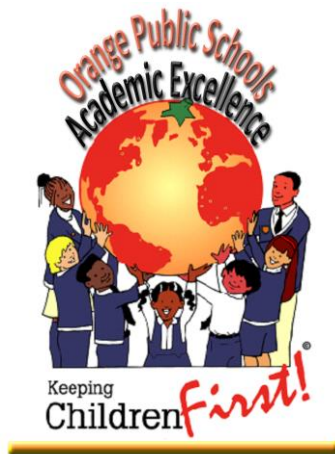


Orange Public Schools
Orange, New Jersey



Orange Board of Education

3-Year Technology Plan

2016 - 2019

ORANGE PUBLIC SCHOOLS TECHNOLOGY PLAN 2016 – 2019

| | |
|--|----|
| Tech Plan Approval | 4 |
| Stakeholders | 5 |
| Executive Summary | 6 |
| Technology Overview | |
| <i>Technology</i> | 6 |
| <i>Maintenance Policy and Plan</i> | 8 |
| <i>Replacement Plan</i> | 9 |
| <i>Assistive Technology/Accessibility</i> | 9 |
| Cyber Safety | 10 |
| Needs Assessment | 11 |
| Three-Year Goals and Objectives | 15 |
| Three-Year Implementation and Strategies Table | 18 |
| Funding Plan | 19 |
| Professional Development | 23 |
| Evaluation Plan | 24 |

Three-Year Local School District Technology Plan July 1, 2016 through June 30, 2019

*County: Essex
District: Orange
Grade Levels: K-12*

*County Code: 13
District Code: 3880*

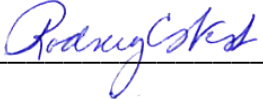
Website: www.orange.k12.nj.us

Date Technology Plan approved by School Board: _____

Is District compliant with Children's Internet Protection Act (CIPA): Yes

Please indicate below person(s) to contact for questions regarding this Technology Plan:

*Name: Rodney West
Title: Information Technology Manger
Email: westrodn@orange.k12.nj.us
Phone: (973) 677-4000 x6082*

Signature:  _____

Orange Public Schools
Orange, New Jersey

Superintendent Approval:


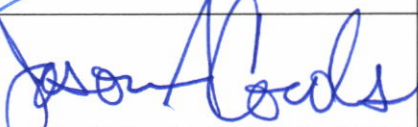
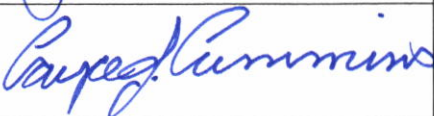



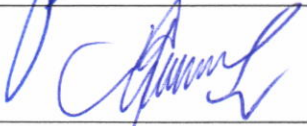

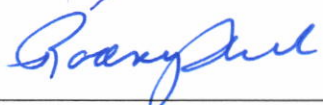
Superintendent: Dr. Paula E. Howard
Email: howardpa@orange.k12.nj.us
Phone: (973) 677-4000

Signature  _____ Date: _____

Orange Board of Education (2016 - 2019)

Orange Public Schools
Orange, New Jersey

Stakeholder Table

| TITLE | NAME | SIGNATURE |
|------------------------|---------------------|---|
| Superintendent | Dr. Paula E. Howard |  |
| Network Administrator | Jason Cordes |  |
| School Principal | Cayce Cummins |  |
| Technology Coordinator | Miriam Martin |  |
| Database Administrator | William J. Grenger |  |
| Teacher-Secondary | Jean Jackson |  |
| Business Administrator | Adekunle James |  |
| Teacher-Special Needs | Anthony Dietrick |  |
| IT Manager | Rodney C. West |  |
| | | |

Executive Summary

Vision Statement

Technology is the gateway to the future, and when executed properly is seamless in its infusion. In order to effectively address the rapid changes in technology and education today the Orange Board of Education must remain abreast of all technology related issues. The Orange Board Of Education is committed to preparing today's students for life in the 21st century and beyond. Technology is not a separate entity or area of instruction and should not be taught in isolation. By integrating technology into all levels of instruction, the Orange Public Schools are providing students, staff and the community with opportunities that build a learning community using technology as a learning resource and management tool. This technology enriched learning community affords students, staff and families with the commitment to learning, collaboration and a focus on equitable results.

Mission Statement

The Orange Public Schools will incorporate technology into all areas of the educational process by the infusion of a strengthened curriculum that acquires, applies and evaluates its technology resources to best support the Common Core Standards. This endeavor will develop a community of life-long learners that will enable students to:

- Expand their knowledge base.
- Increase Creativity
- Become more innovative
- Participate in technology trouble shooting
- Become self-directed learners
- Reinforce Language Arts and Math Literacy.
- Improve their critical thinking, problem solving and decision making skills.
- Collaborate with others to effectively complete a task.
- Be informed of various professions involving technology.
- Use assistive technology to augment the learning process.
- Access, analyze, evaluate and communicate information.
- Use video to enhance their learning experiences.
- Use technology to improve student achievement.

Technology Overview

A. Technology

Equipment and Network Capacity:

The district's technology network and infrastructure is a comprehensive system that allows for the users to adequately access all areas of technology, including but not limited to telecommunications, the Internet, educational software and various database management systems.

All of the schools have a minimum of one (20-27) student workstation lab. Schools that have completed their facility expansions have added on an additional lab. The elementary schools

Orange Public Schools
Orange, New Jersey

all have 3 student workstations in the classrooms and library. The **Orange Prep Academy**, and High School have implemented the 3 workstation model in the Special Education Classrooms. All district schools have multiple carts of Chromebooks, 25-30 per. All district schools are now part of a wireless environment which enhances the ability of teachers throughout the district to take attendance, maintain grade books, and perform mark reporting tasks within the district SIS. The Art department at the high school has been provided with Macintosh computers, and each elementary and middle school will also be provided with Macintosh computers in the Art rooms and Media Centers as a tool to expand the knowledge base of its students. Every building has a SMARTBOARD per classroom.

