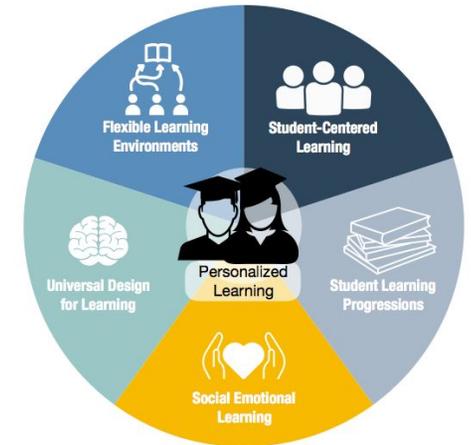




Melrose Public Schools Technology Plan 2020-2023



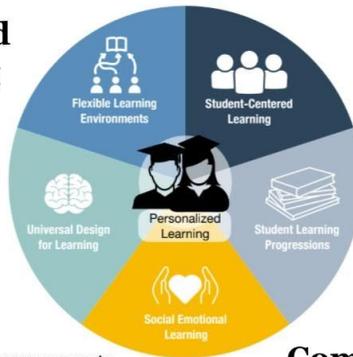
Melrose Public Schools Habits of Learning

Self-Directed and Lifelong Learning

Students can set goals, reflect on their learning, and produce quality results.

Problem Solving

Students can apply processes to define, evaluate and solve complex problems.



Responsible Citizenship

Students can contribute positively to their communities and employ responsible use of technology and other resources for academic and social purposes.

Communication

Students can clearly convey meaning and ideas to varied audiences using different modes.

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Introduction

The following plan provides strategic direction and establishes specific action steps related to how instructional technology will be implemented so as to benefit teaching and learning in the Melrose Public Schools over the next three years. The Three Year Strategic Instructional Technology Plan is designed to provide a blueprint for district technology efforts. The plan was informed by various documents and goals from the district.

The development of the Melrose Public Schools Technology Plan was shaped by the district vision and mission:

- Vision: Every student will be an engaged, challenged, enriched, and self-directed learner.
- Mission Statement: The Melrose Public Schools will provide and sustain a thriving and dynamic teaching and learning environment, preparing every student to excel in their authentic life and global citizenship, as supported by an engaged community.

The plan was also informed by the district's vision for personalized learning. Based upon this vision, the district has developed and started implementing a systematic plan that maximizes digital learning opportunities and prepares students for success in college, career, and citizenship.

In addition, the district's vision and mission is outlined and actualized in its strategy overview which outlines four strategic objectives for the district:

- Curriculum, Planning, and Assessment: Plan for student-centered, personalized, and self-directed learning through high-quality curriculum and varied systems of assessment.
- Teaching All Students: Design and respond to learner variability and interests, by employing culturally responsive, personalized, and inclusive instructional practices.
- Responsive and Inclusive Environment: Design safe, supportive, and student-centered schools in which all students, staff, and members of the community can thrive.
- Professional Culture and Community Engagement: Foster a professional learning community that promotes ongoing personal and collaborative growth to support teaching and learning.

Finally, in 2016, the Massachusetts Department of Elementary and Secondary Education outlined Curriculum Frameworks for Digital Literacy and Computer Science. The framework provides standards for each grade span (K-2, 3-5, 6-8, and 9-12) in the areas of Computing and Society, Digital Tools and, Computing Systems, and Computational Thinking. This Technology Plan outlines actions to support implementation of these standards into the curriculum.

The Three Year Strategic Instructional Technology Plan is based on four goals that were informed by vision, mission, strategy overview, and the Digital Literacy Curriculum Frameworks in addition to the district's vision for personalized learning:

- Personalized Learning: MPS will build and expand upon personalized learning environments that promote deeper, authentic learning experiences featuring collaboration, creation, problem-solving and student voice.

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- Infrastructure, Data, and Privacy: MPS will provide a robust infrastructure that supports tools, resources, data, and systems that enable powerful digital learning opportunities while ensuring privacy, safety, and security for all students and staff.
- Personalized Professional Learning: MPS will leverage technologies and digital learning strategies to expand access to high-quality, ongoing, job-embedded professional learning opportunities for all teachers and administrators.
- Digital Computational Literacy Curriculum: Melrose Public Schools will have a sequenced set of courses and curriculum that meets the Massachusetts Digital Literacy Curriculum Frameworks.

