upon individual staff development plan.	Technology Facilitator. Training Materials.	LTS	Professional development resources and NHA technology budget.	Ongoing through the calendar year.	Staff Self-Assessment. Review of TDS survey in September and May of each school calendar year.
4. Staff will be able to use network drives and resources to share knowledge and 'best-practices'.	Provide training on accessing and using network drives.	Technology Facilitator. Training Materials.	LTS	School operational technology budget	Ongoing through the calendar year.	Ongoing development of NHA Curriculum Center resources.

Goals - Curriculum

E. Collaboration

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. North Saginaw Charter Academy will continuously seek additional volunteer sources to give support to the Technology Facilitator and to maximize services of curricular and staff development.	Establish extra volunteers for additional support for the Technology Facilitator.	Technology Facilitator. Parent Volunteers. Staffing at after school events.	Administrator.	Media Center supplies and special events budget.	September through June each school calendar year.	Increase in work support for the TF based on additional volunteers. Assess volunteer program on an annual basis each spring, TF and school administrators.

Goals – Quality Teachers, Administrators and Staff

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Annual technology development plans will be created by the LTS	Administer self-assessment survey to the staff for the creation of individual staff development plans.	Technology Facilitator. Staff Survey. Individual staff Development Plans.	LTS and Tech Committee		September through June each year.	Staff list of individual technology staff development plans.
2. Professional Development will be delivered in multiple mediums to meet the various needs of individual teachers.	Provide training in appropriate medium based on individual staff development plan.	Technology Facilitator. Training Materials. Access to various training resources.	LTS NHA Service Center Administrator	Professional development resources and NHA technology budget	September through June each year.	Staff Survey.
3. Technology will be effectively used in the regular academic curriculum by the school staff.	Complete a minimum of 1 lesson/project that incorporates technology for each core subject area (Language Arts, Math, History, and Science).	Technology Facilitator. Grade level lesson plans. Hardware and software resources.	Teachers	School operational technology budget	September through June each year.	Checklist of projects completed per teacher.
4. School improvement goals and individual professional growth plans will be reflected in technology staff development.	Align SIP goals with staff technology survey goals.	Technology Facilitator. SIP. Staff survey.	School Improvement Committee, Administrator Teachers	School operational technology budget	September through June each year.	Revised staff survey.
5. School staff will be continuously assessed to ensure that their development is meeting their own instructional and administrative needs.	Distribute Staff Development surveys for needs assessment.	Technology Facilitator. Staff Development workshops. Survey.	LTS Administrator	Professional development resources and NHA technology budget	September through June each year.	Completed surveys.

Goals – Quality Teachers, Administrators and Staff

F. Professional Development

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Staff will participate in curriculum sharing by submitting resources to National Heritage Academy's online lesson plan database.	Submit at least one 'best-practice' lesson or unit to Curriculum Center.	Electronic version of lesson or unit. Curriculum Center. Email. Technology Facilitator.	Teachers	Technology purchase, software upgrades and media supplies. Professional development budget.	September through June each school calendar year.	List of staff with electronically posted resources.
2. Integrate use of electronic resources into classroom practice.	Align use of educational software (e.g. Inspiration, Timeliner) and NHA History Interactive into classroom practice to improve student achievement.	Computers. Software. Regular academic Curriculum Resources. Internet Connection.	Teachers, LTS	Technology WAN budget, professional development and software upgrades.	September through June each school calendar year.	Checklist of projects completed highlighting software use with academic goals per teacher.

Goals – Effective and Efficient Operations

H. Technical Specification - Design

I. Increase Access

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. All staff members will have their own computer.	Identify staff needs and purchase appropriate number of computers.	Technology Facilitator. Staff Needs List.	Principal, LTS	Annual school technology operations budget	September through June of each calendar year	Purchased computers for all staff.
2. Allocate and distribute hardware throughout the building to meet instructional requirements and improve student achievement.	Provide greater access of computers to students.	Technology Facilitator. Computers.	LTS	Annual school technology operations budget	September through June of each calendar year	Log of increased instructional time per grade.

Goals – Effective and Efficient Operations

J. Budgets

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Plan for and acquire hardware in accordance with the guidelines stated above.	Purchase extra technology hardware.	School Budget. Corporate Technology Consultant.	Principal	Annual school technology operations budget	September through June each school calendar year.	Deployment of appropriate hardware in the school annual assessment by NHA – IT team and school leadership.

Goals – Healthy Students in a Safe, Orderly and Caring School

K. Student Information Systems, Security and Communications Systems

Goal	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Develop & utilize a plan to establish a program to promote Internet safety and security	Make students aware of how to use the Internet safely and securely.	I Safe materials, Technology Facilitator, teachers	Principal, Tech Facilitator	School operational technology budget	September through June each school calendar year	Increase and implement additional technology resources

School Affiliation & Philosophy

In order to fully understand the role of technology at North Saginaw Charter Academy, it is important to understand the relationship between the school and the company contracted to provide professional services.

National Heritage Academies (NHA) is an Educational Services company founded in 1995 to support charter schools with professional management services. Since its first contract with Excel Charter Academy in Grand Rapids, Michigan, NHA has expanded to support 55 schools serving over 32,000 students in 2007-2008.

NHA provides shared services between the schools it manages including, but not limited to:

1. Facility management
2. Curriculum support & staff development
3. Human resource support
4. Accounting and finance support
5. Board relations
6. State compliance & reporting
7. Technology infrastructure design, management, and support

NHA affiliated schools maximize school success through a deliberate process of sharing common resources to leverage economies of scale and sharing best practices to drive for continuous improvement.

For more information about National Heritage Academies, please refer to the NHA website, <http://www.heritageacademies.com>.

High Student Achievement

Student achievement is the focus for measuring success at North Saginaw Charter Academy. Bearing this in mind, all activities and programs are evaluated using this metric. Technology, therefore, adds value in as much as it positively impacts student achievement.

