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# Technology Plan

July 1, 2008 – June 30, 2011

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School Code: 41920  
District: Kent Intermediate School District

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## School Contact Information

<b>Intermediate District Name:</b>	Kent County Intermediate School District
<b>District Name:</b>	Chandler Woods Charter Academy
<b>School Name:</b>	Chandler Woods Charter Academy
<b>School Code Number:</b>	41920
<b>Address:</b>	<i>6895 Samrick Ave Pvt</i>
<b>City, State. Zip code:</b>	Belmont, MI. 49306
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<b>URL for technology plan on Web:</b>	<i><a href="http://chandlerwoods.heritageacademies.com/">http://chandlerwoods.heritageacademies.com/</a></i>
<b>Years covered by plan:</b>	2008-2011
<b>Start date of plan:</b>	July 1, 2008

End date of plan:

June 30, 2011

## Introduction

School name

### School Technology Purpose Statement

Chandler Woods Charter Academy goal is to create an integrated approach to technology education within the school building, with the help of staff, parents, and the community. We expect our students to acquire 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 technology literate by Eighth Grade.

### School History & Demographics

Chandler Woods Charter Academy was founded in 1999 by local board of directors. Subsequently, National Heritage Academies was hired to provide professional services to CWCA. Since its opening, CWCA has an enrollment of 683. It is a one building facility with grade level Young 5's-8. The school has 28 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	1	2	3
Asian American	6	3	9
Black/African American	10	4	14
Hispanic/Latino	3	8	11
White	311	333	644
Totals	333	350	683

## School Affiliation & Philosophy

In order to fully understand the role of technology at Chandler Woods 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 33,000 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 Chandler Woods 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

Chandler Woods 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

Chandler Woods 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 at Chandler Woods 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

Chandler Woods 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 Chandler Woods 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 Chandler Woods Charter Academy School Improvement Team has also reviewed and approved this current plans emphasis and goals.

With the support of NHA, Chandler Woods 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 Chandler Woods Charter Academy with the ability to involve parents, family, and students in the life of the school. With tools already in place, Chandler Woods Charter Academy can make school-related information publicly available on the school Web site.

## Effective and Efficient Operation

Chandler Woods Charter Academy has significant benefits through the association with NHA. Access to professional services and resources and the technology program. Because Chandler Woods Charter Academy is one of 55 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 Chandler Woods 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 Chandler Woods 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.

## 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 integrated with technology to meet the requirements of both the NHA Technology Scope & Sequence and the Michigan Educational Technology Standards.	Grades 3-8 teachers will complete a minimum of 10 lesson/project that incorporate technology for each core subject area (Language Arts, Math, History, and Science).	Appropriate network Hardware & Software.	Technology Facilitator, teachers and school administration	CWCA annual technology operating budget.	September through June each school calendar year.	Teachers will use the Technology Skills Assessment Checklist quarterly to measure student skills. TPC to review checklists annually in May.
2. 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, teachers and school administration	CWCA annual technology operating budget.	September through June each school calendar year	Have a schedule up with times and dates, so that teachers can have the opportunity to use the computer lab.
3. Provide guidance to all teachers to develop effective formative evaluation processes.	Train teachers in the use of Technology infused lessons and assessment.	Technology Facilitator. Curriculum Center.	Technology Facilitator, teachers and school administration	CWCA annual technology operating budget.	September through June each school calendar year	Use checklist of technology skill success per student.

# 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.		Technology Facilitator. School Technology Plan. School Improvement Plan.	Technology Facilitator, teachers and school administration	CWCA annual technology operating budget.	September through June each school calendar year.	TPC will review annually in May TP goals to make sure they align with student achievement...
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.	Technology Facilitator Technology Scope & Sequence	Technology Facilitator, teachers and school administration	CWCA annual technology operating budget.	September through June each school 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.	Technology Facilitator. Lesson Plans outlining formative assessment procedure(s). Technology skill checklist.	Technology Facilitator, teachers and school administration	CWCA annual technology operating budget.	September through June each calendar year.	Completion of skill checklist. Assessment of goals met each May.

