

WEST WINDSOR--PLAINSBORO

REGIONAL SCHOOL DISTRICT

Technology Plan 2016-2019

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Committee Members

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Role

HS Teacher
Director of Technology
Principal
Assistant Superintendent of Pupil Services
HS Principal
HS Teacher
Supervisor of Technology, Training, and Media Services
Board Member
Parent
Teacher Resource Specialist for Technology
Parent
Teacher Resource Specialist for Technology
4-5 Teacher
MS Teacher
HS Student
Assistant Superintendent of Curriculum and Instruction
Supervisor of Curriculum and Instruction
Supervisor of Instructional Technology

Mission

The instructional technology mission of the West Windsor-Plainsboro Regional School District is to ensure that all learners, through a variety of opportunities, develop the knowledge, abilities, and competencies in order to create, collaborate, and communicate in a world of evolving and innovative technologies. As such, we believe that a technology-enriched and relevant curriculum with ubiquitous access to digital devices that supports every user and works within a fully-reliable network is the foundation for enabling our students to meet the WWPRSD 21st Century Competencies.

Vision

We envision that technology will be universally accessible and effectively supported for all students and staff in order to promote enhanced opportunities for creation, collaboration, and communication. Technology is an essential tool for teaching and learning. To that end, technology will support the shift to a collaborative learning process in which teachers empower students to take ownership of their learning and work together to explore new content and create meaningful tasks for authentic audiences.

Belief Statements

1. We believe that all learners will demonstrate creative thinking and develop innovative products and processes using digital tools and resources.
2. We believe that all learners will use digital tools and resources to communicate and work collaboratively, as well as contribute to the learning of others.
3. We believe that all learners will access digital tools and resources to gather, evaluate, create, and use information.
4. We believe that all learners will use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
5. We believe that all learners will gain a better understanding of human, cultural, and societal issues related to and through the use of technology.
6. We believe that all learners will understand the permanence of digital content, and practice legal and ethical behavior when using digital tools and resources.

Goals

- To continuously work toward improved **reliability** of the district network, devices and digital resources
 - By September 2016, increase bandwidth on open wireless to 2 GB
 - By September 2017, install a wireless access point in every high school classroom
 - By September 2017, meet the State Education Technology Directors Association (SETDA) 2017-18 bandwidth standard
 - By September 2018, install a wireless access point in every K-3 classroom

- To continuously increase **access** to devices
 - By December 2016, evaluate and refine the processes for ensuring continuous access to devices for students
 - By September 2017, implement a 1:1 program for 9th grade students at HSN & HSS
 - By September 2017, update course specific classroom hardware
 - By September 2018, implement a 1:1 program for 10th grade students at HSN & HSS
 - By September 2019, implement a 1:1 program for 11th grade students at HSN & HSS

- To continuously work toward **equity** of digital resources, digital skills and 21st century competency-based learning experiences
 - By September 2016, develop a library of appropriate digital resources to support existing curricula or new curricula
 - By September 2017, evaluate and recommend changes to the 9-12 Digital Literacy Course offerings
 - By September 2017, develop appropriate digital resources and learning experiences for freshman classes
 - By September 2018, develop appropriate digital resources and learning experiences for sophomore classes

- To continuously improve the **support** for successful implementation of learning in a digital environment
 - By September 2016, establish an annual informational meeting for parents of students new to the 1:1 Learning Initiative
 - By September 2016, establish a process for yearly review and update of the technology plan with the Board of Education
 - By September 2017, all teachers of 9th grade students will participate in professional development in support of the 1:1 Learning Initiative
 - By September 2017, modify the 6th/9th parents orientation to include information regarding how the 1:1 Learning Initiative impacts student learning at each school (high, middle) level, including information on appropriate use of technology in school and at home
 - By September 2017, establish regular meetings with the Teacher Resource Specialist for Technology and teachers for the purpose of establishing best practices in support of the 1:1 Learning Initiative
 - By September 2017, provide ongoing opportunities for reflection and professional development related to the 1:1 Learning Initiative for teachers of grades 5th through 8th
 - By September 2018, all teachers of 10th grade students will participate in professional development in support of the 1:1 Learning Initiative
 - By September 2019, all teachers of 11th grade students will participate in professional development in support of the 1:1 Learning Initiative