We believe that “how” technology is applied in the classroom is substantially more important than “how much” or “how often” technology is applied. Technology’s role in an instructional setting must be deliberate, well-designed and continuously assessed. The successful application of technology for learning lies in the alignment of curriculum, staff preparedness, the quality and availability of training, responsive support systems, and the existence of a reliable and accessible infrastructure.

Safe, Orderly, and Caring Schools

North Saginaw Charter Academy relies on NHA’s proprietary Moral Focus curriculum as a core element for developing a safe, orderly, and caring school environment. In a culture that is increasingly dominated by the presence of technology, students must be able to see the connection between actions and consequences. Just as NHA aligns its technology with its instructional goals and objectives, the policies relating to technology use must align with the development of strong moral character and good citizenship. This alignment is reflected in documents such as the Acceptable Use Policy [AUP], Internet Usage Policy and the application of copyright laws (see **Appendix**).

Quality Teachers, Leaders, and Staff

North Saginaw Charter Academy is committed to developing an environment that fosters professionalism, personal growth, and knowledge acquisition. Technology plays a key role in the development of this environment by providing tools that can increase productivity, allow access to NHA’s curriculum resources, and connect teachers with resources and people throughout the world. To develop truly world-class teachers and administrators, North Saginaw Charter Academy will implement a targeted staff development program designed to help the teachers at school become more effective in their various roles by leveraging technology. This staff development effort will be supported by NHA resources and methodologies as part of a larger staff development effort.

Strong Family, Community, and Business Support

North Saginaw Charter Academy is committed to partnering with parents as a foundational element of our educational program and the development of a strong school culture. Research tends to support this approach, indicating that parent involvement has a measurable impact on student achievement. Accordingly, over the 2007-2008 school years, a technology committee made up of North Saginaw Charter Academy administration, teachers and parent consultant was established to begin the initial process of developing and finalizing this plan. A parent representative from the North Saginaw Charter Academy Improvement Team has also reviewed and approved this current plans emphasis and goals.

With the support of NHA, North Saginaw Charter Academy believes that communication technology can be a powerful force in removing the barriers that sometimes exist between the classroom and the living room. Access to the Internet is increasingly more available. NHA has already initiated efforts that build and support technologies to extend the learning environment beyond the walls of the classroom and into student's homes. Additionally, the application of technology will, in the future, provide parents with access to supplemental curricular materials that will reinforce the students' classroom experiences.

The use of technology also provides North Saginaw Charter Academy with the ability to involve the greater community in the life of the school. With tools already in place, North Saginaw Charter Academy can make school-related information publicly available on the school Web site.

Effective and Efficient Operation

North Saginaw Charter Academy has significant benefits through the association with NHA. Access to professional services and resources and the technology program. Because North Saginaw Charter Academy is one of 53 schools receiving services from NHA, we are able to take advantage of a shared services model referred to as Total Cost of Ownership. Through our contract, we are serviced by a professional technical team that provides North Saginaw Charter Academy with consulting, implementation, and support for all technology efforts. As a result of these shared services, our school is part of a network of other schools and best practices are shared on a regular basis. Ultimately, the partnership between North Saginaw Charter Academy and NHA allows the school's staff to focus its efforts on the delivery of instruction and student achievement implementing and supporting technology.

Curriculum and Instruction

Current Situation

While NHA provides a recommended curriculum scope and sequence for technology use and skill development, is focused on implementing these resources to ensure that all students develop the computer skills to be technologically literate by the time they leave the Eighth Grade.

With access to technology as outlined in the infrastructure & connectivity section of this plan, North Saginaw Charter Academy has the resources necessary to effectively deliver the curriculum. In addition, the school allocates time for technology use to meet NCLB (NETS) and Michigan Technology Standards (METS).

Time Committed to Technology Instruction (Weekly)	
Kindergarten	40 minutes
First Grade	40 minutes
Second Grade	40 minutes
Third Grade	40 minutes
Fourth Grade	40 minutes
Fifth Grade	40 minutes
Sixth Grade	40 minutes
Seventh Grade	40 minutes
Eighth Grade	40 minutes

Additional technology use is expected outside of technology-specific instruction. Students are asked to use technology to further their academic development through its use in content-specific projects such as curriculum-based presentations, classroom simulations, and research/review of Web-based content.

North Saginaw Charter Academy encourages the teachers' use of technology by providing real-time support through the LTS. Based in the school, the LTS consults with teachers on a daily basis to identify and support technology integration opportunities within the classroom. Through the school's affiliation with NHA, the school's TF meets regionally with other LTS' to share best practices with one another. The LTS also meets on a regular basis with school leadership to review goals for technology education.

Future

Philosophy

- By incorporating NHA's approach to technology into the school environment, students at North Saginaw Charter Academy will develop information literacy skills through a comprehensive technology curriculum.
- These skills will be developed as the use of the technology is integrated into the course of each academic subject.
- Teachers will develop an appropriate technology skill-set through well-aligned staff development opportunities and will apply these skills in their instruction.

Developing Technology Skills

- NHA's core academic curriculum is very rigorous, focuses on the development of foundational skills and background knowledge.
- It is essential that instructional time be provided for the development of these skills and to prioritize this instructional time relative to the core academic areas.
- While computer technologies should be used at all grade levels to support the delivery and enhance the effectiveness of instruction. In grades K-2 in the NHA scope and sequence, standards have been developed to accommodate technology instruction in K-2 as needed.
- During the upper elementary years (grades 3-5), the curriculum calls for students to develop specific technology skills that align with state and national standards. With the ultimate goal of having each 8th grade student technology literate, technology-skill instruction will be addressed in the context of academic coursework during each student's middle school education. NHA has provided for additional computers in the classroom as well as the media center lab setting.

