



**New Horizons
Regional Education Center**

**Technology Plan
2014-2016 School Year**

New Horizons

Regional Education Center

Five-Year Technology Plan 2014-2016 School Year

Overview:

The New Horizons Regional Education Center (NHREC) comprises five major and distinct educational programs. These programs (New Horizons Governors School for Science and Technology, Career and Technical Education Center, Center for Autism, Newport Academy (ED) and Center for Apprenticeship and Adult Education) have very different technology needs and are addressed in different sections of this plan. The New Horizons Regional Education Center serves the school districts of Williamsburg-James City, Gloucester, Poquoson, Hampton, Isle of Wight, Newport News, and York County, Virginia.



Source: Home Pages Hampton Roads
http://hamptonroads.homehunter.com/hroads/index_map.jhtml

Vision:

New Horizons Regional Education Center will strive to become a state-of-the-art regional educational center nationally recognized as an authority on specialized educational programs and services that support the development of a world class workforce and self-sufficient citizenry.

Mission:

To secure the educational needs of the Peninsula's school divisions, New Horizons will prepare students educationally, technically, and socially according to each student's needs to become productive citizens.

- To train and educate a world-class workforce.
- To challenge and enrich the education of future scientists and mathematicians
- To provide effective educational, vocational, and therapeutic treatment for children and youth with disabilities.

Technology Plan- Stakeholders, Development and Communications

Stakeholders – The NHREC technology plan is developed through the input from a variety of sources and is reviewed and updated each year. The recommendations for technology plan come from the instructional personnel, advisory committees, and respective building and program administrators to include:

Executive Director, NHREC
CTE Principal, Hampton (Butler Farm) Campus
CTE Principal, Newport News (Woodside Lane) Campus
Special Education Director
Governor's School Director
Apprenticeship and Adult Education and Apprenticeship, Director
Network Administrator
Plant Manager

Technology Plan Development

NHREC develops its technology plan by coordinating efforts through its directors and principals. The NHREC technology plan emphasizes the innovative use of technology in instruction, administration and operations within the system. It is used as a tool to articulate specific new and innovative technology projects and programs within NHREC as well as the processes used for planning, developing, testing, and implementing technology. NHREC personnel submit technology plan funding requests for new and existing programs. Any NHREC employee may submit a technology proposal.

Technology Plan Communications

The technology plan is posted on NHREC website. <http://nhgs.tec.va.us/tech.htm>

Technology Vision: To provide leading edge, reliable and secure Internet service to the Programs and Administration of the New Horizons Regional Education Center. To support the integration of technology in to all New Horizons Programs.

Technology Plan Goals:

Curriculum/Instructional Integration: Enhance student learning experiences and outcomes through the integration of technology into the education process.

- Increase student learning through effective integration of technology into all curricula areas. This objective focuses on student learning and on the effective integration of technology in the curricula and instructional pedagogy.
- Utilize technology to manage student and operational data for effective decision making. This objective focuses on teacher and administrators management of assessment and operational data.
- Supplement and/or provide alternative instructional options through the creation of curriculum-specific content, and access to virtual material and courses. This objective will focus on the management of digital content and various on-line instructional options (distance learning, video conferencing, E-Learning, Virtual Schools).
- Deliver on-line course/curriculum options to students in their home high school or other designated satellite locations that minimize student travel to NHREC.
- Prepare students with the 21st Century skills needed to succeed in an increasingly complex information and technology-driven society. This objective focuses on providing all students with communication, technological and research skills.

Professional Development and Training– Enhance instructional delivery and personnel productivity through a systemic technology development plan related to standards, policies, software and hardware.

- Development of instructional personnel to effectively utilize classroom instructional technology (hardware and software). This objective focuses on teaching teachers how to effectively use technology related to curriculum and instruction.
- Development of teachers and educational administrators related to the implementation and integration of On-Line learning. This objective focuses on training personnel in using digital content, video conferencing, virtual courses and distance learning.
- Development of organizational personnel in terms of productivity, management programs, and online services (email, secure shell, etc.). This objective focuses on training regarding e-mail, Windows, Microsoft products, and other management programs.
- Development of organizational personnel regarding technology policies and procedures. This objective focuses on training all staff regarding technology standards and policies.

Technology Support: Technical support will be provided to assure the appropriate implementation of the network, hardware and software necessary to address instructional and operation needs of the organization.

- Provide for a Technology Director responsible for the vision and management of the overall technology system.
- Provide technical support to resolve hardware and software issues.
- Provide technical support related to data base management for effective decision making.
- Provide Technology Curriculum Instructional Specialist (TCIS) to assist teachers to effectively integrate technology and instructional techniques to maximize student learning.

