

Montclair Public Schools
Office of Technology

MPS Technology Plan
2017-2020
Presented January 2018

Below are goals with identified considerations and objectives, outcomes and recommendations for the 2017-2020 Technology Plan. The summary was reviewed by members of the Office of Technology as well as staff that volunteered to participate on the District Technology Plan Committee. A special thank you to the following staff members and Board of Education members:

MPS Office of Technology

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District Technology Plan Committee (along with the district staff referenced above*)

Louis DeBello, Teacher & School Technology Coordinator, Charles H Bullock ES
Scott Feinstein, Teacher & Genesis Turnkey Trainer, Montclair HS
Patrick Krenn, Assistant Principal, Hillside ES
Nami Kuwabara, Principal, Charles H Bullock ES
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Board of Education Finance, Facilities & Technology Subcommittee

Mr. Joseph Kavish, Chairperson
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District Vision for Technology

Students: The use of technology has reached a critical point and we must focus on providing more ubiquitous access for all students throughout the day, separating the need for technology as a supplemental tool for learning to being infused as an everyday tool, part of the regular school day experience. We must provide seamless classroom integration and leverage technology to transform the learning environment.

Teaching Staff: In order for the student goals stated above to be achievable and meaningful, we must also focus on implementing new and continuing many professional development and support programs, implementing a strong digital citizenship program, and continuously improving the infrastructure so it evolves with increased usage.

Other Building and Central Office Staff: Our district staff must have the tools available to them to work effectively, efficiently, securely and collaboratively.

This plan is meant to provide access to technology to all students, all teachers and all district teaching staff that will allow equal access to curricular resources and technology based educational experiences. It is also designed to support extra-curricular activities and unique technology requirements that support the magnet initiative while maintaining a secure environment for all data.

Goal 1: Support curriculum planning and ongoing sustained instructional professional development for 21st century learning environments for the adoption and integration of technology.

Considerations & Objectives	Recommendation for Implementation
Update and provide professional development on a K-12 Technology Scope and Sequence	Continue to work with Office of Equity, Curriculum & Instruction on revision based on current technology and include in district annual professional development plan
Review and revise K-5 Technology Curriculum	Re-evaluate in 2018-2019 to ensure that the changing technology standards, curriculum and tools continue to be current.
Create a comprehensive 6-12 Technology Curriculum	Work with the Office of Equity, Curriculum & Instruction on identifying technology courses grades 6-12; ensure all courses identified as a technology course has a board approved curriculum guide; include technology integration across the content areas as curriculum guides are developed and resources are identified.

<p>Promote the use of GSuite for Education, Google Classroom and other relevant technology-based tools in the classroom, building and district</p>	<p>During 2017-2018, create internal Google Bootcamps to promote Google Level 1 Certified Educators; during 2017-2018, create a Google Classroom pilot in 5th grade in Watchung ES where students have access to Chromebooks every day; provide ongoing professional development and access to G-Suite applications; during 2018-2019, expand the concept of Google Bootcamps to include Level 2 Certification preparation; expand 1:1 initiative to all 5th grade classrooms and 4th grade at Watchung ES and one 6th grade team at a middle school to be determined, and utilize best practices to promote technology integration across the curriculum; during 2019-2020, expand to all 4th grade and 3rd grade at Watchung as well as all 6th grade team classrooms.</p>
<p>Provide routine, ongoing technology professional development</p>	<p>Secure an annual commitment of \$20,000 of dedicated professional development funds for technology integration for all staff; collaborate with the Office of Equity, Curriculum & Instruction on curricular technology needs; provide for the annual PD of IT staff on current technology trends and district needs.</p>
<p>Create and fill three Technology Integration Specialist positions by June 2020</p>	<p>Technology integration is successful when there are supports for learners that are novice or technology-resistant. These new staff members would be assigned to the Office of Technology but would provide direct support to classroom instructors, K-12. One would be hired in 18-19 for grades 6-8. Two additional would be hired in 19-20, one for K-5 and the other for 9-12. These are not teaching positions but experience delivering instruction utilizing technology would be required.</p>
<p>Develop a Grade 8 technology literacy assessment for 8.1 Standards</p>	<p>"Technological literacy" means students meeting NJSLS 8.1 Educational Technology, obtained through the integration of effective educational technology practices, strategies, and tools throughout all curricular areas. It is recommended that for 2018-2019, the district formulate a committee to develop a common, middle school technology assessment to be administered to all 6th, 7th and 8th grade students. It is also recommended to track this information annually in Genesis to ensure accurate state reporting requirements are met.</p>
<p>Develop a digital citizenship (guided by NJ Bill A3292) program for faculty, students, and parents</p>	<p>The Director of Technology should work with other district and building personnel to create programs for all students K-12 as well as for faculty and parents. Additionally, the Digital Citizenship module in annual GCN training should be required for all staff.</p>
<p>Develop a plan for supporting the new NJ law</p>	<p>The Director of Technology should work with the Office of Equity, Curriculum & Instruction and high school staff to discuss</p>