All administrators have access to technology in their workplace via desktops, laptops with wireless connectivity.

The high school Television Production Lab/Studio, under the direction of its instructor, has the capacity to provide film reportage and narrative on a district-wide level throughout the school year. Additionally, an Orange Board Of Education community bulletin board can be found running on local cable access twenty-four hours a day.

Each school's server has been upgraded to provide additional space in order for students and teachers to begin saving their work in electronic portfolios. This increase in storage space will meet the district's growing need.

Software and Filtering:

The district's network and infrastructure is proficient to provide adequate access to the entire school community. The district's present focus is to continue to build upon the peripherals and software that is used with the current infrastructure. Many of these decisions are being dictated by the professional development needs of the district to improve Language Arts and Math literacy. By providing a strong staff development program that infuses technology into the learning process and models effective use of technology within the curriculum, the district will achieve a stronger educational technology presence that encourages technology integration in all content areas.

Currently the software used throughout the district was recommended by a software committee comprised of teachers and district staff. The software is being re-evaluated to assess its correlation to the Common Core and PARCC. Many of these software titles are server based. The district has moved towards software that is web-based which provides less maintenance and use of server space and allows content to remain current. Currently the district has purchased licenses for such software as, SIRS Discoverer, United Streaming, and Learning.com Technology Literacy Assessment. Edmark software, including Thinking Things, Millie's Math house, Sammy's Science House, etc. have been purchased and installed for the district's Early Literacy Initiative in every Elementary School. Other examples of educational software that are used district-wide include the *Microsoft Office Suite*, Kidspiration and Inspiration, Storybook Weaver and Math Steps. All of our schools are now using Study Island, iRead, Read 180, Math 144, and a web-based NJASK and GEPA prep software program.

United Streaming, a video streaming and library medium, was purchased to begin the process of integrating video into the curriculum. Purchased for the entire district, the option of video

Orange Public Schools
Orange, New Jersey

on demand can enhance the curriculum by affording the teachers the opportunity to include various examples of video within their instruction.

Cisco Pix, ASA, and Websense are the tools used to secure our network infrastructure.

Technology Maintenance Policy and Plan:

With the growing infrastructure, the need to keep an expansive and cohesive infrastructure is mandatory. To help manage the process of dealing with maintenance, the district implemented Autotask, a software tracking system that reflects the help desk model and allows for all technology staff to stay abreast of the technical needs of the district. All teachers have the ability to contact the technology department directly through an email account techsupport@mail.orange.k12.nj.us. The Technology Manager is responsible for checking this account on a daily basis. The software allows for the IT Manager to assign all issues to building base Technology Coordinators and District System Engineers. The Autotask system generates work order tickets to the assigned individual and progress on the ticket can easily be monitored. The tickets can be retrieved by District System Engineers at any location within the district and via Blackberry browser. Monthly meetings are held amongst the technical staff to stay abreast of issues and best practices in technology advancements. The software provides reports and statistics to help better prepare the district for the upcoming year's budget.

Facilities Infrastructure:

The district has upgraded phone and internet access to **100mb**TLS lines. This has increased our bandwidth and allows for faster access to the internet and better network communications between buildings. The expanded bandwidth also affords the district the opportunity to improve upon its Disaster Recovery Solution.

A plan has been implemented that takes advantage of the TLS upgrade and 1-GB pipe installation which have significantly increased bandwidth e.g., upload and download speed. The school buildings district-wide i.e., classrooms and offices, **consist of CAT-6 compatibility commensurate with the installation of POE switches**. With current TLS connectivity and fiber optic lines district-wide, users are able to access more data quickly. All learning areas with workstations are at an **Operating System of Windows 7**. This has addressed the equity concerns of outdated hardware. The district has realized its goal to expand this access to the Township of Orange community with the hopes of building a learning community that expands beyond the classroom walls.

Telecommunications:

The district has recently upgraded its telecommunications software. The implementation of Voice Over IP Telephony continues to expand our use of the network infrastructure. This system has proven to be cost effective as a means to provide communication between the schools and community. **All staff members have voicemail capability** and this accessibility provides an alternative means for receiving information and messages from parents and guardians. The bridge between homes and schools has been strengthened.

Technical support:

The district is currently utilizing over **5,000 computers, laptops and Chromebooks**. At present, the district has three **systems engineers**, one network administrator, and one database

Orange Public Schools
Orange, New Jersey

manager who are full-time employees of the Board of Education. Additional support comes from outsourcing to help maximize the maintenance efficiency.

Replacement Plan

The Orange Board Of Education adopts the concept that all computers are obsolete after five years and thus moves to replace all such computers. Using recycling vendors' services, the Orange Board Of Education will recycle all computers over five years old. All desktops for administrators will then be re-stocked and reconfigured. All labs are currently running a Windows 7. All computer peripherals and accessories are replaced as needed.

Servers for the district have been upgraded and volume licenses for **Microsoft Office and Windows 2008 and Windows 2012** have been purchased to allow the system engineers to push software from the server to workstation rather than install off individual CD-ROMs. This process will cut down on cost and service.

