
Norwood Public School District

Technology Plan

2016 - 2021

Technology Plan July 1, 2016 through June 30, 2021

"Think ~ Lead ~ Serve"

177 SUMMIT STREET • NORWOOD, NEW JERSEY • 07648
PHONE: 201-768-6363 • FAX: 201-768-0630

County: Bergen County Code: 03

District/Charter School or Affiliation: Norwood

District Code: 3740

Grade Levels: K-8

Web Site: <http://www.wearenorwood.org>

Date Technology Plan approved by school board or governing body

06/27/2016

Is the district compliant with the Children's Internet Protection Act (CIPA)? Y


Please indicate below the person to contact for questions regarding this technology plan:

Name: Christopher Rzucidlo

Title: Network Administrator

E-mail: rzucidlo@nvnet.org

Phone 201-768-6363 x60027

Signature:  _____

Date: 3/26/19 _____

Superintendent/Lead Person Approval:

District Superintendent/Lead Person:

Ms. Lisa Gross

Superintendent

E-mail: grossl@nvnet.org

Phone: 201-768-6363

Signature:  _____

Date: 3/27/19

Vision Statement for Norwood Public School

Our school community will use our technology to enhance and expand instruction within our classrooms. Our mission is to meet the educational needs of every student. To achieve this goal, we will expand our use of technology to meet the curricular needs of all learners, to provide access to information through global learning, and to foster student responsibility for their learning.

THINK ~ LEAD ~ SERVE






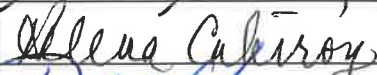


APPENDIX A

Technology Plan components CHECKLIST

This form may be used to ensure all components are addressed in the submitted document for review.

School /Charter School/Renaissance School: (Norwood Public School) NJTRAx PARCC Technology Readiness Rating: 9.0 NJTRAx Digital Learning Readiness Rating: 5.9			
<ul style="list-style-type: none"> • If the <u>Future Ready District Level</u> summary report was generated within the 2015-2016 school year, include a copy of the district report with the Plan submission • If the <u>NJTRAx Digital Learning Surveys</u> summary report was generated, include a copy for all identified schools 			
STEP		YES	NO
1.	<i>District vision included.</i>	X	
2.	NJTRAx technology readiness system for the district and for each school was updated.	X	
3.	NJTRAx DL surveys for each school were completed. GO TO STEP 5	X	
4.	School-based Goals, Strategies, Objectives and Indicators are included for each identified school.	X	
5.	Reflection and adjustment plan is included.	X	
6.	School-based plan for infusion of technology within instruction is clearly understood.	X	
7.	School-based Reflection & Adjustment is included for each identified school.	X	
8.	School-based budget is included to support activities in Action Plan.	X	

I agree to the contents in this educational plan, and the assurance that I will be involved in the implementation of this Technology Plan for Digital Learning. Involvement in the implementation of this Plan may include: reviewing the progress of meeting the goals and objectives, being responsible for completing one or more activities in the action plan, participating in the revisions of the plan. Stakeholders associated with the district and school levels (i.e., each principal from targeted schools) should sign.

Stakeholder Name	Stakeholder Title	Stakeholder Signature
Ms. Lisa Gross	District Superintendent	
Mr. Vito DeLaura Jr.	Principal, Norwood Public School	
Fran Orefice	Supervisor of Instruction	
Christopher Rzucidlo	Technology Coordinator	
Aaron Gulko	Technology Teacher	
Ms. Helena Cabiroy	Teacher	
Mr. Rahul Vaghasia	School Board member	
	Parent	
Mr. David Roth	Director of Special Services	
	Students	
	Community Member	

Appendix B

Basic Technology Plan Elements Districts Should Have In Place Already

VISION

1. Is there a **vision** for digital learning in the district that is shared among all stakeholders?
Yes

DISTRICT INFRASTRUCTURE

1. Is there an existing robust technological infrastructure that meets current connectivity goals and that can be augmented to meet future demand that is at least 100 KB per student external connection for each 1,000 students and 1000 KB per student internal connection scalable up to 1 GB Ethernet or 1,000 MBPS? Yes
2. Is equipment scalable, such as firewalls, switches and routers that form the backbone of both wired and wireless networks? Yes
3. Is equitable access to technology and connectivity available to all students within the school grounds? Yes
4. Is there efficient routing of information between internal users and external resources? Yes
5. Is bandwidth and current Internet usage tracked? Yes
6. Is there ongoing coordination when ordering new technologies and maintaining technology between the maintenance department within the district, the lead persons for both educational technology and assistive technology, and all principals? Yes
7. Does the district have security software to manage potential hacks, viruses, etc.? Yes
8. Is there a security system(s) in place to determine who can automatically enter a district building (i.e., Access control systems, taped video security or proximity readers)? Yes
9. Is there digital citizenship support and education available for staff and students? Yes
10. Are the needed technical solutions to support the educational environment, both academic and administrative identified and addressed? Yes
11. Are IT resources maintained by a reliable and responsible person or firm? Yes For those districts that need additional technical support, does the district collaborate with other districts for shared services to ensure onsite assistance available for online assessments?
No
12. Considering all network equipment (security cameras, wireless devices, desktops, all ports), does the district document all infrastructure setups and IP address schematics? Yes