The district extends its gratitude to the Melrose Public Schools Technology Committee who led the completion of the Three Year Strategic Technology Plan that follows:

- Melanie Acevedo, Chair of Technology Committee, Digital Literacy Teacher
- Margaret Adams, Assistant Superintendent for Teaching and Learning
- Wendy Arnold, Library Media Specialists, Melrose Middle School
- Blair Cochran, Physics Teacher at Melrose High School
- Josh Cristiano, Academic Facilitator, Melrose Middle and High School
- Neal Ellis, City of Melrose, Chief Information Officer
- Susan Jones, Digital Literacy Teacher, Roosevelt and Hoover School
- Meghan Lewis, Grade 5 Teacher, Winthrop School

In addition, we are thankful for the Melrose Public Schools Leadership Team including Superintendent Taymore who provided feedback on the document. The teachers, who are members of the first Personalized Learning Cohort, added their feedback to drafts of the document as well.

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Vision for Personalized Learning

Personalized learning results from decisions about teaching and learning based on a framework of social emotional learning, clear learning progressions and expectations for competency, and principles of universal design for learning. These foundational concepts come to life through the student centered approaches teachers choose and the flexibility of the learning environment that promotes student agency and engagement.



Student Centered Learning

Selecting and using instructional methods and assessment practices that give students choice and ownership for their learning builds agency and investment.



Student Learning Progressions

Defining clear outcomes and describing what progress and competency looks like fosters alignment, focus and shared ownership of learning while promoting equitable outcomes.



Social Emotional Learning

The skills and knowledge to manage emotions, set and work toward goals, establish and maintain relationships, and work productively with others serve as a foundation for success in life.



Universal Design for Learning

A framework for optimizing teaching and learning providing for varied means of engagement, representation and expression aligned with the science of how we learn.



Flexible Learning Environment

Designing learning environments that are flexible and can accommodate the needs and interests of a range of learners leads to equitable outcomes.

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Technology Management and Staffing

The structure for roles and responsibilities related to technology management and staffing are described in the following brief position descriptions. There were a number of positions recommended in the five year Technology Plan from 2015 that were not funded including academic facilitator for the elementary level and Director of Instructional Technology. The Library Media Specialists at the elementary level was recently funded for the 2019-2020 school year to support teacher preparation periods in grades 3-5.

Academic Facilitators

The Academic Facilitators work directly with school principals, Assistant Superintendent for Teaching and Learning, and teaching staff to integrate district instructional technology initiatives so that all students may have individualized learning opportunities, acquire the technological capacity key to 21st century skills, and prepare for college and career. This work includes the development of ongoing face-to-face and on-demand staff professional development, setup and management of ongoing central instructional technology solutions, as well as the evaluation and required modification of these initiatives to meet individual instructional technology goals and timelines. Alongside teachers, the Academic Facilitator models appropriate and/or new educational techniques, methods, materials, and instructional programs for educators so they may provide appropriate differentiation and support to students who need extension and challenge.

As of the start of this technology plan in the fall of 2020, the district has one Academic Facilitator who works at the secondary level. The 2015 Technology Plan called for the hiring of an additional Academic Facilitator for the elementary level. That position has never been funded.

Library Media Specialists

The Library Media Specialist (LMS) empowers students and staff to be effective and ethical users of ideas and information by creating an environment where collaboration, inquiry, and creativity thrive. The LMS collaborates with teachers, students, and instructional technology staff to design, teach, and assess learning experiences that incorporate inquiry learning, the full range of literacy skills (information, media, visual, digital and technological), critical thinking, and the creation of new knowledge. The LMS is an expert resource for teachers and students in the selection, evaluation, acquisition, organization of and access to information and technology resources in all formats. The LMS works collaboratively with teachers, other instructional technology department staff, and administrators to develop literacy skills across the curricula at both building and district levels, as well as through informal and formal professional development.