Assistive Technology and Accessibility

It is important that all stakeholders be able to access and use the technology available to them. All special needs students have Individual Education Plans (IEPs) that describe the particular needs of each child. Currently the following assistive technologies have been put into place as per the child's IEP:

- Laptop Computer
- Phonic Ear Buds
- Augmented Communication Device
- Text to Speech software
- Increased Font Size
- Several schools have an account with RFB&D (Reading for the Blind and Disabled), providing books on tape and or CD.
- iPads

In accordance with Federal Access Laws, the Orange Board Of Education has moved to Schoolwires, an ASP web hosting service. Pages can be found at www.orange.k12.nj.us

Three-Year Technology Plan Inventory Table

| Area of Need | Describe for 2016-17 | Describe for 2017-18 | Describe for 2018-19 |
|---|--|--|--|
| Technology Equipment | Smartboards, Chromebooks Replace obsolete equipment | Chromebooks, Apple Server, Replace obsolete equipment | Replace obsolete equipment |
| Networking Capacity | 1GB Ethernet, 1GB TLS | 10 GB Ethernet, 10GB TLS | 10 GB Ethernet, 10GB TLS |
| Software used for curricular support and filtering | Websense Barracuda Symantec READ180,MATH180,iREAD | Websense Barracuda Symantec READ180,MATH180,iREAD | Websense Barracuda Symantec READ180,MATH180,iREAD |
| Technology maintenance policy and plans | Consultants | Consultants | Consultants |
| Telecommunications Services | Schoolwires, Ethernet upgrade | Schoolwires | Schoolwires |
| Technical Support | Infrastructure Evaluation, NCS | Casper Suite, Solar Winds | Casper Suite, Solar Winds |
| Facilities – infrastructure including central telephone & security systems | Informacast | Informacast expansion | Video Conferencing Equipment |
| Other Services: | PD Vendors | PD Vendors | PD Vendors |

B. Cyber Safety

To provide the district with a safe guard against inappropriate access, use, and intrusion, WEBSense filtering software and Barracuda are used. This filtering software is robust, yet can tailor to provide access to websites that can be used for curricular needs. The software has proven to be successful and will be renewed by the district. The appropriate use of software and other types of technology are outlined in the district’s Technology Manual and updated Acceptable Use Policy (AUP) for staff and students. The AUP also discusses the various perils and responsibilities the user must face as well as the consequences for failure to observe the code of conduct regarding cyber bullying.

Orange Public Schools
Orange, New Jersey

The Technology Coordinator located in each building is responsible for informing staff and students of the perils of the Internet. Parental resources regarding online safety are available to all parents on the Parent Resource Page of the District website. Orange has implemented a technology curriculum which will include a section on cyber safety. The curriculum and proposals for Internet Safety Policy was presented to the public at an Orange Board of Education meeting on August 29, 2007.

C. Needs Assessment

Technology Coordinators are required to take a technology survey and to perform a technology inventory annually. This survey and inventory are used to assist in budgeting for next year. In the past there have been few district-wide staff developments in the area of technology. The district Curriculum Department now oversees the instructional component of Technology Coordinator responsibility. The Technology Coordinators received training and were then instructed to turnkey that training to their staff. Presently we provide technology training to all staff. Technology Coordinators still receive additional training above and beyond and are still required to turnkey that training. However, staff now has the opportunity to also receive said training first hand.

Summary

Several professional development days have been established throughout the school year to address the needs and concerns of staff. The days include sessions in both pedagogy and technical abilities. Classes included but were not limited to:

- *Microsoft Office 365*
- EasyTech Software
- Web 2.0 tools
- *Genesis*
- Smartboard
- *Schoolwires*
- *United Streaming*
- Using Video Clips in your lessons
- Apple Technology

Educators are assured access to technology to facilitate technology integration across the curriculum. Each classroom is equipped with four student stations with cross-curricular software. A hard-wired and wireless environment enhances Internet connectivity. Interactive whiteboards, a minimum of four per school, provide heightened presentation and application of skills.

Students have daily access to technology to support the use of 21st century skills in their learning environment. The four-station elementary classroom environment is augmented by a minimum of one computer lab per building as well as work stations in all media centers. **The Orange Preparatory Academy and CIAO (Alternative High School)** schools follow the four-station classroom model supplemented by a minimum of two computer labs along with work stations in the media center. The

Orange Public Schools
Orange, New Jersey

high school has four computer labs as well as thirty-five work stations in the media center. All district schools have multiple Chromebook carts, 25-30 per.

Past professional development, focusing on but not limited to, Unitedstreaming, eBoards, Schoolwires, Student Information Systems, interactive whiteboards, pod casting, email usage, and Apple technology addressed the administrator, educators, and student needs for technology integration.

Technology Coordinators are present in every building to assist teachers in the infusion of software, hardware, and online subscriptions throughout the core curriculum content standards and the Common Core Standards. System Engineers and the Network Administrator are routinely assigned to service maintenance/repair requests as they appear in Autotask.

Goals and Objectives for 2013 - 2016

The integration of technology into the curriculum offers the potential to augment student's learning experience by providing an instructional tool for delivering subject matter in the curriculum. The district's responsibility to prepare students to access, analyze, apply and communicate information effectively can be achieved by modeling and encouraging the integration of technology that is aligned with the Core Curriculum Content Standards and best practices that support differentiated learning, integration across the curriculum, and self-directed learning.

Goal 1: All students will acquire 21st century technology skills necessary to be productive members in the community, work place, and society at large.

Objective 1: Technology integration practices and strategies will be used in the teaching and learning process. Technology Coordinators will be used to move teachers from the use of traditional practices of teaching subject areas towards web 2.0 tools and resources.

Timeline: July 1, 2013– June 30, 2016

This objective has been met and is ongoing.

Objective 2: Reevaluate the development and implementation of a district-wide technology curriculum that emphasizes the curriculum's correlation to the Common Core Standards and PARCC assessment.