Infrastructure and Connectivity - Electronic infrastructure including software, hardware and network resources providing equitable access across all levels

- Provide access to stable secure network.
- Connect all instructional areas to the Internet.
- Provide secure and cost effective digital data service to all New Horizons Programs and Administration offices.
- Promote and develop online systems and methods to collect, store and distribute information for the New Horizons Regional Education Center
- Meet the requirements of the Child Online Protection Act and the Child Internet Protection Act and the goals of No Child Left Behind.

Educational and Administrative Productivity – Maximize the security, safety and efficiency within the organization.

- Evolve mission-critical systems and applications from legacy platforms to an Internet/web-based structure.
- Establish system wide site licenses for core software applications to ensure version consistency and efficiency in operational support
- Promote a 24-7 learning environment with resources and tools available for students, teachers, parents, and administrators.
- Provide a high speed broadband network to support NHREC's educational initiatives.
- Create and maintain the storage of digital content to support curricula.
- Create and implement data management systems to support effective educational and operational decision making.

Accountability and Results – Utilize technology to assess teaching effectiveness, school improvement plan, IEP's, as well as local, state and federal reporting requirements.

- Utilize Web-based decision-making and reporting to support NHREC school improvement plan, learning teams, and leadership objectives.
- Ensure that data driven decision-making systems support local, state and federal requirements.
- Research instructional effectiveness resulting from integration of technology.

Technology Plan Accountability and Evaluation

The following process and steps outline technology program planning, implementation and accountability within the technology plan:

- Establish Strategic Goals for the system by Board of Trustees, Executive Director, and Leadership team.
- Solicit technology plan proposals, input and content from staff by Principals and Directors.
- The school leadership team and the Technology Plan evaluation committee evaluate project outcomes.
- The technology plan is maintained by the Director of Technology. Yearly updates enable accurate and timely reporting of NHREC Technology Plan to include new goals and objectives.

New Horizons Network:

The Center currently consists of four separate campuses (Butler Farm, Woodside Lane, Kiln Creek Elementary wing, and York Middle School wing). A Gigabit Local Area Network (LAN) with fiber backbone and 54 Megabits Wireless Local Area Network (WLAN by Meru) exists in each campus and a Wide Area Network ties all five together connected by two 15 Megabit and two 5 Megabit services to Internet service. Nine VLANs provide campus to campus connections for Voice Over IP phone service, connection to campus Payroll, Accounting, Zimbra Collaboration Suite and Video Conferencing services. Each instructor and administrator has a computer in his/her office with full Internet service (email, secure shell, WWW). Each LAN/WLAN is managed by an ABMX Quad Quad core (16 cores) server and Cisco routers and Extreme Gigabit switches (POE). Each WLAN is secured with 128bit encryption. Each building on the five campuses has at least one network printer on the LAN/WLAN.

Overview:

Horizonet provides Internet service and support to the 280 plus employees and staff and to the students of New Horizons Regional Education Center. Digital voice telephone service (voice over IP) and full Internet service (e-mail, secure shell and WWW access and Web pages) are provided to staff and instructors. Horizonet support staff consists of one Network Administrator, one twelve month Database and Computer Support Specialist and one twelve month Computer Support Specialists. Each main campus (Woodside and Butler Farm) is connected to the Internet by a 15 Megabit service. Two other campuses (Kiln Creek and York Middle) are connected to these centers by 5 Megabit service. The Family Crisis Center located in Williamsburg Virginia is connected to the William and Mary Campus network. A unified managed encrypted Meru wireless LAN (WLAN) is installed at all locations. Web pages are provided for the New Horizon's Regional Education Center Programs (www.nhrec.org) and for instructional staff. Security and content filtering are provided by Cisco router firewalls and Dan's Guardian and Untangle software. E-mail service is provided by Google School and Zimbra Collaboration Suite software running on ABMX Servers. Some funding for instructional program Computers is provided through the Virginia Technology Grant program and discount digital service is supported through the E-Rate or Universal Service Program.



CTEC Instructional Technology Plan (Woodside Lane)

GOAL 1: Engage students in meaningful curricular content through the integrated and effective use of technology.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Purchase one Promethean Board per year.		\$2500
2. Update teacher presentation computers and multi-media presentation cart.		\$3500
3. Provide staff development to help teachers integrate technology to enhance instruction.		
4. Use Learning Teams to research use of technology, support staff for integration of technology into the classroom, and provide feedback to Administrators on training needs.		
5. Teachers will have access to instructional and coaching support from technology coaches for integrating technology into teaching and learning.		Stipend

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 2: Provide students with access to authentic and appropriate tools to gain knowledge, develop skills, extend capabilities, and create and disseminate artifacts that demonstrate their understandings.