The district currently has two Library Media Specialists at the secondary level. During the 2019-2020 school year, 1.5 elementary LMS were added. Currently, the elementary LMS are specialists and support coverage for elementary planned periods for general education teachers for students in

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grades 3-5 with a 40 minute period each week. The elementary LMS have developed a curriculum for this first year, which will continue to grow and develop each year.

Elementary Digital Literacy Teachers

For the 2019-2020 school year, the elementary schools have 3.5 FTEs of Digital Literacy teachers who provide direct instruction in the teaching of the 2016 Massachusetts Digital Literacy and Computer Science Curriculum Frameworks. They provide direct instruction to all K-5 students for 40 minutes each week. Their lessons focus on the principles of computational thinking, digital citizenship, and media literacy. They also have been tremendous assets to their schools in providing direct support for teachers to troubleshoot technology and the integration of technology into their classrooms. They provide embedded professional development supports for teachers that have successfully strengthened technology integration efforts.

Infrastructure Staffing

City of Melrose Chief Information Officer (CIO)

The Information Technology Department, under the supervision of the Chief Information Officer, is responsible for the management and oversight of all technology systems in the City of Melrose, including the Melrose Public Schools. The Information Technology Department has two divisions, one for City operations and one for School operations. The City IT division is responsible for all City technology management and oversight in addition to the management and oversight of the citywide network. The School IT division is primarily responsible for the support of School technology in school buildings. The City of Melrose CIO reports to the Melrose Public Schools Superintendent with regard to all interactions with the hardware and network infrastructure in the school district. The CIO oversees the Melrose Public Schools Network Manager, two Help Desk Technicians and a Student Data Analyst..

Citywide, the CIO oversees the planning, design, implementation and maintenance of all citywide technology and telecommunications throughout all city departments including Schools, Police and Fire and directs required modifications to these systems. They manage the purchase, placement and repair of all technology equipment and maintain an asset management plan for the lifecycle management of all technology. The CIO also oversees all hardware and software upgrades on all citywide technology. The CIO manages all technology and telecommunications vendors and contracts.

Technology Support Technicians

The School Information Technology Department provides support for day-to-day technology operations, and customer service for classroom and administrative technologies. This includes the management of purchased services and technical support resources as well as hardware procurement, end station security, software management and asset management.

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Network Manager

The Network Manager, working under the direction of the Chief Information Officer, is responsible for the hands-on day-to-day IT staff supervision and operations of all the Melrose Public Schools information technology systems. The Network Manager also acts as the primary support contact for the Central Administration staff and Melrose High School.

Systems Administrator

The Systems Administrator, working under the direction of the Network Manager, designs, installs, and manages building computer networks for both administrative and academic clients including troubleshooting and repairing all aspects of the network including workstations, servers, etc. This individual has primary responsibility for providing networking services and computer applications throughout the Melrose Public Schools. The Systems Administrator provides input to the Network Manager in the decision making process concerning operating systems, networks, computer platforms, data management systems and technical support for the implementation of technology applications in the PreK -12 curriculum. The Systems Administrator also acts as the primary support contact for the Melrose Veterans Memorial Middle School. The Systems Administrator will also maintain the daily availability, functionality and performance of the network-computing environment of the Melrose Public Schools.

Help Desk Technician

The Help Desk Technician, working under the direction of the Network Manager, provides technical software, hardware and network problem resolution to all elementary school computer users by performing question/problem diagnosis and guiding users through step-by-step solutions in a school building environment; clearly communicates technical solutions in a user-friendly, professional manner; provides one-on-one end-user training as needed; troubleshoots network problems; resolves more complex end-user problems in conjunction with Technology staff; conducts hardware and software inventory database maintenance and reporting; and performs related work as required.

Student Information and Data Coordinator

The Student Information and Data Coordinator, working under the direction of the Chief Information Officer, coordinates, verifies and submits data reports to the Department of Elementary and Secondary Education (DESE) and acts as internal consultant on Aspen X2 to district staff. Maintains and upgrades district databases, integrates Aspen X2 with other district systems, oversees security within databases, creates relevant reports and trains staff on accessing reports and troubleshoots system issues as needed.

The Student Information and Data Coordinator will also act as liaison between School departments and Technology in matters of business processes, oversees Aspen support for staff, documents software processes and procedures, provides training and instruction for staff for district databases. The Coordinator also provides support to school staff in generating data reports for analysis.