Timeline: July 1, 2013– June 30, 2016

This objective has been met and is ongoing.

Objective 3: Students will be exposed to cross-platform environments and devices in order to continue to excel in the community, work place, and in a global society.

Orange Public Schools
Orange, New Jersey

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Goal 2: All stakeholders in students' welfare, including educators and administrators, will increase their knowledge and level of 21st century skills in order to effectively integrate educational technology across curricula that will enable students to achieve the goals of the Common Core Standards and attain success in a global society.

Objective 1: All educators, including administrators, will participate in ongoing, sustained, high-quality professional development activities focused on infusing 21st century skills into curricula and instructional practices.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Objective 2: All school administrators will model the 21st century skills necessary to provide effective and informed leadership that supports the infusion of educational technology and encourages learning beyond the school walls.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Objective 3: All supervision and evaluation practices will address the effective use of educational technology for student achievement of the Common Core Standards and success in a global society.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Objective 4: All educators, including administrators, will use e-mail and other interactive tools including Schoolwires, Naviance, Global Connect, the SIS [Genesis] and its Parent Portal to communicate with parents/legally designated caregivers, students and other educators electronically.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Goal 3: All students, educators, and administrators will be able to access and utilize educational technology resources for instructional and administrative purposes throughout classrooms, library media centers, and educational venues such as community centers and libraries.

Objective 1: The student population will benefit from the accessibility of technology provided by maintenance of district-wide wireless access and the continuance of the district replacement plan for computers that are 5 years or older.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Orange Public Schools
Orange, New Jersey

Objective 2: Voice Over IP telephony will be expanded to include video conferencing beginning with administration located at Administrative building.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Objective 3: Apple technology will be purchased for the purpose of implementation across grades K-12 in order to provide all students with hands-on/cross-platform and assistive technologies.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met and is ongoing.

Goal 4: The maintenance of the district infrastructure will be robust in its accessibility and provide the necessary safety and security for all students and administrators to acquire digital information and communicate virtually without risk.

Objective 1: District-wide web based video conferencing will be implemented.

Timeline: July 1, 2013 – June 30, 2016

This objective is ongoing.

Objective 2:

School district will conduct an analysis of infrastructure and use the results to budget for effective implementation of industry standard networking that supports 21st century educational technology systems.

Timeline: July 1, 2013 – June 30, 2016

This objective is ongoing.

Objective 3: Upgrade current DS3 service to 500Mbps Ethernet, thus increasing bandwidth and meeting the growing VOIP and PARCC assessment needs of the district.

Timeline: July 1, 2013 – June 30, 2016

This objective has been met.

Goals and Objectives for 2016 - 2019

The integration of technology into the curriculum offers the potential to augment student's learning experience by providing an instructional tool for delivering subject matter in the curriculum. The district's responsibility to prepare students to access, analyze, apply and communicate information effectively can be achieved by modeling and encouraging the integration of technology that is aligned with the Core Curriculum Content Standards and best practices that support differentiated learning, integration across the curriculum, and self-directed learning.

Goal 1: All students will acquire 21st century technology skills necessary to be productive members in the community, work place, and society at large.

Objective 1: Technology integration practices and strategies will be used in the teaching and learning process. Technology Coordinators will be used to move teachers from the use of traditional practices of teaching subject areas towards web 2.0 tools and resources.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Objective 2: Reevaluate the development and implementation of a district-wide technology curriculum that emphasizes the curriculum's correlation to the Common Core Standards and PARCC assessment.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Objective 3: Students will be exposed to cross-platform environments and devices in order to continue to excel in the community, work place, and in a global society.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Goal 2: All stakeholders in students' welfare, including educators and administrators, will increase their knowledge and level of 21st century skills in order to effectively integrate educational technology across curricula that will enable students to achieve the goals of the Common Core Standards and attain success in a global society.

Objective 1: All educators, including administrators, will participate in ongoing, sustained, high-quality professional development activities focused on infusing 21st century skills into curricula and instructional practices.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Objective 2: All school administrators will model the 21st century skills necessary to provide effective and informed leadership that supports the infusion of educational technology and encourages learning beyond the school walls.

Timeline: July 1, 2013 – June 30, 2016

Orange Public Schools
Orange, New Jersey

This objective has been met and is ongoing.

Objective 3: All supervision and evaluation practices will address the effective use of educational technology for student achievement of the Common Core Standards and success in a global society.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Objective 4: All educators, including administrators, will use e-mail and other interactive tools including Schoolwires, Naviance, Global Connect, the SIS [Genesis] and its Parent Portal to communicate with parents/legally designated caregivers, students and other educators electronically.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Goal 3: All students, educators, and administrators will be able to access and utilize educational technology resources for instructional and administrative purposes throughout classrooms, library media centers, and educational venues such as community centers and libraries.

Objective 1: The student population will benefit from the accessibility of technology provided by maintenance of district-wide wireless access and the continuance of the district replacement plan for computers that are 5 years or older.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Objective 2: Voice Over IP telephony will be expanded to include video conferencing beginning with administration located at Administrative building.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Objective 3: Apple technology will be purchased for the purpose of implementation across grades K-12 in order to provide all students with hands-on/cross-platform and assistive technologies.

Timeline: July 1, 2016– June 30, 2019

This objective has been met and is ongoing.

Goal 4: The maintenance of the district infrastructure will be robust in its accessibility and provide the necessary safety and security for all students and administrators to acquire digital information and communicate virtually without risk.

Objective 1: District-wide web based video conferencing will be implemented.

Timeline: July 1, 2016– June 30, 2019

This objective is ongoing.