Implementation Plan

Goal 1: To continuously work toward improved **reliability** of the district network, devices and digital resources

District Goal and Objective	Strategy/Activity	Completion Date	Person Responsible	Documentation
Increase bandwidth on open wireless to 2 GB	Either increase capacity of existing connection or increase the capacity of a secondary connection	Sept 2016	Director of Technology	Bandwidth increase
Install a wireless access point in every high school classroom	Purchase and install access points, connect to wireless network	Sept 2017	Director of Technology	Access points installed
Meet the State Education Technology Directors Association (SETDA) 2017-18 bandwidth standard	Increase bandwidth capacity based on student enrollment	Sept 2017	Director of Technology	Bandwidth increased to meet requirements for student population
Install a wireless access point in every K-3 classroom	Purchase and install access points, connect to wireless network	Sept 2018	Director of Technology	Access points installed

Goal 2: To continuously increase access to devices

District Goal and Objective	Strategy/Activity	Completion Date	Person Responsible	Documentation
Evaluate and refine the processes for ensuring continuous access to devices for students	Review loaner statistics, meet with stakeholders to gather input, determine curricular impact of loaner program, develop and implement plan	Sept 2016	Network Manager	Updated process
Implement a 1:1 program for 9th grade students at HSN & HSS	Implement 1:1 program for 9th grades; provide devices, training for 10th grade teachers	Sept 2017	Director of Technology	Program implemented
Update course specific classroom hardware	Evaluate curricular needs of course which require supporting hardware, purchase supporting hardware	Sept 2017	Director of Technology	Hardware installed
Implement a 1:1 program for 10th grade students at HSN & HSS	Implement 1:1 program for 10th grades; provide devices, training for 11th grade teachers	Sept 2018	Director of Technology	Program implemented
Implement a 1:1 program for 11th grade students at HSN & HSS	Implement 1:1 program for 11th grades; provide devices, training for 12th grade teachers	Sept 2019	Director of Technology	Program implemented

Goal 3: To continuously work toward **equity** of digital resources, digital skills and 21st century competency-based learning experiences

District Goal and Objective	Strategy/Activity	Completion Date	Person Responsible	Documentation
Develop a library of appropriate digital resources to support existing curricula or new curricula	Meet with curricular and technical specialists to gather and evaluate digital resources. Share these resources with district supervisors. Create online library of digital resources.	Sept 2016	Assistant Superintendent for Curriculum and Instruction, Content Area Supervisors, Teacher Resource Specialists for Technology	Documentation of digital resource
Evaluate and recommend changes to the 9-12 Digital Literacy Course offerings	Meet with representative stakeholders to evaluate existing curriculum and determine recommendations	Sept 2017	Supervisor, K-12 Instructional Technology	Updated Curriculum
Develop appropriate digital resources and learning experiences for freshman classes	Meet with curricular and technical specialists to gather and evaluate digital resources	Sept 2017	Assistant Superintendent for Curriculum and Instruction, Content Area Supervisors, Teacher Resource Specialists for Technology	Documentation of digital resource
Develop appropriate digital resources and learning experiences for sophomore classes	Meet with curricular and technical specialists to gather and evaluate digital resources	Sept 2018	Assistant Superintendent for Curriculum and Instruction, Content Area Supervisors, Teacher Resource Specialists for Technology	Documentation of digital resource

Goal 4: To continuously improve the **support** for successful implementation of learning in a digital environment

District Goal and Objective	Strategy/Activity	Completion Date	Person Responsible	Documentation
Establish an annual informational meeting for parents of students new to the 1:1 Learning Initiative	Meet with building principals to organize meeting. Meet with teacher resource specialists for technology to develop material for meeting.	Sept 2016	Director of Technology	Support document for parents
Establish a process for yearly review and update of the technology plan with the Board of Education	Gather data for teachers, students and parents. Review data with technology committee.	Sept 2016	Director of Technology	Documents provided to the board
All teachers of 9th grade students will participate in professional development in support of the 1:1 Learning Initiative	All 9th grade teachers will attend summer training sessions and follow up sessions held during the school year.	Sept 2017	Supervisor, Technology, Training, and Media Resources	Training guide and online support resources
Modify the 6th/9th parents orientation to include information regarding how the 1:1 Learning Initiative impacts student learning at each school (high, middle) level	Meet with building principals to review orientation content.. Meet with teacher resource specialists for technology to develop material for orientation.	Sept 2017	Director of Technology	Updated orientation document