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Current Status and Goals

The Melrose Public Schools Five Year Technology Plan is coming to its conclusion with the 2019-2020 school year. In spring of 2015, the Melrose Public Schools developed a Five Year Strategic Instructional Technology Plan to focus on the effective use of technology to support the implementation of 21st century student learning skills such as communication, collaboration, critical thinking and creativity. The previous plan articulated that there is an explicit connection between technology use and a differentiated and highly student-centered learning environment that emphasizes inquiry, information literacy, and that is aligned with state and national curriculum standards.

Since 2015, the district has accomplished many of the goals and objectives outlined in the original plan. The District Technology Committee has met each year since 2015 and has included members of various stakeholder groups including teachers, administrators, and the Chief Information Officer. The Committee monitored and evaluated implementation of the Technology Plan. The district committee provided guidance and input into how the district interprets technology needs and how these needs are met through the various initiatives, purchases and actions of the district staff working to support technology as a tool for learning.

During the past five years, Melrose has made great strides in increasing educator's knowledge and skills in using technology as a learning tool. Professional development opportunities have evolved each year to respond to teacher needs and changes in educational technology. The district has provided opportunities for teachers to develop their understanding of the components of Google Apps for Education. In the last two years, the district has also increased the amount of online professional development offerings to staff. These offerings also allow teachers to interact with instructional technology as a learner. The increase of teachers' use of these tools in their classroom have continued to grow each year, and the district's professional development has responded to meet those needs. The closure of schools in March 2020 for remote learning likely also has accelerated teachers' integration of technology tools to enhance instruction and the curriculum.

In the classroom, great progress has continued to be made in the use of technology as an educational tool to support student learning needs. The district has focused on supporting teachers in making use of the resources available for Google Apps for Education with students. Google Docs, Slides, Sheets, and Classroom are the most frequently used across all grades spans. In addition, there are some tools such as FlipGrid and Screencasting that are used to support opportunities for collaboration and creating. In most cases, students are using technology for the consumption of information. However, each year, in line with the district's vision for personalized learning, there are increased examples of students creating and sharing their learning using technology. Opportunities for using technology for real world tasks and also project based learning have also increased over time. As will be outlined below by grade spans, in many cases, the number and access to devices has not kept up with the increasing desire of teachers and students to integrate technology into the classroom.

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The following chart represents current numbers of Chromebooks per school. As indicated below, the number of Chromebook varies by school. With the continuous increase in enrollment, individual school PTOs have purchased additional carts. However, overall, the number of Chromebook carts has not kept pace across all buildings and therefore the ratios are not equitable between schools.

Chromebook Inventory Summary Sheet					
Building	Carts	Carts suitable for MCAS	Chromebooks	Student Count	Student to CB Ratio
Hoover	6	6	160	318	2.0:1
Horace Mann	5	5	133	284	2.1:1
Lincoln	10	10	253	414	1.6:1
Roosevelt	9	9	232	432	1.9:1
Winthrop	8	7	204	416	2.0:1
Middle School	13	11	340	818	2.4:1
High School	15	13	348	986	2.8:1
Franklin	1	1	30	48	1.6:1
Total	67		1700	3716	2.2:1
Elementary Total			1012		

Elementary Schools

Since 2015, the elementary schools have been outfitted with Chromebook carts. While the Chromebook carts allowed for an initial infusion of technology into the elementary schools and use within the classroom, the number of carts has not kept pace with the increase in the student population in many schools. The PTOs have also funded since 2015 some additional Chromebook carts. However, as more teachers use technology in their classroom, there are not sufficient devices to meet the need. Many of the Chromebooks are also aging out and are no longer easily repaired. The additional Digital Literacy and Library Media Specialists positions have increased the need for technology. In many cases, the knowledge of the educators and the desire to use technology as a tool to personalize learning has outpaced the availability of devices.

Middle School

In 2014, the Middle School piloted the use of Chromebooks in classrooms with the purchase of 25 devices on a single cart. Since then, the number of carts has increased to 12 and, in 2019, a 1-1 initiative was launched with families of sixth grade students encouraged to purchase a school

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“recommended” Chromebook and students in other grades invited to bring their own devices. The action plan below will outline that the goal over the next coming two years is to ask all incoming sixth graders to bring their own Chromebook.