Objective 2:

School district will conduct an analysis of infrastructure and use the results to budget for effective implementation of industry standard networking that supports 21st century educational technology systems.

Orange Public Schools
Orange, New Jersey

Timeline: July 1, 2016– June 30, 2019
This objective is ongoing.

Objective 3: Upgrade current TLS service to 1000 Mbps Ethernet, thus increasing bandwidth and meeting the growing VoIP and PARCC assessment needs of the district.

Timeline: July 1, 2016– June 30, 2019
This objective is ongoing.

Orange Public Schools
Orange, New Jersey

| Three-Year Technology Implementation Activity Table | | | | |
|--|--|-----------------|---|---|
| District Goal and Objective | Strategy/Activity | Timeline | Person Responsible | Documentation |
| 1.1 | Technology Coordinators will turnkey, mentor, and model tech integration across curricula | 7/2016 -6/2019 | Curriculum Director, Technology Supervisor | PD hours |
| 1.2 | Implement Scholastic digital curricula i.e.,Read180, Math180, and System 44 | Ongoing | Curriculum Director/Technology Supervisor, Cross-curricula staff | Scholastic data pull, Common Core guidelines |
| 1.3 | Assemble team including IT Department and Tech Coordinators that will configure and deploy devices in cross-platform environment | 7/2016 - 6/2019 | IT Manager, Network Administrator, Systems Engineers, Tech Coordinators | Casper Suite device management system |
| 2.1 | Staff development in Apple technology, webinar development | 7/2016 - 6/2019 | Curriculum Director, Technology Supervisor | PD hours, Teacher evaluation/observation (Teachscape-Domains 1 and 2) |
| 2.2 | Lesson plans and activities that support technology integration | 7/2016 - 6/2019 | Curriculum Director/Administrator, Technology Supervisor, Cross-curricula staff | PD hours, Teacher evaluation/observation (Teachscape-Domains 1 and 2) |
| 2.3 | Lesson plans and activities that support technology integration | 7/2016 - 6/2019 | Curriculum Director/Administrator, Technology Supervisor, Cross-curricula staff | PD hours, Teacher evaluation/observation (Teachscape-Domains 1 and 2) |
| 2.4 | Assignment of access to SIS, Parent Portal,Global Connect, Schoolwires, Naviance, email | 7/2016 - 6/2019 | School Administrator, Database Mngr.,Asst. Database Mngr, IT Mngr. | SIS, Naviance, Global Connect generated reports, login logs |
| 3.1 | Provide wireless network maintenance/management system; maintain district replacement plan. | 7/2016 - 6/2019 | Business Admn., IT Mngr., Network Administrator | Purchase Orders, Inventory, NCS wireless management system |
| 3.2 | Install and manage VoIP conferencing equipment | 7/2016 - 6/2019 | Business Admn., IT Department | Purchase Orders, Inventory |
| 3.3 | Purchase and configure: Apple tablets/notebooks, server | 7/2016 - 6/2019 | Business Admn., IT Department | Purchase Orders, Inventory |
| 4.1 | Implement web based video conferencing tool and supporting equipment | 7/2016 - 6/2019 | Business Admn., IT Department | Purchase Orders, Inventory, contracts |

Orange Public Schools
Orange, New Jersey

| | | | | |
|-----|--|-----------------|--------------------------------|--|
| 4.2 | Purchase and install network management tools | 7/2016 - 6/2019 | Business Admn., IT Department | Purchase Orders, Inventory, NCS and SolarWinds reports |
| 4.3 | Install 10000Mbps Ethernet and configure router(s) accordingly | 7/2016 - 6/2019 | Business Admn., IT Department | Purchase Orders, Verizon contracts |
| 4.4 | Coordinate with PARCC TRT; Scholastic READ/Math 180 | 7/2016 - 6/2019 | IT Department; Curriculum Dept | PARCC TRT, SCHOLASTIC REPORTS |

Funding Plan

The Three-Year Technology Plan for the Township of Orange has a creation date of July 1, 2016. The Township of Orange is a district that supports spending and decision making at the building level. Each school creates a technology budget that supports its school's needs. Installation, maintenance, and district wide purchases are implemented at the district level. Schools are responsible for working in collaboration with district personnel to provide a comprehensive building technology model that will show the advancement and vision of technology in the classroom.

The total cost of ownership is shared between the school and district budgets as well as grant funded resources. The district receives additional funding from federal title grants as well as IDEA which have enabled the district to provide professional development opportunities and equipment to enhance instruction.

E-rate has been a substantial part of funding for the district's technology needs. This reimbursement process provides a discount rate of about 85 %. This cost savings allows for the district to spend 15% towards Internet access, infrastructure and telecommunication needs.

Orange Public Schools
Orange, New Jersey

| Three-Year Educational Technology Plan Anticipated Funding Table 2016 -2017 | | | | | |
|--|---|------------------------|----------------------|----------------------|---------------------------------------|
| ITEM | DESCRIPTION OF ITEM TO BE PURCHASED | FEDERAL FUNDING | STATE FUNDING | LOCAL FUNDING | MISC. (e.g. Donations, Grants) |
| Digital curricula (see NIMAS) | Scholastic: Read180,Math180,System44 | | | \$315,000 | |
| Print media needed to achieve goals | | | | | |
| Technology Equipment | Apple server, Scholastic server, tablets/notebooks,IWBs | | | \$119,00 | |
| Network | TLS 100 MB | \$183,600 | | \$32,400 | |
| Capacity | 1000 Mbps Ethernet | \$178,500 | | \$31,500 | |
| Filtering | Websense, Barracuda, Symantec, Firewall | | | \$70,000 | |
| Software | SolarWinds, NCS, Casper Suite, Nefsys | | | \$57,000 | |
| Maintenance | Consultants | | | \$15,000 | |
| Upgrades | Informacast (VoIP) | | | \$17,500 | |
| Policy and Plans | | | | | |
| Other services | PD Vendors, Schoolwires | \$18,176 | | \$22,000 | |
| Further Explanation: | | | | | |