OBJECTIVES	Completion Date	Budget Required
Increase student use of technology-based research, presentations, and projects.		\$4000
Students will use technology for skill and knowledge acquisition as determined by curriculum and industry standards.		\$5000
Students will be connected to experts in their field through the use of technology.		
Implement BYOD policy as appropriate.		

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 3: Increase use of online curricula across programs.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Maximize instructional efficiency by using online access for presentation of basic information and instructor led lessons for applications and enhancement of concepts.		
2. Replace at least one existing textbook with a curriculum which includes online access each year.		\$7000
3. Structure student use of online curricula lessons for review and remediation.		
4 Use technologies to develop collaborative teaching lessons through Criminal Justice Programs across both campuses.		

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 4: Use technology to support data-driven decision making to assess and improve teaching and learning.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Use technology to efficiently assess student learning and analyze data.		\$1000
2. Develop a retake and remediation policy in each program to ensure students are progressing at a satisfactory level.		
3. Use online curricula and other technology for structured and easily monitored review and remediation.		
4. Modify pacing, presentation, and format of instruction based on data analysis from assessments.		
5. Conduct pre and post testing to develop student progress goals and measure results using technology-based assessments.		\$1000

MID YEAR SUMMARY:

YEAR END SUMMARY:



CTEC Instructional Technology Plan (Butler Farm)

GOAL 1: Engage students in meaningful curricular content through the integrated and effective use of technology.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Purchase two tablets to integrate into instruction using Promethean		\$2000
2. Install Prometheans in 4 classrooms, move 65" inch flat screen TV to EMT. This leaves only two classrooms without a Promethean system.		\$12,000*
3. Update 4 new teacher presentation computers and multi-media presentation carts (Note: New teachers will all be issued laptops).		\$7000
4. Provide staff development to help teachers integrate technology to enhance instruction.		
5. Use Learning Teams to research use of technology, support staff for integration of technology into the classroom, and provide feedback to Administrators on training needs.		
6. Teachers will have access to instructional and coaching support from technology coaches for integrating technology into teaching and learning.		Stipend

*\$7500 paid from 2012-13 funds

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 2: Provide students with access to authentic and appropriate tools to gain knowledge, develop skills, extend capabilities, and create and disseminate artifacts that demonstrate their understandings.

OBJECTIVES	Completion Date	Budget Required
1. Increase student use of technology-based research, presentations, and projects.		\$4000
2. Students will use technology for skill and knowledge acquisition as determined by curriculum and industry standards.		\$5000
3. Students will be connected to experts in their field through the use of technology.		
4. Implement BYOD policy so that teachers may allow student use of smart phone devices and tablets in classroom for interactive and research-based purposes.		

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 3: Increase use of online curricula across programs.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Maximize instructional efficiency by using online access for basic information and instructor led lessons for applications and enhancement of concepts.		
2. Structure student use of online curricula lessons for review and remediation.		
3 Use technologies to develop collaborative teaching lessons through Criminal Justice Programs across both campuses.		
4. Identify 1-2 other programs to follow Criminal Justice in collaborative teaching across campuses in 2015		
5. Implement ELECTUDE USA on-line system into auto technology program. Look at using outside class. Analyze effectiveness for use of similar systems.		

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 4: Use technology to support data-driven decision making to assess and improve teaching and learning.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Use technology to efficiently assess student learning and analyze data.		
2. Develop a retake and remediation policy in each program to ensure students are progressing at a satisfactory level.		\$2000
3. Use online curricula and other technology for structured and easily monitored review and remediation.		
4. Modify pacing, presentation, and format of instruction based on data analysis from assessments.		
5. Conduct pre and post testing to develop student progress goals and measure results using technology-based assessments.		\$2000

MID YEAR SUMMARY:

YEAR END SUMMARY:



Newport Academy Instructional Technology Plan

GOAL 1: Engage students in meaningful curricular content through the integrated and effective use of technology.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Equip all classrooms with technology needed for instruction by purchasing additional projectors, eBeams interactive white board technology, iPads/tablets, document cameras, and video cameras.		\$11,000
2. Maintain, repair, and replace current technology in classrooms.		\$1,000
3. Maintain current digital curricula, materials (Plato Learning Environment, Moby Max, Discovery Education, Wordly Wise, EdHelper and ABC Teach.		\$11,600
4. Explore/Access additional digital content such as Virtual H.S., Economics and Personal Finance.		
5. Provide professional development regarding use of technology tools and digital curricula available		
6. Provide professional development regarding methods for integrating technology into instruction		
8. Provide instructional technology coaches (TCIS) stipend		Stipend

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 2: Provide students with the appropriate technology tools to develop skills, acquire information, and demonstrate acquisition.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Ensure all students have access to a variety of electronic tools by maintaining laptop carts and classroom computers and purchasing additional eBeam interactive white board technology, assistive technology, iPads/tablets.		
2. Maintain student access to a secure, reliable, and flexible (wireless) networking system to support academic exploration.		

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 3: Use technology to support data-driven decision-making to assess and improve teaching and learning.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Staff will use data to improve instructional planning and behavior programming through the use of data systems and software such as iep.online, Plato Learning Environment (PLE), PowerSchool, Survey Monkey, and the PBIS data base.		Cost of PowerSchool \$3,000 iep.online \$250 Survey Monkey
2. Teachers will use pre-test, formative, and post-test data to improve instruction and respond to student needs through the use of tools such and Moby Max, PLE, Scholastic Reading Inventory, and Scholastic Math Inventory.		
3. Teachers will document and share information related to student progress through continued use of iep.online and PowerTeacher.		

MID YEAR SUMMARY:

YEAR END SUMMARY:



CFA and ED/ID Instructional Technology Plan

GOAL 1: Engage students in meaningful curricular content through the integrated and effective use of technology.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Equip all classrooms with technology needed for instruction by purchasing additional projectors, eBeams interactive white board technology, iPads, document cameras, and video cameras.		\$11,000
2. Maintain, repair, and replace current technology in classrooms.		\$1,000
3. Maintain current digital curricula, materials (Plato Learning Environment, Moby Max, Discovery Education, Wordly Wise, EdHelper, Unique, News2You, shared electronic lesson files, BoardMaker, ABC Teach, and BrainPop.		\$12, 304
4. Explore/Access additional digital content such as Virtual H.S., Economics and Personal Finance,		
5. Provide professional development regarding use of technology tools and digital curricula available.		
6. Provide professional development regarding methods for integrating technology into instruction.		
7. Utilize Learning Team to research best practices and innovative technology, assist with staff development, and provide support with integrating technology into instruction.		
8. Provide instructional technology coaches (TCIS) stipend		Stipend

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 2: Provide students with the appropriate technology tools to develop skills, acquire information, and demonstrate acquisition.

OBJECTIVES (2014):	Completion Date	Budget Required
1. Ensure all students have access to a variety of electronic tools by maintaining laptop carts and classroom computers and purchasing additional eBeam interactive white board technology, assistive technology, communication devices, and iPads/tablets.		
2. Maintain student access to a secure, reliable, and flexible (wireless) networking system to support academic exploration.		

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 3: Use technology to support data-driven decision-making to assess and improve teaching and learning.

OBJECTIVES (2014):	Completion Date	Budget Required
OBJECTIVES (2014):	Completion Date	Budget Required
1. Staff will use data to improve instructional planning and behavior programming through the use of data systems and software such as iep.online, Plato Learning Environment (PLE), and the PBIS data base.		Cost of PS \$3,000 iep.online \$250 Survey Monkey
2. Teachers will use pre-test, formative, and post-test data to improve instruction and respond to student needs through the use of tools such and Moby Max, PLE, Scholastic Reading Inventory, Scholastic Math Inventory, and Early Literacy Skill Builders.		SRI, SMI costs
3. Teachers will document and share information related to student progress through continued use of iep.online and PowerTeacher.		

MID YEAR SUMMARY:

YEAR END SUMMARY:

- GSST staff continually revises curricula for individual courses as well as strand.
- GSST Technology Committee’s goal is to identify technology resources to support and improved teaching and enhanced student performance.
- Technology Committee meets monthly with staff to plan how to use technology for teaching and student learning within their specific curriculum area.
- GSST encourages staff to recognize the benefits of network services (e-mail and Internet access) in their unit design and teaching strategies.
- Edmodo – staff utilizing on-line collaborative forum to support homework assignment and implement the “Flipped Classroom” model.
- GSST realizes that effective integration of technology into the curriculum is a slow process which requires extensive professional development and technical support. It is a high priority of GSST to continue with its efforts to provide teachers with the necessary training, support and resources necessary for them to be successful.
- Professional development training is designed and conducted through the Trainer of Trainers model to meet the needs of the teachers.