Technology Approach by Grade Level

	Philosophy / Approach	Resources
K – 2	<p>Technology skills are not formally taught or assessed.</p> <p>Technology is used throughout the curriculum to enhance instruction as appropriate and as indicated in the curriculum guidelines.</p> <p>Examples:</p> <ul style="list-style-type: none"> • Students access technology in the classroom (mobile computer labs) or the media center as part of an instructional activity. Use of technology is designed solely to reinforce mastery of the content material. • Teachers use technology to enhance the presentation of material to their students through simulation, projection, etc. 	<p>LCD projectors, Internet connectivity</p> <p>Limited student access to computers in common spaces or in the classroom</p> <p>Basic computer skills introduced in lab and classroom setting.</p>
3 – 8	<p>Instructional time is dedicated to developing specific technology skills such as:</p> <ol style="list-style-type: none"> 1. Computer operations 2. File management 3. Word processing 4. Keyboarding 5. Presentation tools 6. Spreadsheet use 7. Database basics 8. Internet use & responsibilities <p>Examples:</p> <ul style="list-style-type: none"> • All fourth grade students take part in a 9 week keyboarding course with periodic refresher lessons throughout fifth grade • Teachers provide students with technology-specific instruction to prepare them to apply the use of technology to their learning. For example, a teacher may give instruction on writing formulas in a spreadsheet in preparation for a unit in which data will be stored and evaluated using a spreadsheet. • Teachers will use a combination of curriculum-aligned activities and fully technology-integrated units of curriculum to deliver instruction and build technology skills as dictated by the Technology scope & sequence. 	<p>LCD projectors, Internet connectivity</p> <p>Regularly scheduled student access to computers required in either a shared space (lab / media center) or in the classroom.</p>

Timeline for Curriculum Integration

The following timeline serves to address the integrated technology activity a student will participate in at North Saginaw Charter Academy:

Grade Level	Integration Activity
K - 2	Classroom teachers are encouraged to lead technology integrated lessons when possible. They have access to resources on Curriculum Center enabling them to do so.
3 - 6	<p>Classroom teachers will teach technology integrated lessons encompassing the Technology Scope and Sequence within their core academic curriculum.</p> <p>Option 1: By following the recommended technology lesson sequence for Open Court (found on Curriculum Center), the teacher will accomplish the Technology goals for that grade level within the framework of the Open Court Reading Curriculum.</p> <p>Option 2: Alternatively, teachers may follow the recommended technology lesson sequence termed "Cross-Curricula" and will meet the technology objectives for that grade level within the framework of the core curriculum.</p>
6-8	<p>Technology Literacy Focus</p> <ul style="list-style-type: none"> • Teacher Observation • Project Based Learning • Student Portfolios • Formal Assessments • Integrated technology Lessons

Technology's Role in the Academic Curriculum

- Specific technology-related skills are not treated equally at each grade level, the underlying philosophy regarding technology's role in the delivery of instruction is consistent across all grade levels.
- Teachers and students will have access to tools (such as computers, scanners, digital cameras, LCD projectors, etc.) and curriculum that integrates the use of technologies.
- All teachers will be expected to develop basic competencies in the use of teaching technologies (see Technology Staff Development section of this document) and to use these technologies appropriately to enhance the delivery of instruction. Additionally, NHA will continue the development of curriculum that capitalizes on the multi-modal aspects of digital technology. (See **Appendix** for details of the Technology Skills Scope & Sequence)

Online Access to Curriculum

- Internet-based technologies streamline the process for distributing of information. Through MyNHA website the Curriculum Center has access of a vast collection of curricular resources made developed for and aligned with the NHA curriculum. These resources include:
 - Unit plans
 - Lesson plans/Project based Learning Resources
 - Background readings
 - Presentations
 - Activities
 - Interactive Web sites
 - Rubrics/Assessments
 - Reading lists
 - Handbooks

Each resource in this collection is aligned with specific content standards. Many of the lessons are also aligned with specific technology-skill objectives.

Managing Curriculum with Technology

- To support the management of student performance information at North Saginaw Charter Academy, NHA will develop and implement a tool set that will enable regular reporting of student performance based on assessment data.
- Teachers will be able to address student deficiencies by accessing the curricular resources that align with content standards and assessment tools. The use of information technology in this process is vital to the management of the data and reporting both teachers and school leaders need.

Staff Development

Current Situation

Staff development is a critical element in the successful implementation and integration of technology in the school environment. North Saginaw Charter Academy understands the value of staff development and has dedicated the LTS to support this function.

Since staff development efforts are supported by the National Heritage Academies Service Center which provides ongoing professional development for all NHA staff members:

- New Teacher Orientation Conference – annually in August
- Regional Professional Learning Institutes – annually each fall and spring
- National Heritage Academy University - annually in July
- Specific curriculum workshops in reading, writing and technology
- School level professional development sessions, annual teacher skill survey, goals and evaluation of development process

Future

Staff Development Philosophy

North Saginaw Charter Academy is committed to including a technology plan that includes a well-organized and comprehensive staff development component. This component will be aligned with the academic curriculum, educational philosophy of the school, and will focus on challenging each child to achieve.

The NHA technology staff development framework contains several component processes. The core curriculum for staff development activities is based on METS for Administrators and METS for teachers and ISTE (International Society for Technology in Education) standards.

- NHA provides a comprehensive Library and EdTech Professional Development Calendar each year.
- NHA has prepared a Teacher Development Survey to assess skill levels and determine school level professional development.
- Professional Development funds available for MACUL, MIEM and other conferences sponsored by the state of Michigan.
- Weekly newsletters with technology resources, updates and advancement announcements available to all staff members through the NHA network.