Orange Public Schools
Orange, New Jersey

| Three-Year Educational Technology Plan Anticipated Funding Table 2017 – 2018 | | | | | |
|---|---|------------------------|----------------------|----------------------|---------------------------------------|
| ITEM | DESCRIPTION OF ITEM TO BE PURCHASED | FEDERAL FUNDING | STATE FUNDING | LOCAL FUNDING | MISC. (e.g. Donations, Grants) |
| Digital curricula (see NIMAS) | Scholastic: Read180,Math180,System44 | | | \$70,000 | |
| Print media needed to achieve goals | | | | | |
| Technology Equipment | Apple server, Scholastic server, tablets/notebooks,IWBs | | | \$100,000 | |
| Network | TLS 1000 MB | \$128,520 | | \$22,680 | |
| Capacity | 10000 Mbps Ethernet | \$214,200 | | \$37,800 | |
| Filtering | Websense, Barracuda, Symantec, Firewall | | | \$65,000 | |
| Software | SolarWinds, NCS, Casper Suite, Nefsys | | | \$18,500 | |
| Maintenance | Consultants | | | \$15,000 | |
| Upgrades | Informacast (VoIP) | | | | |
| Policy and Plans | | | | | |
| Other services | PD Vendors, Schoolwires | \$18,176 | | \$22,000 | |
| Further Explanation: | | | | | |

Orange Public Schools
Orange, New Jersey

| Three-Year Educational Technology Plan Anticipated Funding Table 2018 – 2019 | | | | | |
|---|---|------------------------|----------------------|----------------------|---------------------------------------|
| ITEM | DESCRIPTION OF ITEM TO BE PURCHASED | FEDERAL FUNDING | STATE FUNDING | LOCAL FUNDING | MISC. (e.g. Donations, Grants) |
| Digital curricula (see <u>NIMAS</u>) | Scholastic: Read180,Math180,System44 | | | \$70,000 | |
| Print media needed to achieve goals | | | | | |
| Technology Equipment | Apple server, Scholastic server, tablets/notebooks,IWBs | | | \$100,000 | |
| Network | TLS 1000 MB | \$128,520 | | \$22,680 | |
| Capacity | 10000 Mbps Ethernet | \$214,200 | | \$37,800 | |
| Filtering | Websense, Barracuda, Symantec, Firewall | | | \$65,000 | |
| Software | SolarWinds, NCS, Casper Suite, Nefsys | | | \$18,500 | |
| Maintenance | Consultants | | | \$15,000 | |
| Upgrades | Informacast (VoIP) | | | | |
| Policy and Plans | | | | | |
| Other services | PD Vendors, Schoolwires | \$18,176 | | \$22,000 | |
| Further Explanation: | | | | | |

Professional Development

The district, under the aegis of its designee for responsibility, Director of Curriculum Instruction, Professional Development, Data Assessment (Terri Russo), has identified the area of staff development as a high priority. The restructuring of professional development opportunities are being implemented to address early literacy. In all curriculum areas the implementation of Common Core State Standards (CCSS), the NJDOE Model Curriculum, and PARCC requirements will be addressed to instill educational programs that support scientifically based researched practices that will be included in the curriculum guides for all content areas. Despite the magnitude of research on technology's impact on student achievement, as those professional development opportunities are provided to the district, its facilitators must provide information that supports the integration of technology and assesses and implements Technology Literacy Standards in all curricular areas. Additionally, their practices should model effective technology infusion.

The staff development activities that will be offered in the district will link to the belief that technology integration is an integral part of successful student achievement. Staff will be offered training that infuses technology into all content areas. The Curriculum Department will supervise the instructional responsibilities of Technology Coordinators in order to further develop the mentor-mentee collaborative efforts of educators, school administrators, and the district technology leaders. This pedagogical evolution will become associated with the development and provision of a comprehensive training program that includes technology integration, in-class support, data driven decision making, and mentorship.

Extensive training will also be provided for application instruction and instructional implementation. The training will be provided for the teaching staff and district administrators in the form of in-district workshops and technology enriched conferences. These training opportunities will include hardware training that instructs staff on the valuable use of mobile labs.

A Leadership Academy model for district administrators continues its revision to provide district administrators with a variety of opportunities to build upon their instructional technology skills and ability to evaluate their buildings technology integration practices. The academy will focus on instructional technology and informational technology. Administrators will learn about relevant research and practice involving technology integration and its impact on student achievement. Furthermore, with additional training, administrators will increase their skill level with the district SIS, Genesis, in order to better ensure the effective implementation of its Parent Portal as a dynamic tool and conduit for sharing of student data as it relates to the development of technology integration and its impact on student achievement. Using ISTE's NETS for students, staff and administrators, the curriculum can be revisited to include technology in all content areas to support the goals and objectives of the CCSS. Additionally, professional development in the technology platform for the new Teacher and Administrator Evaluation Models will be provided.

By establishing an equitable professional development program district-wide, the district's commitment to technology and student achievement will continue to support the following curriculum and professional development workshops:

- Teachscape
- Naviance Succeed

Orange Public Schools
Orange, New Jersey

- Global Connect mass communication
 - Destiny for media specialists
 - Discovery Educator
 - World Book
 - Rosetta Stone
 - SOLO adaptive technology
 - My Learning Plan
-
- Other trainings as needed to address Early Literacy, Adaptive and Assistive Technologies, Bilingual/ ESL programs and the CCSS for technology literacy.