CURRICULUM, TEACHING, LEARNING AND ASSESSMENT

1. Do students collaborate with peers and create original deliverables as an outcome? Yes
2. Do all students have ongoing opportunities to collaborate with peers in and outside of school? Yes
3. Do students learn from one another, from the teacher and from resources available outside the school walls? Yes
4. Do students critically evaluate their work and peer work for continuous improvement?
Yes

5. Do school administrators understand the difference between relying on a "canned" software package for student learning content and teachers empowering students through the infusion of digital tools to teach with effective instructional pedagogy? Yes
6. Considering the district's vision for student learning, do teachers know about the technologies that will help make this type of learning more achievable and through what pedagogical design? Yes
7. Are multiple means used by students to demonstrate learning? Yes
8. Are teachers infusing standard 8.2 concepts within their lessons? No
9. Are teachers aware of and/or using effective learning models? Yes
10. Are there opportunities for teachers to gauge where they are in preparing for or utilizing a digital learning environment? Yes
11. Are barriers identified that impede teachers in effectively infusing technology into instruction? Yes
12. Do students have digital portfolios to maintain online collections of their work and objects? Yes
13. Are students assessed for meeting Standard 8.0 in grades K-12? Yes
14. Does the district have a system in place to assure students in grades 6 through 8 meet Standard 8.0 by the end of grade 8? Yes

BUDGETING

1. Is the monetary source for all upcoming purchases identified? Yes
2. Are the funding sources for recurring services, anticipated purchases, and professional learning (include the technology resources to support the district's technology initiatives) over the next three years identified? Yes
3. Does the district have a system in place to determine if what is purchased is actually being used appropriately? No
4. Is the district using innovative ways to fund educational technologies? Yes

Technology Plan

IMPLEMENTATION PLANNING – SCHOOL-BASED TABLE

School /Charter School/Renaissance School (Norwood Public School):

NJTRAx PARCC Readiness Rating: 9 NJTRAx Digital Learning Readiness Rating: 5.9

Goal 1: [Network Infrastructure]

Strategy: Provide reliable network access to a minimum internet bandwidth of a minimum of 1000 kb per student

Projects/Activities (include the steps required to ensure activity completion)	Person responsible for completion of activity and those responsible for reviewing or approving the activity to move forward	Timeline (mm/yr span)	Resources
Research new replacement switches with newer compatible models	Network Administrator Superintendent/Business Administrator	07/2016	
Measure bandwidth usage and evaluate additional required bandwidth	Network Administrator Superintendent/Business Administrator	09/16 – 03/18	
Complete phase 3 of network closet rewiring and replacement of obsolete switches	Network Administrator Superintendent/Business Administrator	07/2016	
Get pricing rates for internet options available to school and choose a provider with best price per megabyte	Network Administrator Superintendent/Business Administrator	05/2019	
Install Replacement switches in 2 IDF's and MDF	Network Administrator Superintendent/Business Administrator	07/19	

Goal 2: [Network Infrastructure]

Strategy: Provide adequate wireless access within the building

Projects/Activities (include the steps required to ensure activity completion)	Person responsible for completion of activity and those responsible for reviewing or approving the activity to move forward	Timeline (mm/yr span)	Resources
Identify areas within the building with weak or no wireless access	Network Administrator Teachers and staff members	05/17	
Run wires and add necessary access points to areas that need access	Network Administrator Superintendent	07/17	

Goal 3: [Network Infrastructure.]

Strategy: Maintain comprehensive security, backup, and disaster recovery plan for district data

Projects/Activities (include the steps required to ensure activity completion)	Person responsible for completion of activity and those responsible for reviewing or approving the activity to move forward	Timeline (mm/yr span)	Resources
Ensure existing equipment is operating as should with scheduled backups of data	Network Administrator Superintendent	06/16 – 07/21	
Research pricing on offsite-backups	Network Administrator Superintendent/Business Administrator	09/17 – 11/19	
Update current disaster recovery plan to include offsite – backups and newer strategies	Network Administrator Superintendent	12/17 – 02/18	
Install Analog POTS lines for emergency communications	Network Administrator/Verizon/Eastern Data Comm Superintendent/Business Administrator	12/18	
Create backup for new servers	Network Administrator Superintendent/Business Administrator	07/19-7/21	
Install LENS Security System	Network Administrator/Eastern Data Comm	12/18	