(S-2485) requiring all NJ high schools to offer computer science by fall 2018 and which makes computer science a graduation requirement for incoming freshman in 2022.	technology needs to support the expansion of Computer Science education at Montclair High School.
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Goal 2: Create, maintain, and support enterprise technology systems for 21st century learning environments throughout Montclair Public Schools (MPS).

Considerations & Objectives	Recommendation for Implementation
Provide a robust network infrastructure and wireless network for technology integration and <i>Bring Your Own Devices (BYOD)</i>	Conduct an assessment for density on our wireless network to prepare for an increase in devices and technology embedded curricular activities (i.e. Google Classroom, flipped classrooms, etc.); continue to upgrade our technology infrastructure to address the continual assault by viruses, phishing schemes, ransomware and spam; begin to plan for obsolescent replacement of access points; evaluate impact of BYOD policy on high school data usage.
Provide and maintain a: 2:1 student to computer ratio throughout all schools by June 20, 2018; 1:1 student to computer ratio grades 6-12 by June 30, 2019; interactive lesson capabilities in all (K-5) classrooms by June 2019; develop and implement 6-year obsolescence plan	Request increase in annual allotment to address a historical (prior to 2016-2017) lack of consistent investment in technology. Also, recommend to continue use of EZ Office Inventory in conjunction with ZenDesk as a means to track inventory and asset history and depreciation. *See Appendix A at end of document
Decrease the dependency on paper, copies, printers and copy machines by utilizing technology and digital solutions	Implement district wide solutions utilizing Papercut with district copy machines; promote the use of copy machines over printers as more cost-effective printing solution; evaluate the use of the copy center as it relates to the true cost of printing versus the cost of consumables; increase the professional development in technology solutions in the classroom for assessment and

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Goal 3: Implement a district wide disaster recovery plan that addresses a catastrophic loss to any of our district technology, data and data systems.

Considerations & Objectives	Recommendation for Implementation
Identify solution that best meets the district's identified needs regarding acceptable loss of data and time to recovery	Select district staff and board members to comprise a Data Crisis Management Team to identify mission critical systems; define data crisis with protocols to address issues on a severity scale; research data storage, backup, restoration and redundancy solutions to identify financial and logistical impact of each; select solution
Secure funding for selected solution (short term and long term)	Most solutions will require multiple phases to full implementation; review plan and secure funding for an immediate solution by June 2018 and for a long term, sustainable solution by the end of June 2020.
Develop an implementation plan for the Data Disaster Recovery Plan	Schedule a series of tabletop drills to address data security scenarios to ensure that all stakeholders know the impact of the selected solution; prepare written manual to address scenarios and distribute to key stakeholders.