Staff training will also be provided for the student database system, Genesis. The district will work along with Genesis to ease district staff into the reporting process required by the NJDOE for data collection and warehousing; the upgrade of the student management system will provide adequacy for data retrieval and publication on the state data warehousing system.

Evaluation Plan

The district technology plan will be reviewed annually by a committee designated by the Department of Special Programs to update, revise and reflect on the current practices and changes in how technology should be best used in education. Telecommunications services, hardware, software, and other services will improve education by the district's ability to remain current in research, practice, and understanding the needs of the district. Currently the district is completing an assessment of the network's topography in order to provide increased access to the Internet, increased reliability of Voice Over IP telephony, and an increased quality of communications to the school community with an infrastructure that is uniform in hardware and software.

The core of district Technology Coordinators, one assigned to each school meet monthly to review, evaluate, modify and implement strategies and methodologies that reflect change/innovations in technology opportunities. Their assessments are turn-keyed to the Information Technology Department which additionally uses software to monitor and evaluate equipment usage and deployment in order to adjust to needs of the infrastructure as it changes.

Three-Year Educational Technology Plan Professional Development Table

Professional development detail is needed for the first school year of the educational technology plan. The use of this table is optional and is provided as a convenience.

| Educators' Proficiency/ Identified Need | Ongoing, sustained, high-quality professional development planned | Support |
|--|---|--|
| Integration of Common Core State Standards technology requirements | District trainers (Technology Coordinators, content area coaches, and supervisors) will provide job-embedded coaching and mentoring for the CCSS requirements | Subject area Wikis will provide additional resources for teachers. Teachers and administrators will be able to add lessons and resources as they work to implement the technology requirements for the CCSS. |
| Teachscape (Danielson and Multidimensional Evaluation Models) | All new hires will be trained in the evaluation models by district employees, using Teachscape. | Teachscape Learn will provide additional professional development for the evaluation models and for improved delivery of instruction/administration. |
| Discovery Education | District trainers (Technology Coordinators, content area coaches, and supervisors) will provide continued job-embedded coaching and mentoring for continued implementation of primary document analysis and supplemental materials to address the CCSS. | Discovery Educator tutorials are available on-line for teachers who need additional training. |
| Rosetta Stone for LEP teachers | The ESL/Bilingual coach and supervisor will continue to provide training to LEP teachers for this interactive software, in order to improve port-of-entry students' oral language acquisition. | Release time will be provided for teachers who did not receive training previously. The ESL/Bilingual Wiki will have additional training resources. |
| SOLO adaptive technology for SE, LEP, and ELA teachers | Initial professional development will be provided by Don Johnsons' company for the adaptive technology. Further job-embedded coaching will be provided by the district. | Subject area Wiki's will provide additional support. Common Planning Time will be utilized to assess which students need to use the adaptive technology and how it can be utilized in the writing centers of each classroom. |

Orange Public Schools
Orange, New Jersey

| | | |
|---|--|--|
| <p>My Learning Plan training for new teachers</p> | <p>During New Teacher Orientation, Technology Coordinators training for the district's professional development and professional growth plan systems will be provided.</p> | <p>The Supervisor of Visual and Performing Arts posts Jings on the My Learning Plan overview page that provide step by step refreshers for users. Secretaries are also provided on-going refreshers to ensure that the requests and plans are submitted in a timely and correct fashion.</p> |
| <p>Math 180</p> | <p>This new program will have professional development provided by Scholastic for grades 6-8 math teachers. Job-embedded coaching and teachers for vertical articulation. Mentoring will also be provided by Scholastic.</p> | <p>The program provides on-line tutorials for teachers and math coaches. Additionally, the district provides monthly meetings for all involved teachers for vertical articulation.</p> |
| <p>Read 180</p> | <p>Continued PD will be provided by Scholastic, especially for data driven instruction.</p> | <p>The program provides on-line tutorials for teachers and ELA coaches. Additionally, the district provides monthly meetings for all involved teachers for vertical articulation.</p> |
| <p>Naviance</p> | <p>New guidance counselors at Orange High School will be trained by the district in order to streamline college applications and for students to increasingly self-monitor their progress and make healthy college and career decisions.</p> | <p>The guidance counselors meet regularly to assist each other in improved utilization of this on-line program.</p> |
| <p>Genesis</p> | <p>During New Teacher Orientation, Technology Coordinators will provide training in the SIS, grade book, and lesson planner. Coaches and supervisors will continue to assist during school year.</p> | <p>During Common Planning Time, teachers can utilize the system's tutorials for further clarification.</p> |

Orange Public Schools
Orange, New Jersey

| | | |
|--|---|--|
| PARCC prototypes | The district will provide training for PARCC prototypes during the school year as they become available. Coaches and supervisors will provide job-embedded training for creating assignments in PARCC format. | During Common Planning Time and department meetings, teachers will review their assignments to revise them to PARCC format. Technology teachers will incorporate these new methods in their lesson plans so students will become familiar with them. |
| Network and Device management training | The district will provide network/device management training for bandwidth/operating system upgrades | Consultants: Promedia/DynTek |
| IWB and tablet training | The district will provide training for implementation of IWB and tablet strategies | Vendors associated with equipment purchase. |

Educational Technology Plan Evaluation Narrative

| | |
|---|---|
| <p>a. <i>Telecommunication services, hardware, software and other services are improving education</i></p> | <ul style="list-style-type: none">• Increased bandwidth allows for digital curricula transfer at greater speed.• Increased bandwidth allows for wireless connectivity and additional access for PARCC assessment.• Scholastic Read/Math 180, System 44• Discovery Education• Study Island |
| <p>b. <i>Effective integration of technology is enabling students to meet challenging state academic standards.</i></p> | <ul style="list-style-type: none">• Student portfolios• PARCC assessment• Study Island reports |

Updates and improvements to all areas of technology will be on a continuous basis due to the evolving advancements in technology and its applications to education and society.