# Goals – Strong Family, Community and Business Support

## D. Parental Communications and Community Relations

Goals	Objective / Strategy	Resources Needed (Human & Material)	Person(s) Responsible	Budget Needs	Time-line (Beginning & Ending dates)	Method of Evaluation
1. Promote parent relationship in their child's education through the use and access of student data systems <i>atschool.com</i> .	Teachers and administrators will regularly review <i>atschool</i> resources with parents.	Technology resources and schedule meeting time.	Administrator.	CWCA annual technology operations budget.	September to June each school calendar year.	Annual review of Parent surveys in May.
2. Staff will be proficient in using electronic tools available through the NHA network resources, to communicate and collaborate with other people throughout the organization.	CWCA will regularly provide professional development for technology, through individual school trainings and provided by NHA..	Technology resources and scheduled meeting time.	School administrators and NHA.	CWCA annual technology operations budget.	September to June each school calendar year.	Review of TDS survey in September and May of each school calendar year.
3. 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 resources and scheduled meeting time	Administrator.	CWCA annual technology operations budget.	September to June each school calendar year.	Review of TDS survey in September and May of each school calendar year.

## 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. The school will continue to develop the parent and community volunteer resources for the media center.	Communicate at the beginning of the year through school newsletters, website, and parent conference surveys.	Communication resources and parent conference surveys.	Administrators, parents and media staff.	CWCA annual technology operations budget.	September through June each school calendar year.	Assess annually volunteer program at spring staff meetings.

## 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. 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.	Professional development resources and scheduled time.	Administrators and staff.	CWCA annual technology operations budget.	September through June each school calendar year.	Annual review of staff IEPs.
2. School improvement goals and individual professional growth plans will be reflected in technology staff development.	Align SIP goals with staff technology survey goals.	Professional development resources and scheduled time.	Administrators and staff.	CWCA annual technology operations budget.	September through June each school calendar year.	Annual review of SIP and staff development goals within staff meetings each spring.
3. 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.	Professional development resources and scheduled time.	Professional development resources and scheduled time.	CWCA annual technology operations budget.	September through June each school calendar year.	Review Completed teacher surveys annually in May.

## 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.	NHA Service Center Technology Facilitator	CWCA annual technology operating budget.	September through June of each calendar year	Administrators will review budget needs with NHA budget advisor annually in January.
2. Assign and distribute hardware throughout the building to meet instructional requirements and improve student achievement.	Provide greater access of computers to students.	Technology Facilitator. Computers.	NHA Service Center Technology Facilitator	CWCA annual technology operating budget.	September through June of each calendar year	Administrators will review budget needs with NHA budget advisor annually in January.

## 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. How will school maintain and implement safe student practices, ex internet safety, filtering etc.	Provide lesson to students to teach safety tips using the internet.	Technology Facilitator. Teachers.	Administrator. NHA Service Center	CWCA annual technology operating budget.	September through June of each calendar year	Regular review of filtering requests and CIPA policies by NHA Service Center.

# Curriculum and Instruction

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## 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, Chandler Woods 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).

<b>Time Committed to Technology Instruction (Weekly)</b>	
Kindergarten	45 minutes
First Grade	45 minutes
Second Grade	45 minutes
Third Grade	45 minutes
Fourth Grade	45 minutes
Fifth Grade	50 minutes
Sixth Grade	Varies from week to week
Seventh Grade	Varies from week to week
Eighth Grade	Varies from week to week

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.

Chandler Woods 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.

### ***Philosophy***

- By incorporating NHA's approach to technology into the school environment, students at Chandler Woods 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 8<sup>th</sup> 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
<b>K – 2</b>	<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><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Teachers use technology to enhance the presentation of material to their students through simulation, projection, etc.</li> </ul>	<p><b>LCD projectors, Internet connectivity</b>  <b>Limited student access to computers in common spaces or in the classroom</b></p> <p>Basic computer skills introduced in lab and classroom setting.</p>
<b>3 – 8</b>	<p>Instructional time is dedicated to developing specific technology skills such as:</p> <ol style="list-style-type: none"> <li>1. Computer operations</li> <li>2. File management</li> <li>3. Word processing</li> <li>4. Keyboarding</li> <li>5. Presentation tools</li> <li>6. Spreadsheet use</li> <li>7. Database basics</li> <li>8. Internet use &amp; responsibilities</li> </ol> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>• All fourth grade students take part in a 9 week keyboarding course with periodic refresher lessons throughout fifth grade</li> <li>• 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.</li> <li>• 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 &amp; sequence.</li> </ul>	<p><b>LCD projectors, Internet connectivity</b>  <b>Regularly scheduled student access to computers required in either a shared space (lab / media center) or in the classroom.</b></p>