Establish regular meetings with the Teacher Resource Specialist for Technology and teachers for the purpose of establishing best practices in support of the 1:1 Learning Initiative	Work with building principals to establish consistent expectations for all teachers. Work with teacher resource specialists for technology to develop PD goals in support of the 1:1 Learning Initiative.	Sept 2017	Supervisor, Technology, Training, and Media Resources	Meeting notes
Provide ongoing opportunities for reflection and professional development related to the 1:1 Learning Initiative for teachers of grades 5th through 8th	Meet with teacher resource specialists for technology to develop PD material and sessions in support of the 1:1 Learning Initiative	Sept 2017	Supervisor, Technology, Training, and Media Resources	Reflection and professional development documents
All teachers of 10th grade students will participate in professional development in support of the 1:1 Learning Initiative	All 10th grade teachers will attend summer training sessions and follow up sessions held during the school year.	Sept 2018	Supervisor, Technology, Training, and Media Resources	Training guide and online support resources
All teachers of 11th grade students will participate in professional development in support of the 1:1 Learning Initiative	All 11th grade teachers will attend summer training sessions and follow up sessions held during the school year.	Sept 2019	Supervisor, Technology, Training, and Media Resources	Training guide and online support resources

Budget

The budget plan includes the next three years of hardware and internet service purchases. During the first two years of the plan the funding level will remain the same as it has for the past few years. There is a recommended increase in the third year of the plan to cover the cost of expanding the 1:1 Learning Initiative at the high school. The reason that we do not have an increase in year two when the 9th grade is added to the learning initiative is due to the recent purchase of Chromebooks that occurred in March. We will be able to provide Chromebooks to the 9th grade students using the Chromebooks we purchased this spring. This Chromebooks purchased will also be used for next year's eighth graders, thus there is no Chromebook purchase for the 16-17 school year.

2016 - 17 (Hardware - \$1,000,000, Internet and Phone service - \$130,800)

- 1:1 Learning Initiative for grades 5 - 8
- Insurance for Acer Chromebooks (based on evaluation of last year's support purchases it will be more cost effective to purchase insurance for 900 Acer Chromebooks than pay for the parts and support necessary to maintain them. (\$45,000)
- Chromebook Cases for eighth grade students and students who have missing or damaged cases (\$35,000)
- Access Points for half of the classroom in the high school and to improve coverage at in the K-3 buildings so that all classrooms have full wireless coverage (\$160,000)
- Access Point Installation (\$60,000)
- Switches for new access points (\$135,000)
- Upgraded Firewall for internet connection at HS South, bandwidth utilization has exceeded capacity of existing firewall (\$160,000)
- Refresh of obsolete hardware, this yearly purchase replaces hardware that has reached end-of-life and no longer meets the needs of the user. Items included: HS Science labs, Switches, HS Theatre, K-5 Teacher Computes, K-5 Lab Computers, MS Library, Projectors, and TV Studio (\$405,000)
- Bandwidth for the internet connections at HS North and HS South, upgraded to 2.5 GB to meet the needs of the 1:1 Learning Initiative, students, teachers and staff (\$10,900/month)

2017 - 18 (Hardware - \$1,000,000, Internet and Phone service - \$180,000)

- 1:1 Learning Initiative for grades 5 - 9
- Chromebooks for incoming fifth grade students, ninth grade students will use Chromebooks purchased in March of 2016 (\$330,000)
- Insurance for Acer Chromebooks (based on evaluation of last year's support purchases it will be more cost effective to purchase insurance for 900 Acer Chromebooks than pay for the parts and support necessary to maintain them. (\$45,000)
- Chromebook Cases for fifth grade students and students who have missing or damaged cases (\$45,000)
- Access Points for half of the classroom in the high school (\$100,000)
- Access Point Installation (\$45,000)
- Switches for new access points (\$90,000)
- Secondary WiFi Controller to assist primary WiFi controller with managing increased number of wireless devices (\$60,000)
- Refresh of obsolete hardware, this yearly purchase replaces hardware that has reached end-of-life and no longer meets the needs of the user. Items included: HS Library, HS Lab Computers, and iPads (\$285,000)
- Bandwidth for the internet connections at HS North and HS South, upgraded to 4 GB to meet the needs of the 1:1 Learning Initiative, students, teachers and staff (\$15,000/month)