**NJ Department of Education
District/Nonpublic School/ Charter School
Three-Year Educational Technology Plan Checklist**

DIRECTIONS: Place a check in the unshaded **COMPLETED** column when the **TASK** has been completed.

| TASK | Completed | |
|--|---------------------------------|----------------------------------|
| | Req'd by E- Rate | Not req'd E- Rate |
| <p>DATE: Provide your educational technology plan's creation date (the date when the technology plan first contained all of the required elements in sufficient detail to support the products and services requested on the Form 470). (</p> <p>Tech Plan creation date: : July 1, 2016</p> | p.29 | |

DIRECTIONS:

- Answers to questions regarding e-rate compliance: Address the numbered items below in a separate District/Nonpublic School/Charter School educational technology plan document.
- Indicate in the *PAGE #* column, the page number where the corresponding information is found.
- For purposes of this document, “educators” are defined as school staff who teache children, including librarians and media specialists.
- Sample table templates are provided (see links embedded in this document) to assist in the development of the educational technology plan. Please use these table templates unless information is already in a digital form.

Orange Public Schools
Orange, New Jersey

| | Indicate in the unshaded spaces the page number where the corresponding information is found | |
|---|--|---------------------|
| | Req'd by E-Rate | Not req'd by E-Rate |
| <p>TECHNOLOGY INVENTORY:</p> <p>1. Describe the technology inventory <u>needed to improve</u> student academic achievement in the 2013-2014 school year that informs the basis for the Form 470. Include in the description the internal connections and basic maintenance <i>for 12 months of the e-rate funded year</i>, such as the following areas:</p> <ul style="list-style-type: none"> a) Technology equipment including assistive technologies b) Networking capacity c) Filtering method d) Software used for curricular support and filtering e) Technology maintenance and support f) Telecommunications equipment and services g) Other services <p>NOTE: If this plan is intended to be used for three years of E-Rate funding, provide anticipated inventory information for all three years. See Inventory Sample Table. Definitions of items eligible for e-rate discounts: http://www.usac.org/sl/applicants/beforeyoubegin/eligible-services/default.aspx</p> | p.11 | |
| <p>NEEDS ASSESSMENT:</p> <p>2. Describe the needs assessment process that was used to identify the necessary telecommunication services, hardware, software, and other services to improve education.</p> | p.12 | |

Orange Public Schools
Orange, New Jersey

| | Indicate in the unshaded spaces the page number where the corresponding information is found | |
|--|--|---------------------|
| | Req'd by E-Rate | Not req'd by E-Rate |
| <p>THREE-YEAR GOALS:</p> <p>3. List clear goals for 2016-2019 that address district needs. There must be strong connections between the proposed physical infrastructure (bandwidth, cabling, electrical systems, networks) and goals. Include goals for using telecommunications and technology that support 21st century learning communities.</p> | p.16 | |
| <p>THREE-YEAR IMPLEMENTATION AND STRATEGIES TABLE:</p> <p style="text-align: center;">I</p> <p>4. Describe the realistic implementation strategies to improve education. Include in the description the timeline, person responsible and documentation (or evidence) that will prove the activity occurred. Address only 'a' and 'b' below to meet e-rate requirements. Address all areas below to continue planning for a technology-rich learning environment.</p> <p style="margin-left: 20px;">a. telecommunications, b. information technology, c. educational technology (including assistive technologies), and d. student technology readiness in preparation for online testing in 2014-2015.</p> | p.19 | |
| <p style="text-align: center;">PROFESSIONAL DEVELOPMENT STRATEGIES:</p> <p>5. Professional development strategies should ensure that staff (teachers, school library media personnel and administrators) knows how to effectively use the technologies described in this plan to improve education, and will continue to support identified needs through 2016. <i>Address only 'a' below to meet e-rate requirements. Address all areas below to continue planning for a technology-rich learning environment.</i></p> <p>Describe the planned professional development strategies by addressing each of the following questions:</p> <p style="margin-left: 20px;">a) How will ongoing, sustained professional development be provided to all educators, (including administrators) that increases effective use of technology in all learning environments, models 21st century skills, and demonstrate learning experiences through global outreach and collaboration in the classroom or library media center?</p> <p style="margin-left: 20px;">b) What professional development opportunities, resources and support (online or in person) exist for technical staff?</p> <p style="margin-left: 20px;">c) How will professional development be provided to educators on the application of assistive technologies to support educating all students?</p> | p.26 | |
| <p style="text-align: center;">EVALUATION PLAN:</p> <p>6. Describe the evaluation process that enables the progress and effectiveness of goals to be monitored.</p> | p.25 | |
| <p>7. Describe the process to make mid-course corrections in response to new developments and opportunities as they arise.</p> | p.25 | |
| <p style="text-align: center;">FUNDING PLAN (July 2016 – June 2019):</p> <p>8. Provide the anticipated costs for 2016-2017 by source of funds (federal, state, local and other) and include expenses such as hardware/software, digital curricula including <u>NIMAS</u> compliance, upgrades and other services including print media that will be needed to achieve the goals of this plan. Allow specific provisions for interoperability among components of such technologies to successfully achieve the goals of this plan.</p> | | |