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 2: Engagement - Engage GSST students in meaningful curricular content through the purposeful and effective use of technology. Ensure that technology is integrated within the GSST curriculum.

OBJECTIVES (2014):	Completion Date	Budget Required
<p>Objective 2.1: GSST curriculum will reflect effective integration of technology. Strategy 2.1.1: - Provide training and coaching support to curriculum writing and revision teams to improve technology integration.</p>	2015	Curriculum writing to include integration of technology
<p>Objective 2.2: GSST teachers will develop skills in interactive, engaging instruction. Strategy 2.2.1: Provide a variety of online learning resources for teachers to improve their instruction.</p>	2015	Instructional technology tip sheet, video, on-line teacher tool box

MID YEAR SUMMARY:

YEAR END SUMMARY:

GOAL 3: Application - Afford students with opportunities to apply technology effectively to gain knowledge, develop skills, and create and distribute artifacts that reflect their understanding e.g. E-Research and E-Mentorships where students communicate and collaborate with their scientists and peers around the world.

OBJECTIVES (2014):	Completion Date	Budget Required
<p>Objective 3.1: GSST Teachers will have access to pedagogical and coaching support for integrating technology into teaching and learning. Strategy 3.1.1: Provide instructional technology coaches (TCIS) stipend</p>	2015	
<p>Objective 3.2: GSST Students will communicate and collaborate with their peers within local, state, National and World for academic strand competitions e.g. E-research and E-mentorship. Strategy 3.2.1: Provide learning experiences that promote cross-class collaboration and communication e.g. video-conferencing, and other online collaboration tools.</p>	2015	
<p>Objective 3.3: GSST Student will have an opportunity to represent their academic, work, and scientific research experience electronically Strategy 3.3.1: Provide the infrastructure, hardware, software, and training for students to support the creation of electronic work</p>	2014	

NOTE: Professional Development

- GSST recognizes that comprehensive and continuous professional development for integrating technology into the curriculum is essential for success.
- GSST will provide quality professional development for technology integration.
- GSST has focused past professional development activities using technology as a tool to enhance teaching and learning.
- GSST will continue to investigate innovative professional development strategies and encourage staff to implement strategies in their daily instruction.
- Professional development training is designed and conducted through the Trainer of Trainers model to meet the needs of the teachers.

MID YEAR SUMMARY:

YEAR END SUMMARY:

Goal 4: Tools – Provide GSST students with access to authentic and appropriate tools to gain knowledge, develop skills, extend capabilities, and create and disseminate artifacts that demonstrate their understandings.

OBJECTIVES (2014):	Completion Date	Budget Required
<p>Objective 4. 1: GSST Students will apply a variety of electronic tools in their academic work to demonstrate skills and understanding of content. Strategy 4.1.1: Provide student-use computers in various forms (desktop, laptop, handheld) and BYOD. Strategy 4.1. 2: Provide interactive white-boards, projectors, and sound systems in classrooms. Strategy 4.1. 3: Provide a variety of Web 2.0 tools, modeling, simulation, and digital video software resources to classrooms.</p>	<p>2014-2016</p> <p>2014-2015</p>	<p>3-D Printer w/ supplies \$6,000,</p> <p>MAT LAB software licenses \$3,000</p>
<p>Objective 4.2: GSST Teachers will have access to technical support for all software and hardware in use in the classroom. Strategy 4.2.1: Maintain Technical Instructional support staff for students and staff based on demand.</p>	<p>2014-2016</p>	<p>Stipend</p>
<p>Objective 4.3: -GSST Students and educators will have access to a robust networking system to support academic exploration. Strategy 4.3.1: Upgrade wireless networks to enhanced coverage and data throughput. Strategy 4.3.2: Maintain supported application. Strategy 4.3.3: Establish procedures for the use of personals electronic devices to access the NHREC network (BYOD)</p>	<p>2014-2016</p> <p>1st Phase in 2013-2014</p> <p>Completed phase in 2014-2015</p>	<p>Bring Your ON Devices (BYOD)</p>

NOTE: Information and Communications Technology Initiatives

- Edmodo
- Facebook – College Planning, scholarships
- GSST staff is encouraged to develop instruction which includes portfolio development and ensures integration of 21st century tools.
- GSST continues to work diligently on implementing the E-research for the senior mentorship experience.

MID YEAR SUMMARY:

YEAR END SUMMARY: