

# Norfolk County Agricultural High School



## Technology Plan

2010-2014

## NCAHS PHILOSOPHY

The Norfolk County Agricultural High School believes agriculture and agribusiness are essential to regional, national, and global economies. We recognize that agricultural and environmental technologies are vital to global survival. Therefore, it is our mission to offer progressive agricultural education, a challenging academic curriculum, and work experiences that prepare our students for continued learning. We are committed to providing a quality educational environment that recognizes diversity in student backgrounds, individual learning styles, and varying abilities. It is the responsibility of the school community to provide a positive learning environment fostered through mutual respect and dignity.

Norfolk County Agricultural High School (NCAHS) is four year High School which offers a unique selection of technical programs. Where technology once played a minor role in the Agricultural community we have now come to embrace technology and integrate it into the evolving field of Agribusiness.

The Massachusetts Department of Education issued benchmarks so that each district's technology plan would develop a series of goals and action steps in response to the following:

1. Commitment to a Clear Vision and Mission Statement
2. Technology Integration
3. Technology Professional Development
4. Accessibility of Technology
5. Infrastructure for Connectivity
6. Access to the Internet outside the School Day

Our plan responds to each of these benchmarks with a major emphasis placed on the need to continue and expand professional development opportunities for staff so that they can effectively enhance student learning by integrating technology into the curriculum. Educators at the Norfolk County Agricultural High School today are being asked to address twenty-first century issues with teaching, learning and management tools designed for industrial age schools. The skills necessary for the next century will require students to have the ability to access, analyze and communicate information effectively. These information processing skills will enable our students to assume a productive role in an information age that is integral to our global economy.

The Norfolk County Agricultural High School hopes to meet this challenge by using technology to design effective instructional strategies for our diverse student population. Our ability to provide opportunities that will allow for a new vision of how students and staff learn, how teachers teach, and how technology will both facilitate and contribute to the future success of our school system.

In an attempt to keep our technology plan as a viable working document we have used our school goals process in key sections to set goals with corresponding action steps so that we can monitor and evaluate our progress. The technology plan's goals in the areas of Curriculum Integration, Professional Development, accessibility and Infrastructure will be revisited annually as part of our assessment and evaluation process.

After evaluation the status of each goal will be determined as completed, on-going or in need of revision. Technology planning is an on-going process that will require us to set new goals during the life of the plan as we evaluate our progress and as technology and funding opportunities change.

To achieve significant progress toward tomorrow's schools, a systemic approach must be used to integrate and simultaneously address three concepts -- active learning, schools as learning communities, and integrated technology. If technology is to have a substantial and lasting impact, it must be used in ways that reflect an important new understanding of learning. Educators and cognitive psychologists have developed this new view during the past two decades. It explains learning as the active construction of meaning and understanding by the learner rather than a passive assimilation of information. It emphasizes the importance of intrinsic curiosity, social interaction and the pursuit of complex projects and genuine problems in the learning environment.

In addition to new concepts of learning, new models of school organization have evolved in recent years. These seek to establish schools as learning communities. This model stresses the importance of interaction among students, teachers, parents, and the community as they work dynamically together for the benefit of the entire community. New patterns of organizing people, more flexible space, and longer blocks of time will enable us to use technology to its fullest potential for student learning.

Information technology is an essential element in putting these new models of schools and learning into practice. It must be transparent to the user as well as integrated as a tool into a wide range of learning activities. It must be right there in the classroom where students and teachers have immediate access when it is needed. New electronic devices will transform our learning and teaching practices far beyond those that have been common place for centuries. With them, schools will provide learning experiences which are active and stress team-work, involve complex thinking skills, focus on solving real world problems, increase interaction with people from other parts of the world, and approach learning in an interdisciplinary manner.

NCAHS's Master Plan committee is developing a plan for the direction of the school for the next three, five and ten years. This plan deals with facilities, curriculum both vocational and academic, professional development and the future of technology as it relates to the Agribusiness World.

**DOE Benchmark Standard 1: – Commitment to a Clear Vision and Mission Statement**

The district's technology plan contains realistic and clearly stated goals and strategies that align with the school improvement plan.

The Norfolk County Agricultural High School has a vision that will shape our technology plan for the next five years.

- A. NCAHS will continue to integrate technology into our classrooms and across the curriculum to better meet the needs of the agricultural/vocational surroundings. Our students transition between classrooms, barns, greenhouses, mechanical engineering labs, woodworking shops into computer labs where they are able to articulate their new found skills into an e-portfolio that documents their four years at NCAHS.

- B. NCAHS' Technology Department meets monthly with key administrators and department heads to discuss current technology needs and issues as well as to address the changing needs of staff and students. NCAHS's technology projected budget is established based on State appropriations, Grants, Erate, and the County's budget for the coming school year. As monies become available the projected budget is reassessed and reprioritized based on new technological developments and opportunities as they arise. Using grant resources in addition to budget monies, we have updated our existing computers and added computers labs that are used in association with smart boards and LCD projectors to further enhance the learning environment.
- C. The non discounted portion of the erate request is covered by the annual school committee appropriation. In fiscal 2010 sufficient funds were appropriated to cover all internet costs, telephone charges, local network maintenance charges and anticipated purchases. Some of the anticipated instructional technology needs will come from grant sources including state, federal and private.
- D. NCAHS budget for technology is revisited yearly to meet the ever changing technology demands.
- E. NCAHS uses all resources available to obtain funding for technology needs. Grant resources are utilized by all departments at NCAHS.

**DOE Benchmark Standard 2:- Technology Integration**

A. Teacher and Student Use of Technology

- 100% of our teachers use technology every day to access or share lesson plans enter attendance into our SIS, and to communicate through email. In addition, teachers are now using a web based grading program.
- A majority of our teachers use technology with students in the following areas; Research multimedia, simulations, data interpretation, communication and collaboration.
- A majority of our students reach technical proficiency by the 10<sup>th</sup> grade as a requirement for e-portfolio creation.
- As of September 2009, 50% of our teachers are at the advanced level and 50 % are at the proficient level as defined by the Massachusetts Technology Self Assessment Tool. (TSAT)
- NCAHS has an Acceptable Use Policy that is posted on our school website ([www.norfolkaggie.org](http://www.norfolkaggie.org)) and distributed to all students and staff whom must sign and return it before they are allowed access to the school network.
- Each year we survey the departments for technological needs for the upcoming school year. Each department submits a prioritized list of their requests for equipment, training and software. The Technology Department, Administrators and department heads then prioritize the lists school wide to develop a technology plan for that year.

B. NCAHS has been successful in integrating technology into the classrooms

- NCAHS has two full time instructional technology teachers.
- NCAHS has a full time network administrator for data management and assessment.

**DOE Benchmark Standard 3: Technology Professional Development**

- A. The staff at NCAHS has participated in many different technology professional development programs. Technology training for, but not limited to have included Web page building and design, emailing, smart Board, grading program, and our SIS software.
- B. NCAHS offers courses in Smart Board usage, teacher web page design, Grade quick web. Training and curriculum integration is an ongoing process. Continued professional development is crucial to the success of technology integration and advancement for our school.
- C. NCAHS will continue to assess our teacher's needs for professional development based on the results of the TSAT and surveys created by the Professional Development Committee (HSTW) to determine the direction of future Technological Professional Development training. The Professional Development Committee also assesses software and hardware needs for each department based on the curriculum framework.

**DOE Benchmark Standard 4: Accessibility of Technology**

- A. Students per Instructional Computer
  - NCAHS has been successful in achieving a ratio of 2.3 students to computer ratio. We have met the DOE standards for fully functioning Internet enabled computers as defined by the Department of Education.
  - NCAHS provides access to portable / handheld devices as deemed appropriate for the curriculum by the instructor.
  - We will continue to advocate for local funds, seek grants and accept quality donations in order to reach our replacement cycle goal of 20% each year.
  - Erate monies are used to upgrade computers and purchase educational software.
- B. Technical Support
  - In classroom technical support is provided by phone, email and by a web based reporting tool. NCAHS has 2 pcs available at most times to be able to switch out a non functioning pc to eliminate downtime.

**DOE Benchmark Standard 5: Infrastructure for Connectivity**

- A. Internet Access
  - NCAHS provides connectivity to the Internet in all classrooms including 6 computer labs.
  - NCAHS has underground conduits that connect our six campus buildings by fiber.
- B. Networking LAN/ WAN
  - All computers meet or exceed the minimum requirement of 10/100 MB cat 5 switched accesses.
  - NCAHS provides services for file sharing, backups, scheduling, email, and a web based SIS and grading systems and the updating of our school website for staff, students and parent information and services.
- C. E-Learning Environment
  - NCAHS sponsors a Spanish dual enrollment class in conjunction with Massasoit Community College in which students earn foreign language college credits.
  - The ISafe program is now part of our curriculum for students, staff and parents. Our web site features a link to Net Smartz for Internet safety tips for Parents and Students.
  - Virtual field trips include visiting college campuses and visualizing landscaping as part of our Plant Design courses.

**DOE Benchmark Standard 6: Access to the Internet outside of the School Day**

- A. NCAHS has a new Website that is maintained and updated daily. Every educator has an Internet account with the capability of sending e-mail and accessing the web. Teachers also have the capability of maintaining individual web pages for better communication with students and parents. Many of our staff currently maintains their own WebPages.
  
- B. The NCAHS's website has up-to-date list of all libraries in the surrounding towns that provide computer use after school hours. The campus is also open for student use before classes start and after the school day. Specialized and one to one help is available to all students upon request or during computer lab classes.

## **Technology Goals**

NCAHS will;

Continue to Evaluate and replace and update computers and software programs

Continue acquisition of video projectors and smart boards with training for Staff and Students.

Upgrade and expand instructional software in academic and technical areas by assisting teachers with preview and purchase of software packages/services.

Provide ongoing training for our web based grading program.

Administer the TSAT to accurately assess the instructional staff's abilities

Expand training and resources to faculty for the creation of teacher websites.

Deploy a Reading assistance software package.

## **Technology Achievements**

NCAHS has;

Upgraded our file server and have begun to update our infrastructure to 1GB speed switches.

Installed a fios line that runs parallel to our existing T1 line.

Upgraded our backup hardware and software.

Added Overhead projectors and smart boards to classrooms and labs.

Replaced older printers and copiers with updated models.

Moved to a web based grading program for teachers that integrates with our SIS.