## Timeline for Curriculum Integration

The following timeline serves to address the integrated technology activity a student will participate in at Chandler Woods 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"> <li>• Teacher Observation</li> <li>• Project Based Learning</li> <li>• Student Portfolios</li> <li>• Formal Assessments</li> <li>• Integrated technology Lessons</li> </ul>

## ***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 Chandler Woods 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

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## Current Situation

Staff development is a critical element in the successful implementation and integration of technology in the school environment. Chandler Woods 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***

Chandler Woods 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.

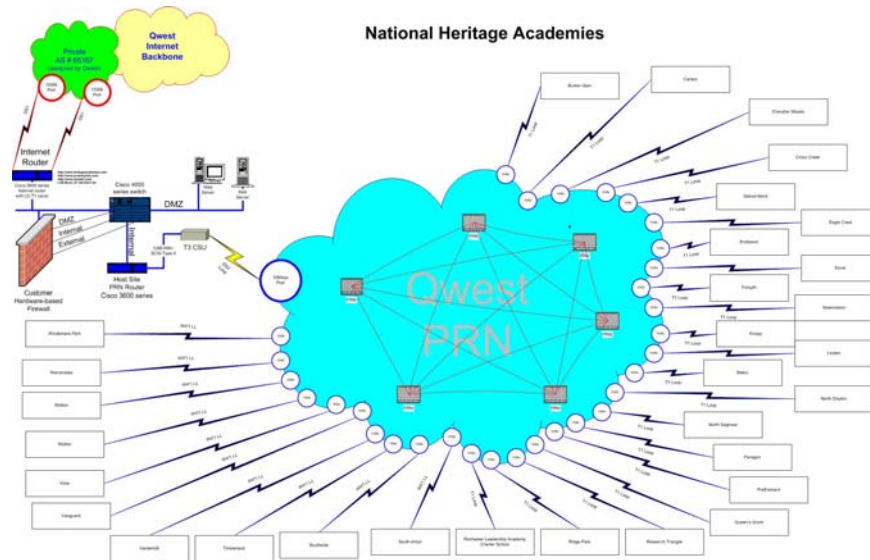
The NHA technology staff development framework contains several component processes. The core curriculum for staff development activities is based on METS for Administrators and METS for teachers and ISTE (International Society for Technology in Education) standards.

- 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.



## **WAN Infrastructure**

Chandler Woods Charter Academy receives many of its data services through its access to the NHA provided WAN. The WAN connectivity provides access both to NHA resources and to the Internet. The school currently has a T1 circuit provisioned through Qwest Communications. This circuit uses Qwest's Premium RPN service to connect securely to all other NHA sites in a "hub and spoke" topology. (see WAN diagram below)



WAN connectivity is monitored and managed remotely by the NHA technology staff

## **Internet Access**

Internet access for Chandler Woods Charter Academy is obtained through the schools connection to the NHA WAN. All traffic emanating from the school is routed through a web filtering solution.

## **Telephony Infrastructure**

Telephone access is provided in every classroom at Chandler Woods Charter Academy through 3Com's NBX voice over Ethernet system. The telephone system provides a high degree of functionality and individual voicemail. The NBX system includes a Web-based configuration tool employed by NHA's technology staff to provide support remotely for telephone issues.

# Personnel

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## 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, Chandler Woods 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 Chandler Woods Charter Academy.

### **Information Technology Support**

- NHA provides technology support services to CWCA 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.

## 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**

Chandler Woods 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**

Chandler Woods 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.

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

# Hardware Recommendations

## Current Situation

Chandler Woods 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 Chandler Woods 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

- Chandler Woods Charter Academy maintains a 1 computer per student computer ratio during assigned computer lab periods. Teachers are provided with their own computer in the classroom.
- Chandler Woods 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, Chandler Woods Charter Academy also employs three LCD projectors throughout the facility.

### Controlling TCO through Lifecycle Management & Standards

Hardware at Chandler Woods 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 400:1 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.