Goal 4: For Montclair Public Schools to participate in the Future Ready Schools-NJ initiative and accomplish Phase I and II for at least one school by the end of the 2018-2019 school year and Phase II by the end of 2019-2020. In addition, start the process with at least three additional schools by the end of 2019-2020. The Future Ready Schools – NJ Certification Program is designed to provide direction, guidance, support, and connections to resources for New Jersey schools that are dedicated to best preparing their students for success in college, career, and citizenship. By engaging in the program, districts gain the knowledge and foundation needed to support their schools' efforts to get FRS-NJ certified.

Considerations & Objectives	Recommendation for Implementation
<u>Phase I - District Commitment:</u> The District Commitment Phase ensures that school	During the 2017-2018 School Year, complete the following steps for Phase I: <u>Step I:</u> Have the Superintendent of Schools sign the Future Ready Pledge to begin the process of committing your district to

<p>districts are dedicated to supporting their schools' efforts, and that these efforts are collaborative. Once a district is committed, schools in the district can declare their participation and apply for certification.</p>	<p>support your schools' FutureReady initiatives.</p> <p><u>Step II:</u> Enact the Board Resolution to declare your district leadership's commitment to supporting your schools' FutureReady efforts.</p> <p><u>Step III:</u> Establish the District-Level Future Ready Team to begin district-wide collaboration efforts to plan and implement Future Ready initiatives and ensure that each school's needs are represented and supported.</p> <p><u>Step IV:</u> Conduct a District Self-Assessment to discover your district's strengths and needs within the context of the national Future Ready framework.</p> <p><u>Step V:</u> Submit the Commitment Pre-Application to officially enter the Future Ready Schools - New Jersey Certification Program and be recognized as a district that is committed to becoming FutureReady and supporting its schools and educators' Future Ready initiatives. Once a district is committed, its schools can begin applying for certification.</p>
<p><u>Phase II - School Participation:</u> The School Participation Phase features the establishment of the school-level Future Ready team and the official declaration of a school's participation in the certification program.</p>	<p>During the 2018-2019 School Year, complete the following steps for Phase II:</p> <p><u>Step I:</u> Establish a School-Level Future Ready Team to begin school-wide collaboration efforts to plan and implement Future Ready initiatives and ensure that the entire school's needs are represented and supported.</p> <p><u>Step II:</u> Sign the School Participation Letter to declare your school's commitment to being certified as Future Ready!</p> <p><u>Step III:</u> Submit the School Participation Letter</p>
<p><u>Phase III - School Certification:</u> The School Certification Phase enables individual schools to apply for certification by taking actions that lead to success through the Future Ready Schools - New Jersey Indicators of Future Readiness.</p>	<p>By the end of the 2018-2019 School Year, complete the following for at least one school:</p> <p><u>Phase III - School Certification:</u> Submit evidence of the success in the Future Ready Schools – NJ indicators. The following items must be submitted/completed:</p> <p>Step 1: A School Narrative</p> <p>Step 2: Create and Submit a Future Ready Schools - NJ video</p> <p>Step 3: Identify the Indicators that schools can strive to achieve success in and submit for credit towards being certified as FutureReady.</p> <p>Step 4: Submit evidence to the Future Ready Schools - New</p>

	Jersey team between February 22nd and June 30th for review and feedback.
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Appendix A
Student/Computing Device Ratio

Please note that each year devices which no longer can support network security or application updates become obsolete and must be responsibly disposed. Therefore, even though additional devices are purchased, the overall ratio may not proportionately improve.

School	May 2014	September 2014	October 2017	October 2018	October 2019	October 2020
Bradford ES	8.1	3.5	3			
Charles H. Bullock ES	4.9	3.2	1.4			
Edgemont ES	3.6	2.4	1.8			
Hillside ES	5.4	2.7	2			
Nishuane ES	16.4	16.4	2.4			
Northeast ES	4.2	3.4	2.3			
Watchung ES	11.1	3.4	1.8			
Buzz Aldrin MS	1.9	1.5	.96			
Glenfield MS	3.6	2.1	1.6			
Renaissance MS	2.5	1.5	1.1			
Montclair HS	6.0	2.2	1.5			