Date	Professional Learning Opportunity	Focus
Monday-Friday	New Teacher Orientation – Conference in Grand Rapids, MI	New Teacher Orientation – for new LTS
Wed - August 22	AtSchool WebEx Time 1:00-2:00	Progress Reports/Publications
Wed – September 5	AtSchool WebEx Time 1:00-2:00 – Please invite you're Principal!	Discipline
September	WebEx – How to “do” professional Development in your building	Details to be announced
September 15	Schedule Meeting with Principal to evaluate and schedule PD – Complete survey on Sharepoint	Staff technology literacy and student technology literacy goals
Wed – September 19	AtSchool WebEx Time 1:00-2:00	Progress Reports/Publications
Wed – September 26	AtSchool WebEx Time 1:00-2:00	Report Cards
Wed – October 3	AtSchool WebEx Time 1:00-2:00	Discipline
October 3	Accelerated Reader Workshop 10:00 – 3:00 NHA Service Center	Implementing Accelerated reader at your schools
October 15	Integrated Technology and Information Literacy Lessons	Create portfolio of effective lessons to add to our NHA Technology Curriculum Resources – Complete Monthly survey
October 15	Accelerated Reader Workshop Continue to plan and evaluate Staff PD with Principals – Complete survey on Sharepoint	West Michigan Student achievement aligned with staff development assessment
November 15	Integrated Technology	Information Literacy Focus – add to school portfolio – complete survey on Sharepoint
November 12-16	NHA Fall Learning Institute	Details announced at your buildings
December 15	Integrated Technology	Enhancing the classroom learning activities add lessons to school portfolio – complete survey on Sharepoint site
December	Technology Integration Lesson Plans	

Connectivity & Infrastructure

Current Situation

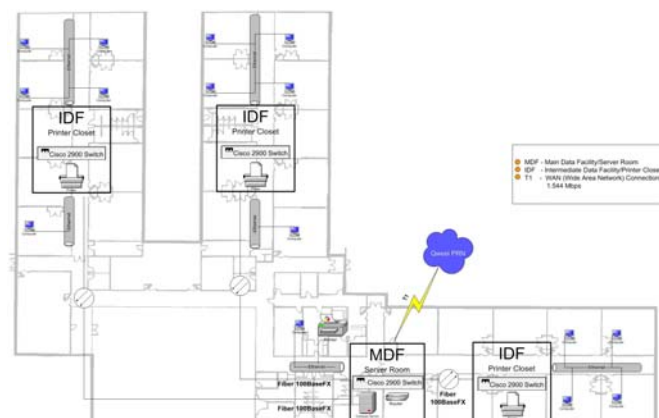
Through its affiliation with NHA, North Saginaw Charter Academy benefits from the professional services and shared infrastructure provided to all NHA affiliate schools. This infrastructure has been developed to support the needs of the school while minimizing the cost by effectively managing the infrastructure lifecycle, accessing shared resources, and leveraging economies of scale.

The current infrastructure at consists of the following elements:

- 1) Local Area Network (LAN)
- 2) Wide Area Network (WAN)
- 3) Internet Access
- 4) Telephony

LAN Infrastructure

The active networking hardware operates at 100Mbps in a completely switched environment; providing 100Mbps access to each device on the network. The LAN utilizes TCP/IP exclusively. This component of the infrastructure is detailed more clearly in the diagram below:



The LAN was designed and installed by NHA's technology staff. All LAN management is handled through remote management tools by the NHA technical staff.

Personnel

Current Situation

- NHA is committed to providing training and curriculum support at the school site.
- NHA has lowered the Total Cost of Ownership (TCO) of technology by centralizing technical support functions to its Grand Rapids office.

Instructional Technology Support

- In order to provide teachers with high-levels of support for the use of technology, North Saginaw Charter Academy employs a full-time Library Technology Specialist. The LTS responsibilities include supporting the delivery of a technology-integrated curriculum and the delivery of staff development.
- The LTS is focusing on the effective use of technology in the learning environment.
- The school's LTS will assume the ownership and responsibility of the technology program within the school. Responsibilities will include oversight of building-level technology efforts, management of the staff-development program, and ongoing assessment of building needs. This person will work hand-in-hand with teachers to support the infusion of technology in the academic curriculum.
- The LTS will truly be a member of the school staff. The school leader will be responsible for hiring and managing the LTS. NHA is committed to providing professional development and program resources to the LTS and providing guidelines for the educational technology process at North Saginaw Charter Academy.

Information Technology Support

- NHA provides technology support services to North Saginaw Charter Academy through its NHA Information Technology team.
- This team provides centralized management of NHA's technological infrastructure, consults with school staff regarding technology needs and use, and sets IT policies for all NHA affiliate schools.
- The responsibilities of this team includes management of NHA's Wide Area Network (WAN), Local Area Networks (LANs), file servers, desktop and portable computers, Web (WWW) servers, application servers, software configurations, etc. In addition to managing this infrastructure, the IT team provides a technical support through a centralized help desk made accessible via telephone or through a Web browser.

Resources

Current Situation

Network Resources

- Technology that provides access and resources to students, teachers and the parent community.
- NHA Service Center support and school level support.

Software

North Saginaw Charter Academy provides access to a variety of software resources supplied and supported by NHA's technology staff. All resources are selected to meet the academic needs of the students and enhance the instructional process.

The software resources offered as part of the model can be grouped into three distinct categories: (1) instructional software, (2) productivity software, and (3) management software.