Chandler Woods 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.

- Chandler Woods Charter Academy will review the technology equipment and curriculum yearly to insure continued progress toward student and staff technology competency and improved student achievement.
- Chandler Woods 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:
    - Provided *Lobbyguard registration system* for all visitors
    - 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 Tech Support Center. 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

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## Current Situation

National Heritage Academies and Chandler Woods Charter Academy has 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>Chandler Woods 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](mailto: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](http://www.techlearning.com)).

Step 2: The above referenced poster may be used for nonprofit purposes. Approval must be submitted to [techlearning\\_editors@cmp.com](mailto: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.

## Current Situation

### ***Budgeting Philosophy***

- Technology expenditures at Chandler Woods 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 Chandler Woods 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, NHA Tech Support Center) 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.

**School Budget**

**Chandler Woods**

Desktops/Laptops

30

Thin Clients  
n-computing

<b>Network</b>	Annual cost
Internet	335
School WAN	1736
Service center WAN	617
PRN	3472
<b>Total</b>	6160

<b>Access to Tech</b>	2008-2009	2009-2010	2010-2011
Desktops/laptops n-computing	11250	750	750
Thin clients	2352	2352	2352
Thin client server	12370	16100	16100
<b>Total</b>	2670	2670	2670
	28642	21872	21872

<b>Shareholder</b>	Annual cost
Phones	1750

<b>Security</b>	Annual cost
Microsoft	7550
Anti virus	444
Content filter	1132
Spam	304
<b>Total</b>	9430

<b>Staffing</b>	Annual cost
Help desk	3510

### 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

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## Current Situation

- Through its association with NHA, Chandler Woods 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 through staff meetings and email.
- 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 TEA 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

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## Current Situation

- Evaluation of technology integration efforts at Chandler Woods Charter Academy:
  - Regular NHA Service Center Conference Calls with the Information Technology Department
  - NHA Tech Support Center 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**

**2008 - 2009**

- 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** \_\_\_\_\_ **Parent** (print):

**Signature:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

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

## Technology Skill Professional Development Profile-

At the beginning of each school year and at the end of each school year the teachers complete this staff development survey and the results are used to determine the individual staff development needs for each teacher. The LTS is responsible to coordinate individual, small group and large group training (with the support and scheduling allowances of the principal) to improve teacher technology skills throughout the school year. The results are also shared with NHA which offers staff development opportunities to all NHA employees during each school year and also during the summer at NHAU and New Teacher Orientation.

## National Heritage Academies Technology Scope and Sequence for Staff

N	Novice: Introduction and overview of learning concepts/areas
B	Basic: Developed skills through planned training sessions
P	Proficient: Applied learning without direction
C	Technology Coach: Can train and assist others

### Network Basics

		Years as a NHA Teacher	NTO	1	2	3	4	5
<b>Login and Network:</b>								
	NHA Technology Standards & Model							
	Log-in to the NHA Network	N	B,P	P	P	P	P	C
	Identify and use school network drives such as the Personal Z.; Universal & Project Drive(s)	N	B,P	P	P	P	P	C
	Contact the NHA Help Desk (electronic tickets and telephone)	N	B	P	P	P	P	C
	Understand the process and purpose of the NHA Desktop Image	N	B	P	P	P	P	C
	Identify and use other drives (e.g. A: Floppy & D: CD; other...)		N,B	P	P	P	P	C
	Locate computer identification information (e.g. IP address & Serial Number)		N,B	P	P	P	P	C
	Reset a Student's Password		N	B	P	P	P	C
<b>File Management:</b>								
	Save and retrieve documents (Name a file, choose a location and retrieve saved files)		N,B	P	P	P	P	C
	Distinguish between Save and Save As			N,B	P	P	P	C
	Create, save, open and move documents inside sub-folders			N	B	P	P	C
<b>Printing:</b>								
	Set a default printer		N,B	P	P	P	P	C
	Select various printers within the building		N,B	P	P	P	P	C
	Print only selected pages from documents		N,B	P	P	P	P	C

	Print duplex		N,B	P	P	P	C
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### Electronic Mail