Goal 4: [Hardware]

Strategy: Maintain updated equipment and software compatible with district system

Projects/Activities (include the steps required to ensure activity completion)	Person responsible for completion of activity and those responsible for reviewing or approving the activity to move forward	Timeline (mm/yr span)	Resources
Replace obsolete laptops, install current software and operating system	Network Administrator Superintendent/Business Administrator	06/16 – 09/16	
Deploy additional laptop cart for online Spanish course	Network Administrator Superintendent/Spanish teachers	06/16 – 09/16	
Update all current devices with newest available operating system; installing more ram (if needed)	Network Administrator Superintendent	06/16 – 09/16	
Replace 60 obsolete Apple iPad tablets transferring all apps to replacements	Network Administrator Superintendent	07/19 - 7-20	
Provide 1:1 Chromebooks for students in grades 7 & 8	Network Administrator Superintendent/Business Administrator	07/17	
Provide 1:1 Chromebooks for students in grades 5	Network Administrator	07/18	

& 6	Superintendent/Business Administrator		
Replace Servers	Network Administrator	7/19	

Goal 5: [Hardware]

Strategy: Equip every classroom with the following interactive devices

1. Wall or ceiling mounted LCD projector
2. Interactive whiteboard
3. Document Camera

Projects/Activities (include the steps required to ensure activity completion)	Person responsible for completion of activity and those responsible for reviewing or approving the activity to move forward	Timeline (mm/yr span)	Resources
Replace 2 obsolete defective interactive whiteboards with new, current models	Network Administrator and Building & Grounds Superintendent/Teachers	06/16 – 09/16	
Replace 25 obsolete projectors with newer LCD models.	Network Administrator Superintendent/Teachers	06/16 – 06/17	
Replace 4 obsolete projectors with newer LCD models.	Network Administrator Superintendent/Teachers	07/19	
Replace Projector and Screen in All Purpose Room	Network Administrator Superintendent/Business Administrator	12/18	
Update all current devices with newest available operating system; installing more ram (if needed)	Network Administrator Superintendent/Teachers	06/16 – 09/16	
Replace obsolete teacher laptops	Network Administrator Superintendent/Teachers	07/19 - 07/21	
Install Promethian Interactive Display in upper grade Makerspace	Network Administrator/Keyboard Consultants Superintendent/Teacher	09/18	
Install 4 cloud-ready print station in hallways reducing prints	Network Administrator Superintendent	07/18	

Instructional Goals

Goal: Educators will leverage the power of technology to measure essential learning and utilize assessment data to improve student learning.

Strategies/Action Plan

- Collect outside examples of digital assessment
- Seek possible seminars/workshops to inform
- Collect current assessment practices and identify what stakeholders would like to see
- Present findings to teachers
- Gather examples/research around data mapping and digital assessment
- Identify current district protocols, current practices, and favorable alternatives
- Explore assessment tools and their purposes and possibilities
- Inform district leaders on findings
- Create a repository of literature, tools, and practice guides for collecting, analyzing, accessing, securing, and using data for instruction
- Institute upper and lower grade Makerspace

Objectives

- Systems of collecting assessment data are available for all teachers, at all grade levels.
- Teachers make instructional decisions based upon relevant assessment data collected.

Timeline

- Compare and Select programs to pilot – September 2017 to June 2018
- Research relevant assessment programs – September 2016 to June 2017
- Implement MAPS Assessment- September 2018- ongoing
- Implement Frontline Data Collection RTI September 2018- Ongoing
- Evaluate and select the best program for needs – June 2018
- Implement Selected Program (LATIC) utilizing turnkey PD – September 2018 to June 2021

Resources

- 5 Building Blocks of Data Informed Instruction (<https://www.msdf.org/blog/2012/06/the-five-building-blocks-of-data-informed-instruction>)
- Beyond the Bubble Test (<http://www.ed.gov/news/speeches/beyond-bubble-tests-next-generation-assessments-secretary-arne-duncans-remarks-state-leaders-achieves-american-diploma-project-leadership-team-meeting>)
- Teachers Know Best (<http://www.teachersknowbest.org>)
- Digital Assessment Tools (<https://www.nwea.org/blog/2015/growing-list-50-digital-education-tools-apps-formative-assessment-success/>)
- Formative Assessment Tools (<https://www.graphite.org/top-picks/top-tech-tools-for-formative-assessment/#%2Ftop-tech-tools-for-formative-assessment>)
- Mindset Works Schoolkit (<http://www.mindsetworks.com/mindset-school/>)
- Games and Learning (<http://gamesandlearning.umich.edu/a-games/>)

Indicators:

- Increase in teacher-to-teacher dialogue in the utilization and validity of assessment data.
- Data analysis reflects student progress and mastery.