Software Listing

- Destiny Library System, Graph Club, Timeliner, Inspiration, Encarta 2006, Finale Notepad, Type to Learn
- Bowmac REDI for School Emergencies, NWEA Test Taker, SIRS, Star Early Literacy, TestWiz
- Windows XP Professional, Microsoft Office 2003 Professional, Access, Excel, Outlook, PowerPoint, Publisher, Word, Adobe Acrobat Reader 7.0, McAfee Virus Scan, Internet Explorer, Lifetouch Image, Yearbook Forms Wizard

Publication of School Information

North Saginaw Charter Academy envisions communications through the use of Internet technologies. NHA is equally committed to this goal by providing parent access to student information via At-School, a proprietary Web-based student information system. Moving forward, NHA has extended this functionality to include more school-related information (i.e. this School Technology Plan, calendars, publications, memos, etc.) and allow for parents to access it via the Web or to subscribe to content via E-mail. North Saginaw Charter Academy will also begin to publish more content via the North Saginaw Charter Academy school webpage <http://northsaginaw.heritageacademies.com/>

Community resource use is encouraged, such as:

- Community and Regional libraries
- Intermediate School Districts, REMC's, and RESA's, student resources and professional development resources
- Annual Subscription to United Streaming/Discovery Education
- Online media and video teleconferences

Hardware Recommendations

Current Situation

North Saginaw Charter Academy takes advantage of its association with NHA for the procurement, installation, and lifecycle management of its hardware assets. NHA handles the installation and lifecycle management, for North Saginaw Charter Academy. Finally, this arrangement with NHA allows the school to access shared professional services from NHA. By spreading the cost of these services across all NHA affiliated schools, the Total Cost of Ownership (TCO) for TEA is minimized.

School Assets

- North Saginaw Charter Academy maintains a 1 computer per student computer ratio during assigned computer lab periods. Additionally,
- North Saginaw Charter Academy is equipped with a full compliment of tier 1 networking equipment (Cisco or HP router and switches) as well as network attached workgroup printers located throughout the building and a multi-function printers/scanners/fax machine.
- For instructional purposes, North Saginaw Charter Academy also employs three LCD projectors throughout the facility.

Controlling TCO through Lifecycle Management & Standards

Hardware at North Saginaw Charter Academy is procured, installed, and managed through its relationship with NHA. This arrangement allows the school to maintain its focus on the instructional uses of technology while relying on IT professionals at NHA to focus on issues of performance, scalability, reliability, TCO, licensing, etc.

NHA has adopted stringent hardware standards designed to ensure system reliability and performance while simultaneously minimizing support time and costs. These standards are enforced through acquisition and support policies and enable NHA to reach a 200:1 computer to technician ratio while maintaining the highest standards for support. Hardware standards address product continuity, total lifecycle cost, reliability, and performance. These criteria are applied to telephony hardware, desktop and portable computers, cabling, networking hardware, software, digital imaging devices, software, and management tools.

The following sections describe the current state of the hardware specified by NHA's hardware standards.

Telephony Hardware

- NHA provides telephone access in every classroom, for ready access to communications in the event of an emergency; the telephone also provides a critical link that supports the Parent-Teacher partnership.

Computer Hardware

- Personal computer: By providing and adhering to hardware standards, NHA's technicians are able to provide the highest service levels by making the computing environment consistent.
- When replacing existing computers, NHA is deploying thin client computers with an expected life of six years.
- Printers, networking components, and additional peripheral devices (scanners, digital cameras, etc.) are expected to exceed a four-year lifecycle and will be replaced at the end of their useful lives.
- NHA deploys technology:
 - Six years on the thin clients, without requiring any upgrades or maintenance.
 - Hardware is replaced through a scheduled process entitled "refresh" and provides for upgrades.
 - Each school is equipped with two (HP) servers with the primary purpose of storing data, managing network printing, and serving network enabled applications to client computers.
 - NHA's technology group revises the standard annually to match the latest technology.

Future Technology Purchases

- 1) Technology literate students with ready access to technologies that support the collection of information and the creation of content
- 2) Technology empowered teachers with access to technologies that enhance their instruction in effective and dramatic ways
- 3) Technology-enabled administrators able to effectively manage school operations and monitor academic progress at the student, classroom, and school levels.

North Saginaw Charter Academy will apply the following criteria to decisions related to hardware acquisition:

- 1) Instructional/curricular requirements
- 2) Operational requirements
- 3) State/industry standards
- 4) Support requirements (maintenance, remote management)

- 5) Total Cost of Ownership
- 6) Scalability
- 7) Return on Investment (ROI)

Measured using both

...methods that evaluate administrative efficiencies, productivity, and added value

and

...impact on student learning potential and curriculum delivery.

The establishment and application of these criteria will ensure the most effective use of technology and financial resources with the ultimate goal of improving student performance. By leveraging the schools financial resources through the use of leasing and re-thinking the use of externally acquired funding.

- North Saginaw Charter Academy will review the technology equipment and curriculum yearly to insure continued progress toward student and staff technology competency and improved student achievement.
- North Saginaw Charter Academy committed to the belief that every teacher should have access to technology that ties the use of technology with the delivery of instruction in a specific content area.
- Due to the sensitive nature of student information, the technology employed at each NHA school will be dependable, reliable, robust, and secure.
 - NHA's technology group will employ security best practices and currently has:
 - Scheduled security audits
 - group policies for desktop computer security,
 - policies for maintenance of security patches, employing encryption for the transmission of student data, implementations of secure technologies such as VPN, and PRN.

Technical Support Procedures

- All technical support issues are addressed through NHA's help desk. The technicians at this desk are available from 7AM – 7PM ET Monday – Friday. Trouble tickets can be opened via telephone or through a self-service Web interface. The technician connects to the computer remotely and demonstrates how to correct the problem to the customer.
- NHA will continue to seek more efficient methods for addressing technical support issues as both the technologies and the organization evolves.

Guidelines

Current Situation

National Heritage Academies and North Saginaw Charter Academy adopted several guidelines and procedures to ensure compliance with applicable state and federal guidelines for technology use in schools.