	Create a New message; Add multiple recipients		N,B	P	P	P	P	C
	Reply to a message		N,B	P	P	P	P	C
	Forward a message		N,B	P	P	P	P	C
	Use the Address Book (Search for mail recipients)		N,B	P	P	P	P	C
	Add Attachments to E-Mail (e.g. pictures, documents)		N,B	P	P	P	P	C
	Open an Attachment from E-Mail		N,B	P	P	P	P	C
	Download an Attachment to an appropriate storage area (network drive)		N	B	P	P	P	C
	Organize E-Mail (create and use filing folders; role of Public Folders)		N,B	P	P	P	P	C
	Sort messages (by name, date subject)		N	B	P	P	P	C
	Delete E-mails (clean out your Mailbox)		N	B	P	P	P	C
	Create Distribution and Contact Lists		N	B	P	P	P	C
	Use the Outlook Web Access Calendar			N	B	P	P	C

### AtSchool Student Information System

Atschool Teacher Modules:								
	Attendance		N,B	P	P	P	P	C
	Gradebook		N,B	P	P	P	P	C
	Progress Reports		N	B,P	P	P	P	C
	Report Cards		N	B,P	P	P	P	C
	Publications (newsletters)		N	B,P	P	P	P	C

### Hardware

	Set up and use Mobil Laptop Cart		N	B	P	P	P	C
	Set up and use mobile Keyboarding System		N	B	P	P	P	C
	Set up and use the LCD Projector		N	B	P	P	P	C
	Basic Troubleshooting		N,B	P	P	P	P	C
	Use the Telephone System		N,B	P	P	P	P	C
	Use the Scanner		N	B	P	P	P	C
	Use the Digital Camera		N	B	P	P	P	C
	Use the digital Video Camera			N	B	P	P	C

### Microsoft Software Applications

MS Word: Word Processing								
	Enter text into a new Word Processing document		N,B	P	P	P	P	C
	Change the font and size of text		N,B	P	P	P	P	C
	Align text with alignment buttons		N,B	P	P	P	P	C
	Highlight text with the mouse		N,B	P	P	P	P	C

	Change the format of text with bold, italics and underline		N,B	P	P	P	C
	Use the cut and paste commands		N,B	P	P	P	C
	Use the menu bar functions		N,B	P	P	P	C
	Insert and format Clip Art		N,B	P	P	P	C
	Use Spell Check		N,B	P	P	P	C
	Learn Keyboard short-cuts (Ctrl-V = Paste, etc...)			N,B	P	P	C
	Learn to use headers and footers			N,B	P	P	C
	Insert and format other digital images			N,B	P	P	C
	Word Processing Tasks - The Options Menu			N	B	P	C

### MS Publisher: Desktop Publishing

	Use the Publisher Menu Bar Functions		N,B	P	P	P	C
	Resize, group and move objects		N,B	P	P	P	C
	Link text boxes for text flow			N,B	P	P	C
	Add other digital images			N,B	P	P	C
	Add and Delete Pages			N,B	P	P	C
	Locate and use existing templates from the Template Wizard			N,B	P	P	C

### MS Excel: Spreadsheets

	Use the mouse to select and enter data into a cell		N,B	P	P	P	C
	Spreadsheet: Learn to add/subtract cell information		N,B	P	P	P	C
	Spreadsheet: Formatting (cells; columns; rows)		N,B	P	P	P	C
	Spreadsheet: Learn spreadsheet terms		N,B	P	P	P	C
	Spreadsheet: Learn to graph or chart		N,B	P	P	P	C
	Spreadsheet: Create basic formula functions			N,B	P	P	C
	Learn to use headers and footers			N,B	P	P	C
	Advanced Spreadsheets (Sorting, Filters, Freeze Panes; Copying Worksheets)				N,B	P	C

### MS PowerPoint: Presentations

	Use a readymade PowerPoint Presentation		N,B	P	P	P	C
	Learn how to select and use a design template			N	B	P	C
	Learn how to create a basic presentation			N	B	P	C
	Learn how to format a presentation with slide transitions and animation			N	B	P	C
	Learn how to insert multimedia (sound, video, etc.) and hyperlinks			N	B	P	C

### MS Access: Databases

	Know how to start a new database document					N	B	P,C
	Know database terms					N	B	P,C
	Know how to create fields and enter information into records					N	B	P,C
	Learn to sort the database based on one field					N	B	P,C
	Perform a search based on one or more fields					N	B	P,C