Reflection & Considerations:

- Various integrated programs must be considered, including the investigation into the utilization of an adaptive learning platform that continually provides assessment, feedback, and self-regulation to the individual learner.
- The possible barrier includes the cost of program and teacher buy-in. Additional funds will be necessary to avoid the pitfall of assessing without direct instructional application.

Goal: The Norwood Public School District will implement a 1:1 laptop program with the seventh and eighth grade for the 2017-2018 school year & fifth and sixth grade for the 2018-2019 school year

Strategies/Action Plan:

- Research the cost of purchasing new laptops and insurance for the students.
- Search/Develop professional development for the educators to truly embed technology into their lessons
- Develop a curriculum that fosters the use of technology integration in instruction
- Research the cost and benefits of implementing the use of a learning management system such as Haiku
- Offer training to students and parents on the Acceptable Use of school-issued equipment
- Offer training from IDE

Timeline

- Research cost associated with implementing a 1:1 program – September 2016 to January 2017
- Evaluate and select the best equipment for needs – June 2017
- Implement 1:1 Program – September 2017 - 2018
- Student/Parent education night Sept - 2017 - 2021

Indicator(s):

- Purchase of laptops and insurance
- student/parent education night
- curricular offerings
- informal classroom observations/walkthroughs
- formal teacher observations
- Attendance at Professional Development Workshops

Objective:

- Equip middle school teachers, students, and parents with the most cutting-edge yet embedded digital tools for learning.

Reflections & Considerations

- Various forms of professional development must be considered to offer the staff the skills necessary to provide instruction that successfully utilizes technology as the driving force
- The possible barrier includes the cost of program and teacher buy-in.

Goal: The Norwood Public School District will implement two maker spaces, one for grades K-4 and one for grades 5-8 infusing 21st-century skills over the 2017-2018 and the 2018-2019 school years.

Strategies/Action Plan:

- Research the cost of purchasing new Active Panel, stools, green screen, and supplies.
- Research the cost of new flexible furniture
- Research the cost of removing the wall and installing new flooring.
- Develop a curriculum that fosters the use of technology integration in instruction

Timeline

- Research the cost of purchasing new Active Panel, stools, green screen, and supplies: Summer 2017 and 2018.
- Develop a curriculum that fosters the use of technology integration in instruction: Summer 2017 and 2018
- MakerSpace board presentation December 17, 2018.
- Implement curricula 2017-2021

Indicator(s):

- Purchase of supplies
- Board Presentation
- curricular offerings

Objective:

- Infusing coding, CAD, 3D printing and the engineering and design process into the mindset of student learning at NPS.

Reflections & Considerations

Goal: The Norwood Public School District will implement a paperless / Ink Saavy 7/18 - 7/21

Strategies/Action Plan:

- Research the cost of purchasing cloud-ready printers

Timeline

- Research cost associated with implementing a 1:1 program – September 2016 to January 2017
- Evaluate and select the best equipment for needs -- June 2017
- Implement 1:1 Program – September 2017 - 2018
- Student/Parent education night Sept - 2017 - 2021

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- Implement 1:1 Program – September 2017 - 2018
- Student/Parent education night Sept - 2017 - 2021

Indicator(s):

-

Objective:

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Reflections & Considerations

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- Possible barrier includes the cost of program and teacher buy-in.

Professional Learning

Goal No.	Initial Activities	Follow-up Activities (as appropriate)
1.	Implement new add-ons to Google Apps for Education	Technology Coordinator and Technology Teacher will provide training to staff members
2.	Teachers collaborate with each-other using new online software	Technology Teacher will go around and answer any additional questions / answers
3.	Various professional development classes offered at the NVCC	Staff may signup and attend various classes offered by high school curriculum center

Budget

Goal No.	Activity	Funding Source (Federal/State/Private/)	Amount
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1	25 LCD short-throw projectors	--	\$32,032
2	2 replacement network switches	--	\$4,50.57
3	Additional laptop cart for online Spanish classes	--	\$20,879.95
4	2 replacement interactive whiteboards	--	\$6,750.00
5	Replace obsolete desktop and laptop computers	--	\$324,608
6	Cables and other equipment required to upgrade switch rack	--	\$8,200
7	16 replacement Cisco switches	--	\$105,759
8	1 Promethian Interactive Display	--	\$5,570.78
9	4 replacement projectors	--	\$4,259.64
10	4 cloud-ready print workstations	--	\$3,063.25

Reflection and Adjustment

The technology committee will meet each month to assess goals and troubleshoot any stumbling blocks in order to rework goals and adhere to timelines