Current Procedures	Developing Procedures
<p>Deployment Procedures</p> <p>Help Desk Technical Support Request procedure</p>	<p>North Saginaw Charter Academy is able to access ELL education technology resources.</p>
Current Guidelines	Established Procedures
<p>A hardware and software procurement policy that follows Information Resource Management (IRM) technology standards.</p> <p>CIPA compliant Acceptable Use Policy</p> <p>Data Integrity management</p> <p>Network security policy</p> <p>A policy for equipment maintenance, repair, replacement, and disposal</p> <p>A policy for equipment/materials donation</p> <p>A comprehensive policy for inventory control</p> <p>The media center is encouraged to post and practice guidelines as established by Hall Davidson (See Copyright below) and distributed by Tech Learning.</p>	<p>FERPA Laws and legislation is addressed in all handbooks and contracts.</p> <p>NHA does not participate in advertising and commercialism on school resources and equipment.</p> <p>Each NHA school has a school web page developed by the NHA Parent Ambassador Program.</p> <p>NHA provides Open House activities for parents and the community on a regular basis.</p> <p>NHA has established the Parent room at each school building and provides computer technology for parental use.</p>

Equipment / Materials Donation

- NHA is not accepting donated equipment that does not meet the definitions of NHA's IT architecture.

Data Privacy

- NHA must develop and publish a data privacy policy in compliance with the Family Educational Rights and Privacy Act of 1974 (The Buckley Amendment), 20 U.S.C. S123g and 34 C.F.R. Part 99.

Access to Information Policy

- NHA affiliated schools will have an Access to Information Policy as NHA develops Internet filtering mechanisms in accordance with Public Law 106-554, The Children's Internet Protection Act (CIPA) and the Neighborhood Children's Internet Protection Act. This policy must ensure adequate data retrieval capabilities for both students and staff and provide for legal requirements relating to Internet access. This policy will include disaster recovery.

Copyright Protocol

Dated 11/09/06

- NHA employees who provide original written, musical or technical work for NHA, in the course of their employment, are bound by the terms and conditions of the Copyright Clause contained in the Employee Handbook.
- Vendors hired to create written, musical or technical work for NHA, should sign an Assignment of Copyright. The Assignment transfers all copyright ownership to NHA. An Assignment of Copyright can be obtained from Dani Phillips, Legal Services & Risk Manager (616.954.3090) or dphillips@heritageacademies.com.
- Classroom Teachers are given considerable advantage in using copyrighted materials but should be trained in proper citation requirements and the scope of materials that can be copied.
- NHA customer service center employees who use materials from an outside source must follow the copyright clause displayed within the body of that source (e.g. a copyright clause may require permission before using the materials). NHA may be held to a higher standard than a Classroom Teacher. All sources should be properly cited.

Copyright Training:

Step 1: Library Technicians should be the initial point of contact for questions regarding copyright use. The "*Copyright Guidelines for Administrators*" by Hall Davidson is an excellent resource for training (www.techlearning.com).

Step 2: The above referenced poster may be used for nonprofit purposes. Approval must be submitted to techlearning_editors@cmp.com.

Step 3: The "*Copyright Guidelines for Administrators*" should be displayed in the Library. Training of teachers should be conducted on-site and on a semi-annual basis.

Step 4: Copyright guidelines should be taught to students and volunteers by each individual teacher.

Step 5: Annual review should be conducted of the Technology Policy and Plan.

Step 6: Semi-Annual audits should be conducted of licensed and registration materials.

Budget

Current Situation

Budgeting Philosophy

- Technology expenditures at North Saginaw Charter Academy, combine the fixed costs and the variable costs, and are fundamentally tied to being successful in fulfilling the vision of all students becoming computer literate by the eighth grade.
- Hardware refreshes cycle for managing the cost of technology throughout its lifecycle. All equipment and software supplied through NHA is being purchased. The refresh cycle for thin client computers is six years and the remaining equipment is four years. The technology department may decide that a certain piece of hardware is still architecturally viable after the refresh cycle and will continue to deploy it.
- Budget allocations for the LTA role at North Saginaw Charter Academy are embedded in the school's personnel budget. This role is budgeted as a .5 FTE once the school has more than 400 students enrolled with a Library Technology Specialist employed at full time.
- Other budgeted items such as shared services provided by NHA (i.e. Internet access, WAN access, Help Desk) are accounted for in a billed services model. Other services such as access to Atschool / atschool.com, the curriculum center, development of the Technology Curriculum, support for the LTS/LTA are included as value-add services and are not billed or included in the school budget.

Aligning the Budget

- The budgeting process for technology must not only account for acquisition of hardware, software, connectivity, and staffing, but it must also pay careful attention to the Total Cost of Ownership (TCO). NHA will continue to apply standards and IT best practices to reduce the TCO. NHA's policies and procedures ensure that software and hardware are utilized for their optimal life while staying current with the new technology advances.
- As evidenced in the **Infrastructure & Connectivity** section of the Technology Framework document, NHA is committed to developing systems, procedures, and support structures to improve technology's impact while reducing the TCO.

Communication & Collaboration

Current Situation

- Through its association with NHA, North Saginaw Charter Academy is able to take advantage of school for communication and collaboration. NHA has demonstrated a strong commitment to use technology for communications. This system has become a hallmark of our internal operations and serves as a major communication vehicle both within the organization and externally with parents.
- Principal Meetings – NHA currently provides technology updates (covering report card processes, resources, reviewing policies/procedures, instructional practices and general questions) at monthly principal meetings for all NHA affiliated schools.
- LTS - Principal Meetings – LTS at each school have periodic meetings with school leaders, school leadership teams, and at full staff meetings to discuss educational technology issues at their
- Classroom Planning – LTS currently meet with individual teachers, small groups, or entire staffs to devise effective uses of technology with respect to the NHA curriculum.
- Regional LTS Meetings – As the primary support structures within the school, LTS must be well trained in the various aspects of their role. To support these efforts, NHA has committed resources that allow for regularly scheduled regional training sessions for LTS.