### Graphics & Images

	Know how to use basic painting/drawing tools such as MS Paint					N	B	P	C
	Know how to select specific areas of a painting or graphic					N	B	P	C

	Knows the difference between several graphic formats			N	B	P	C
	Printing to a page			N	B	P	C
	Access and use clip art			N	B	P	C

### Working with the Internet - World Wide Web

	Filtering @ NHA	N	B	P	P	P	C
	Manually enter an Internet Web Address (URL)		N,B	P	P	P	C
	Learn Internet Explorer button functions (back, forward, stop, etc.)		N	B	P	P	C
	Know basic internet terms		N	B	P	P	C
	Learn to build and organize a 'Favorites' list of most used websites		N	B	P	P	C
	Know how to create website shortcuts and hyperlinks in MS Word		N	B	P	P	C
	Know how to search and use keywords for information within a search engine program			N	B	P	C
	Know how to search for and download graphics/images within a search engine program			N	B	P	C

### NHA Educational Software

	Know how to use Graph Club 2.0	N	N	B	P	P	C
	Know how to use Timeliner 5.0	N	N	B	P	P	C
	Know how to use Inspiration 8.0	N	N	B	P	P	C
	Know how to use MS Encarta	N	N	B	P	P	C
	Know how to use Type to Learn	N	N	B	P	P	C
	Know how to use Accelerated Reader	N	N	B	P	P	C
	Know how to use United Streaming	N	N	B	P	P	C
	Know how to use Scholastic Keys	N	N	B	P	P	C

### Education and Curriculum

#### Online Resources

	Know how to access Curriculum Center	N	B	P	P	P	C
	Know how to access and use NHA History Interactive materials	N	B	P	P	P	C
	Know how to locate and use recommended internet sites	N	B	P	P	P	C
	Know how to access, download and print lesson resources from Curriculum Center	N	B	P	P	P	C
	Know how to locate and use e-curriculum	N	B	P	P	P	C

#### Technology Curriculum

	Interpret and understand the NHA Technology Scope & Sequence of Content Standards	N	B	P	P	P	C
	Know how to access, download and print grade appropriate technology curriculum resources	N	B	P	P	P	C
	Deliver curricular instruction that incorporates the use of Technology		N,B	P	P	P	C
	Access and download resources to effectively assess and track student progress of technology skills		N,B	P	P	P	C
	Design lessons that incorporate the use of technology to enhance computer literacy in students.		N	B	P	P	C
	Know how to evaluate internet sites for accuracy and suitability	N	B	P	P	P	C

# Traditional Heritage Academies Technology Scope and Sequence for Students

(July 2006)

		<b>N</b>	Novice: direct instruction of the technology objectives.				
		<b>B</b>	Basic: apply the technology objective with direction.				
		<b>P</b>	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	8
<b>Mouse Skills:</b>							
	Point and Click/Double Click	N	B	P	P	P	P
	Point and Select from Menu	N	B	P	P	P	P
	Point, Click, and Drag	N	B	P	P	P	P
	Know the basic functional differences between left and right mouse buttons.			N	B	P	P
<b>Keyboarding Skills:</b>							
	Use typing tutorial program.		N	B	P	P	P
	Proficiently type, using proper hand position, with all alphanumeric keys.		N	B	P	P	P
<b>Other:</b>							
	Identify and know the basic functions of computer hardware.	N	B	P	P	P	P
	Know potential hazards that could damage computer hardware.	N	B	P	P	P	P
	Learn NHA's student computer usage policies.	N	B	P	P	P	P
	Know basic facts about networked computers.			N	B	P	P
	Uses a variety of input and output devices. (Scanner, digital camera, etc...)			N	B	P	P
	Know the differing capacities and trade-offs for computer storage media.				N	B	P

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

		3	4	5	6	7	8
<b>File Management:</b>							
	Save (Name, Choose a location)	N	B	P	P	P	P
	Retrieve saved documents	N	B	P	P	P	P
	Distinguish between Save and Save As		N	B	P	P	P
	Create back-up of documents.			N	B	P	P
<b>Computer Operation Skills:</b>							
	Know how to start a computer software program	N	B	P	P	P	P
	Cut, Copy, Paste		N	B	P	P	P
	Manipulate Windows (Task Bar, Close Button, Minimize Button, Maximize Button, Restore Window Button)		N	B	P	P	P
	Trouble-shoot simple problems.				N	B	P