Even with increasing use of student-owned devices in the classroom, there is still an immediate need to replace the two oldest carts reserved for the library (60 chromebooks) and continue to maintain the others for the following reasons:

- **In-School Student Use:** As the district phases in the 1-1 device program, there will be some students in classes who will not have devices for a variety of reasons on a daily basis. Additionally, there are requests from the special education department to provide students on education plans with devices for the day. Currently, these needs are either met through shared carts or devices circulated from the stationary library carts. The library does not have the capacity to meet these needs as the library Chromebooks are close to end-of-life; have limited battery capacity; and are not repaired or replaced by the district.
- **Student Access at Home:** As technology becomes more deeply integrated in learning strategies and students are expected to use devices to communicate, collaborate, and learn from home, there will be a need to circulate individual chromebooks as a patchwork to help create an equitable experience for all students.

In addition to Chromebooks, teachers have access to three middle school labs: one in the library suite, and two technology labs used for scheduled classes. Library common area has 12 desktops for student use.

High School

In addition to Chromebooks carts that are housed by the department at the high school, the library houses three carts, which are actively loaned out to students and faculty. In 2016, the library media center was remodeled. The learning center itself has access to 14 desktops including access to a graphics lab with 26 desktops. In addition on the top level, there is a CAD lab, an additional computer lab, and the business lab which are used throughout the school day for classes. The video production class lab includes 9 Macs used for video editing. In 2014, the science wing of the high school was remodeled so that each of the spaces includes access to 12 desktops in each space.

in 2019, a 1-1 initiative was launched with families of ninth grade students encouraged to purchase a school “recommended” Chromebook, and students in other grades were invited to bring their own devices. The action plan below will outline that the goal over the next coming two years is to ask all incoming ninth graders to bring their own Chromebook.

Special Education Considerations

In some cases, students with disabilities need access to a Chromebook to have their students’ needs met. In these cases, a Chromebook is often taken from a cart and is then dedicated to that student. When doing this, it often means that there are less devices to support needs in the general education classrooms. The current configuration of carts doesn’t necessarily facilitate allowing one student to borrow a Chromebook. Because demand for Chromebook is highest at the elementary and middle school, this issue is most prevalent at these levels.

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Smartboards and Projectors

The projectors and Smartboards in all schools are on average 12 years old. The projectors because of age have several technical issues including burning up, overheating, lens that are melting over time, and frequently blowing out their bulbs. The projectors are not wireless nor connected to the network allowing for wireless connections. The overall quality of the projector presentation has declined. The Smartboard itself sometimes will not align properly, start to burn up, and have dead spots where they no longer work. Smartboard software has not been upgraded. As teachers integrate more technology, a non-working projection system is often a disadvantage in providing planned instruction. The cost of replacing both projectors and Smartboards is extensive and will need attention by the district.

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Action Plan:

Personalized Learning			
Goal 1: MPS will build and expand upon personalized learning environments that promote deeper, authentic learning experiences featuring collaboration, creation, problem-solving and student voice.			
	Objectives:	Person Responsible:	Timeline:
Year One 2020-2021	1.1.1 Develop learner profiles and personalized learning plans in grades 2-12. Curate examples at the grade K-1 level.	Assistant Superintendent for Teaching and Learning Curriculum Directors Grades 6-12 Personalized Learning Specialist Instructional Coaches All grades 2-12 Teachers	Learner profile Fall 2020 Personalized Learning Plans Fall 2020 Examples of Personalized Learning Plans winter 2020-2021
	1.1.2 Incorporate digital portfolios with increasing student ownership using learner profiles in the goal setting and reflection in grades 3-5, 6th grade, and 9th grade.	Assistant Superintendent for Teaching and Learning Curriculum Directors Grades 6-12 Personalized Learning Specialists Instructional Coaches All grades 3-5, 6th, and 9th grade teachers	Begin implementation Fall 2020 and return at least once per quarter or semester
	1.1.3 Provide opportunities for learner directed showcase of student centered inquiry projects across content areas, for example: <ul style="list-style-type: none"> ● Grade 3-5 Passion Projects ● Grade 8 Civics ● Grade 6-8 ELA Capstone ● Grade 10 “ism” Capstone ● Grade 12 Senior Capstone 	Assistant Superintendent for Teaching and Learning School Principals Teachers grades 5, 8, 12 Curriculum Directors	Showcase-May 2021