Future

- WebEx and Video Conferencing capabilities currently being used and expanded capabilities in the future for collaborating with colleagues, parents and the community.
- *Intermediate School Districts* – Assist NHA with communication on state reporting regulations and access to state technology resources.
- *Universities & Colleges* – Local colleges and universities may have opportunities to become part of pilot programs or benefit from access to the resources of the institutions.
- *Granting Agencies* – National Heritage Academies is able to collaborate with local foundations, institutions, or businesses to form partnerships.

Evaluation

Current Situation

- Evaluation of technology integration efforts at North Saginaw Charter Academy
 - Regular NHA Service Center Conference Calls with the Information Technology Department
 - Helpdesk assistance available on a daily basis
 - The LTS is primarily responsible for the implementation of the instructional and staff development portions of the technology plan.
 - The LTS and the school leader meet on a regular basis to assess the state of the technology efforts at the school.
 - On an annual basis, goals devised through the technology planning process are reviewed in the development of each school's annual action plan.

**TECHNOLOGY USER AGREEMENT
AND PERMISSION FORM
2007 - 2008**

A. As a parent or guardian of a student at National Heritage Academies, I have read the **Technology Acceptable Use Policy** about the appropriate use of computers at the school and I understand this agreement will be kept on file at the school. (Questions should be directed to the principal or technology department for clarification.) I have explained the following rules to my child to the best of my ability to help them understand the responsibilities that correspond with use of the NHA computer network:

- 4) The user's data must remain within the allocated disk space on all data drives and on the e-mail server.
- 5) Downloading or installing of any commercial software, shareware, or freeware onto network drives or disks is not permitted.
- 6) Copying other people's work or attempting to intrude into any user's folders or files is not permitted.
- 7) Using profane, abusive or impolite language to communicate and/or accessing, viewing, sending or displaying offensive, obscene, or abusive materials is not permitted.
- 8) Users must obtain a username and password from the National Heritage Academies Technology Department.
- 9) Sharing your password or allowing another person to access network resources under your username is not permitted.
- 10) Leaving a resource that you are logged onto unattended is not permitted.
- 11) Logging onto a resource for use by another person is not permitted.
- 12) Visiting non-education websites, chat rooms, or personal email accounts is prohibited.
- 13) Disclosing any sensitive data to others lacking the authority or right to view that data is not permitted.
- 14) Request a password change in the event you suspect your password is no longer confidential.
- 15) Using a computer to harm people or their work is not permitted.
- 16) Damaging the computer or the network in any way is not permitted.
- 17) Violating copyright laws is not permitted.
- 18) Wasting printing resources such as toner, color ink, and paper is not permitted.
- 19) Should students encounter any inappropriate material by accident, he/she should report it to their instructor immediately.

B. As a parent or guardian of a student at National Heritage Academies, I have read the above information describing the NHA position on the appropriate use of the Internet in the classroom. I understand my child will be using devices that are connected to the Internet in a supervised and educationally focused environment. I also understand that any breach of this "User Agreement" will result in the loss of computer privileges.

- ACCEPT** We accept and agree to abide by **the National Heritage Academies Technology User Agreement and Permission Form**. This agreement is on record and valid until my child is no longer enrolled with a school affiliated with National Heritage Academies.
- DECLINE** We decline the right to use the technology devices provided by National Heritage Academies.

Student Signature: _____

Parent Name (print): _____

Parent Signature: _____ **DATE:** _____

Please sign, date, and return this form to your school

Appendix A

National Heritage Academies Technology Scope and Sequence for Students (July 2006)

N	Novice: direct instruction of the technology objectives.
B	Basic: apply the technology objective with direction.
P	Proficient: apply technology objective without direction.

Content Standard 1: Students will demonstrate awareness, knowledge and appropriate usage of computer hardware components.

			3	4	5	6	7	
1.01	Mouse Skills:							
1.02		Point and Click/Double Click	N	B	P	P	P	
1.03		Point and Select from Menu	N	B	P	P	P	
1.04		Point, Click, and Drag	N	B	P	P	P	
1.05		Know the basic functional differences between left and right mouse buttons.			N	B	P	
1.06	Keyboarding Skills:							
1.07		Use typing tutorial program.		N	B	P	P	
1.08		Proficiently type, using proper hand position, with all alphanumeric keys.		N	B	P	P	
	Other:							
1.09		Identify and know the basic functions of computer hardware.	N	B	P	P	P	
1.10		Know potential hazards that could damage computer hardware.	N	B	P	P	P	
1.11		Learn NHA's student computer usage policies.	N	B	P	P	P	
1.12		Know basic facts about networked computers.			N	B	P	
1.13		Uses a variety of input and output devices. (Scanner, digital camera, etc...)			N	B	P	
1.14		Know the differing capacities and trade-offs for computer storage media.				N	B	

Content Standard 2: Students will demonstrate awareness, knowledge and usage in file management and basic computer operation.

			3	4	5	6	7	
2.01	File Management:							
2.02		Save (Name, Choose a location)	N	B	P	P	P	
2.03		Retrieve saved documents	N	B	P	P	P	
2.04		Distinguish between Save and Save As		N	B	P	P	

2.05		Create back-up of documents.			N	B	P	
2.06	Computer Operation Skills:							
2.07		Know how to start a computer software program	N	B	P	P	P	
2.08		Cut, Copy, Paste		N	B	P	P	
2.09		Manipulate Windows (Task Bar, Close Button, Minimize Button, Maximize Button, Restore Window Button)		N	B	P	P	
2.10		Trouble-shoot simple problems.				N	B	

Content Standard 3: Students will demonstrate awareness, knowledge, and usage of a word processor, spreadsheet, and database.