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

		3	4	5	6	7	8
<b>Word Processing:</b>							
	Know how to start a new word processing document.	N	B	P	P	P	P
	Change the font and size of text.	N	B	P	P	P	P
	Align text with alignment buttons.	N	B	P	P	P	P
	Highlight text with the mouse.	N	B	P	P	P	P
	Change the format of text with bold, italics and underline.	N	B	P	P	P	P
	Know how to print independently.	N	B	P	P	P	P
	Use the cut and paste commands.		N	B	P	P	P
	Use the menu bar functions.		N	B	P	P	P
	Insert clip art		N	B	P	P	P
	Use Spell Check			N	B	P	P
	Learn Keyboard short-cuts (Ctrl-V = Paste, etc...)				N	B	P
	Learn to use headers and footers.				N	B	P
<b>Spreadsheet:</b>							
	Use the mouse to select a cell.	N	B	P	P	P	P
	Enter data into a cell.	N	B	P	P	P	P
	Learn spreadsheet terms.		N	B	P	P	P
	Know how to start a new spreadsheet document.		N	B	P	P	P
	Learn to graph or chart.			N	B	P	P
	Learn to add/subtract cell information.			N	B	P	P
	Create formula functions.					N	B
<b>Database:</b>							
	Know how to start a new database document.				N	B	P
	Know database terms.				N	B	P
	Know how to create fields and enter information into records.				N	B	P
	Learn to sort the database based on one field.				N	B	P
	Perform a search based on one or more fields.				N	B	P
<b>Other:</b>							
	Know basic distinctions among computer software programs, such as word processors, special purpose programs, and games.		N	B	P	P	P
	Start using multiple applications to complete one document or project. (e.g. Insert a spreadsheet into a word processing document)				N	B	P
	Know how formats differ among software applications and hardware platforms.				N	B	P

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

		3	4	5	6	7	8
<b>Graphics:</b>							
	Know how to use basic painting and drawing tools.	N	B	P	P	P	P

	Put shapes together to create a picture.	N	B	P	P	P	P
	Know how to use advanced painting and drawing tools.			N	B	P	P
	Know how to select specific areas of a painting or drawing.			N	B	P	P
	Know how to use cut, copy, and paste with selected shapes.			N	B	P	P
	Know the differences between several graphic formats.				N	B	P
<b>Desktop Publishing/Presentations:</b>							
	Know how to insert clip art.			N	B	P	P
	Learn how to select and use a template.			N	B	P	P
	Know how to zoom in and out.			N	B	P	P
	Learn how to create a basic presentation.			N	B	P	P
	Use special hardware devices for input within a document (scanner, digital camera).			N	B	P	P
	Learn how to format a Presentation.				N	B	P
	Complete a content area project.				N	B	P
	Complete and present a content area project presentation using Microsoft PowerPoint.				N	B	P
	Use multimedia within a document/presentation. (video, animation, sound, etc...)				N	B	P

**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	8
	Know how to search for information within a reference-based software program.	N	B	P	P	P	P
	Learn Internet etiquette: do's and don'ts	N	B	P	P	P	P
	Know basic Internet terms.	N	B	P	P	P	P
	Manually entering an Internet web address (URL).			N	B	P	P
	Learn how to search and use keywords within a search engine.			N	B	P	P
	Learn Internet Explorer button functions (back, forward, stop, etc..).			N	B	P	P
	Learn to access, send and reply with e-mail.			N	B	P	P
	Learn how to download graphics.			N	B	P	P
	Research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.						
					N	B	P

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

		3	4	5	6	7	8
	Know ways that technology is used at home and school.			N	B	P	P
	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	P
	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	P
	Know that technologies often have costs as well as benefits and can have an enormous effect on people and other living things.			N	B	P	P
	Know that new inventions often lead to other new inventions and ways of doing things.			N	B	P	P
	Know areas in which technology has improved human lives.			N	B	P	P
	Understand the concept of software piracy.			N	B	P	P
	Know ways in which technology has influenced the course of history.				N	B	P
	Know that science cannot answer all questions and technology cannot solve all human problems nor						