2018 - 19 (Hardware - \$1,350,000, Internet and Phone service - \$216,000)

- 1:1 Learning Initiative for grades 5 - 10
- Chromebooks for incoming fifth grade students and ninth grade students (\$700,000)
- Chromebook Cases for fifth and ninth grade students and students who have missing or damaged cases (\$60,000)
- Upgrade Firewall and Load Balancer for internet connection at HS North, bandwidth utilization will exceed capacity of existing hardware(\$230,000)
- Refresh of obsolete hardware, this yearly purchase replaces hardware that has reached end-of-life and no longer meets the needs of the user. Items included: Access Points, iPads, Staff Computers, and Switches (\$360,000)
- Bandwidth for the internet connections at HS North and HS South, upgraded to 6 GB to meet the needs of the 1:1 Learning Initiative, students, teachers and staff (\$18,000/month)

Professional Development Plan

The Professional Development (PD) plan for the 1:1 Learning Initiative includes introductory sessions for teachers involved in the initiative, sessions for teachers with initiative experience, sessions for all staff, and sessions for parents. Each year teachers who will be participating in the initiative the following year will participate in the winter PD day and four half-day sessions during the summer. These sessions will be modified based on the results of previous trainings and the needs of the grade level that is being introduced to the initiative that fall.

During the school year the Teacher Resource Specialists for Technology (TRST) will work with teachers and administrators to support the 1:1 Learning Initiative. This will be done by: assisting with lesson development, modeling lessons, co-teaching, working with supervisors on planning department meetings, working with building administrators on planning faculty meetings, and responding to individual teacher requests for support. The involvement of the TRST will help to ensure that PD is consistent and available to all teachers.

Listed below is a summary of the training opportunities specific to the 1:1 Learning Initiative:
2016

Summer:

8th Grade Teachers

Module 1: Creation & Collaboration

Module 2: Digital Assessment

Module 3: Workflow with Google Classroom

Module 4: Planning & Managing Digital Learning

Google APPS For Education Training

Google Docs & Sharing

Google Forms, Spreadsheets & Flubaroo

Google Presentations

Google Calendars

Google Classroom

Parents

Parent Training

2017

Feb

Introduction to the 1:1 Learning Initiative for 9th grade teachers

2016 Sessions:

Creating & Collaborating in a Chromebook World

Digital Assessment for 1:1 Learning Environments

Using Google Maps to Enhance Classroom Instruction

Managing the 1:1 Chromebook Classroom

Summer

Offerings will be similar to 2016 sessions, with focus on 9th grade teachers

Oct

2018

Feb

Introduction to the 1:1 Learning Initiative for 10th grade teachers, offerings will be similar to Jan/Feb 2016 session

Summer

Offerings will be similar to 2016 sessions, with focus on 10th grade teachers

2019

Jan/Feb

Introduction to the 1:1 Learning Initiative for 11th grade teachers, offerings will be similar to Jan/Feb 2016 session

Evaluation Plan

The 1:1 Learning Initiative will be assessed to determine the impact on: student collaboration, student/teacher communication, student-centered learning, student performance and instruction. Assessment of the initiative will be accomplished through a variety of tools. The assessment data will be collected yearly and used to assess the overall effectiveness of the initiative. The Technology Committee will evaluate and, if necessary, realign the initiative on a yearly basis using the assessment data as a guide. Potential assessments include but are not limited to:

21st Century Competency Assessments

- 8th Grade Global Challenge

- Classroom Competency assessments

Technical Assessments

- Collaboration occurrences

- Documents created by students

- Technology usage

Student Performance Assessments

- PARCC

Survey

- Teacher -

 - Student-centered instruction impact

 - Collaboration between students impact

 - Overall satisfaction

- Student

 - Collaboration experiences

 - Communication experiences

 - Overall satisfaction

- Parent

 - Impact on family life

 - Overall satisfaction