			3	4	5	6	7	8
3.01	Word Processing:							
3.02		Know how to start a new word processing document.	N	B	P	P	P	
3.03		Change the font and size of text.	N	B	P	P	P	
3.04		Align text with alignment buttons.	N	B	P	P	P	
3.05		Highlight text with the mouse.	N	B	P	P	P	
3.06		Change the format of text with bold, italics and underline.	N	B	P	P	P	
3.07		Know how to print independently.	N	B	P	P	P	
3.08		Use the cut and paste commands.		N	B	P	P	
3.09		Use the menu bar functions.		N	B	P	P	
3.10		Insert clip art		N	B	P	P	
3.11		Use Spell Check			N	B	P	
3.12		Learn Keyboard short-cuts (Ctrl-V = Paste, etc...)				N	B	
3.13		Learn to use headers and footers.				N	B	
3.14	Spreadsheet:							
3.15		Use the mouse to select a cell.	N	B	P	P	P	
3.16		Enter data into a cell.	N	B	P	P	P	
3.17		Learn spreadsheet terms.		N	B	P	P	
3.18		Know how to start a new spreadsheet document.		N	B	P	P	
3.19		Learn to graph or chart.			N	B	P	
3.20		Learn to add/subtract cell information.			N	B	P	
3.21		Create formula functions.					N	
3.22	Database:							
3.23		Know how to start a new database document.				N	B	
3.24		Know database terms.				N	B	

3.25		Know how to create fields and enter information into records.				N	B	
3.26		Learn to sort the database based on one field.				N	B	
3.27		Perform a search based on one or more fields.				N	B	
Other:								
3.28		Know basic distinctions among computer software programs, such as word processors, special purpose programs, and games.		N	B	P	P	
3.29		Start using multiple applications to complete one document or project. (e.g. Insert a spreadsheet into a word processing document)				N	B	
3.30		Know how formats differ among software applications and hardware platforms.				N	B	

Content Standard 4: Students will demonstrate knowledge of creating and using graphics, desktop publishing, and creating presentations.

			3	4	5	6	7	
4.01	Graphics:							
4.02		Know how to use basic painting and drawing tools.	N	B	P	P	P	
4.03		Put shapes together to create a picture.	N	B	P	P	P	
4.04		Know how to use advanced painting and drawing tools.			N	B	P	
4.05		Know how to select specific areas of a painting or drawing.			N	B	P	
4.06		Know how to use cut, copy, and paste with selected shapes.			N	B	P	
4.07		Know the differences between several graphic formats.				N	B	
4.08	Desktop Publishing/Presentations:							
4.09		Know how to insert clip art.			N	B	P	
4.10		Learn how to select and use a template.			N	B	P	
4.11		Know how to zoom in and out.			N	B	P	
4.12		Learn how to create a basic presentation.			N	B	P	
4.13		Use special hardware devices for input within a document (scanner, digital camera).			N	B	P	
4.14		Learn how to format a Presentation.				N	B	
4.15		Complete a content area project.				N	B	
4.16		Complete and present a content area project presentation using Microsoft				N	B	

		PowerPoint.						
4.17		Use multimedia within a document/presentation. (Video, animation, sound, etc...)					N	B

Content Standard 5: Students will demonstrate awareness, knowledge and usage of the World Wide Web and research tools that leverage technology.

			3	4	5	6	7	
5.01		Know how to search for information within a reference-based software program.	N	B	P	P	P	
5.02		Learn Internet etiquette: do's and don'ts	N	B	P	P	P	
5.03		Know basic Internet terms.	N	B	P	P	P	
5.04		Manually entering an Internet web address (URL).			N	B	P	
5.05		Learn how to search and use keywords within a search engine.			N	B	P	
5.06		Learn Internet Explorer button functions (back, forward, stop, etc...).			N	B	P	
5.07		Learn to access, send and reply with e-mail.			N	B	P	
5.08		Learn how to download graphics.			N	B	P	
5.09		Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.				N	B	

Content Standard 6: Students will demonstrate an understanding of the relationships among science, technology, society, and the individual.

			3	4	5	6	7	
6.01		Know ways that technology is used at home and school.			N	B	P	
6.02		Know that new tools and ways of doing things affect all aspects of life, and may have positive or negative effects on other people.			N	B	P	
6.03		Understand that when an individual creates something on a computer, the created work is that person's property, and only that person has the right to change it.			N	B	P	
6.04		Know that technologies often have costs as well as benefits and can have an enormous			N	B	P	

		effect on people and other living things.						
6.05		Know that new inventions often lead to other new inventions and ways of doing things.			N	B	P	
6.06		Know areas in which technology has improved human lives.			N	B	P	
6.07		Understand the concept of software piracy.			N	B	P	
6.08		Know ways in which technology has influenced the course of history.				N	B	
6.09		Neither knows that science cannot answer all questions and technology cannot solve all human problems nor meet all human needs.					N	
6.10		Know examples of copyright violations and computer fraud and possible penalties.					N	
6.11		Know that technology and science are reciprocal. They both are the driving force behind each other.						
6.12		Know ways in which technology and society influence one another.						

Content Standard 7: Students will demonstrate an understanding of how technology can be used as a tool for problem solving and decision making.

			3	4	5	6	7	
7.01		Know that objects occur in nature; but people can also design and make objects.	N	B	P	P	P	
7.02		Know that tools can be used to observe measure, make things, and do things better and/or more easily.	N	B	P	P	P	
7.03		Know that people are always inventing new ways to solve problems and get work done.	N	B	P	P	P	
7.04		Identify a simple problem that can be solved using technology.			N	B	P	
7.05		Know constraints that must be considered when designing a solution to a problem.			N	B	P	
7.06		Select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems.			N	B	P	
7.07		Know that people have invented and used tools throughout history to solve problems and improve ways of doing things.			N	B	P	

7.08		Identify appropriate problems for technological design.					N	
7.09		Design a solution or product, taking into account needs and constraints.					N	
7.10		Implement a proposed design.					N	