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	<p>1.1.4 Curate examples across grade spans and content areas of personalized learning models including examples of learning menus, playlists, and student led conferences.</p>	<p>Personalized Learning Cohort Personalized Learning Specialist Academic Facilitator</p>	<p>Establish Second Personalized Learning Cohort Fall 2020-Spring 2021 Curate examples 2020-2021</p>
	<p>1.1.5 Assign objectives of Technology Plan to established committees, i.e. Curriculum, Professional Development, and Technology Plan to monitor, evaluate, and support implementation.</p>	<p>Assistant Superintendent for Teaching and Learning Chief Information Officer Curriculum Committee Members Professional Development Committee Members Technology Committee Members</p>	<p>Assign objectives to committees-September 2020 Update plan based on progress-May 2021</p>
	<p>1.1.6 Integrate the goals of the Technology Plan with school improvement plans.</p>	<p>Superintendent School Principals School Site Councils</p>	<p>Fall 2020</p>
	<p>1.1.7 Evaluate the effectiveness, impact on student achievement, and engagement of the implemented instructional practices that support personalized learning.</p>	<p>Assistant Superintendent for Teaching and Learning Personalized Learning Specialist Academic Facilitator</p>	<p>Identify measures Fall 2020 Collect pre-assessment data Fall 2020 Collect post-assessment data Spring 2020</p>
	<p>1.1.8 Pilot student led conference by members of personalized learning cohort.</p>	<p>Assistant Superintendent for Teaching and Learning School Principals Personalized Learning Cohort Teacher Curriculum Directors Grades 6-12</p>	<p>Implement student-led conference-Spring 2023</p>

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Year Two 2021-2022	1.2.1 Implement personalized learning profiles in grades K-1. Continue implementation in grades 2-12.	Assistant Superintendent for Teaching and Learning Curriculum Directors Grades 6-12 Personalized Learning Specialist Instructional Coaches Teachers in Grades K-1	Learning profile templates shared with teachers-September 2021 Update Learning profiles three times a year- February 2022 and May 2022
	1.2.1 Increase student ownership for digital portfolios in grades 3-12 with students making their own choices for items in their digital learning.	Assistant Superintendent for Teaching and Learning School Principals Curriculum Directors Grades 6-12 Personalized Learning Specialist Instructional Coaches Teachers in Grades 3-12	Introduce portfolios-October 2021 Update portfolios end of each trimester or quarter
	1.2.3 Implement student-led portfolio showcases in grades 5,8, and 9-10. Continue to support student centered inquiry projects across content areas that will be one component of students' portfolios.	School Principals Curriculum Directors Grades 6-12 Teachers in Grades 5, 8, 10	Showcase-May 2022
	1.2.4 Increase the use of personalized learning models including learning progressions, success criteria, and next step rubrics across grades K-12 including linking these to students digital portfolios and grading.	Assistant Superintendent for Teaching and Learning School Principals Curriculum Directors 6-12 Personalized Learning Specialist Instructional Coaches Teachers in Grades K-12	Share examples-Fall 2021 Curate additional examples-Winter 2021
	1.2.5 Support implementation, monitor, and evaluate assigned goals and objectives of Technology Plan by	Assistant Superintendent for Teaching and Learning Curriculum Committee Member	Assign objectives to committees-September 2021

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	the Curriculum, Professional Development, and Technology Committee.	Professional Development Committee Members Technology Committee Members	Update plan based on progress-May 2022
	1.2.6 Revise and continue school based goals from Technology Plan into school accelerated improvement plans.	Superintendent School Principals School Site Councils	Fall 2021
	1.2.7 Evaluate the effectiveness, impact on student achievement, and engagement of the implemented instructional practices that support personalized learning.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialist Academic Facilitator	Revise measures as needed Fall 2021 Collect pre-assessment data Fall 2021 Collect post-assessment data Spring 2022
	1.2.8 Pilot and share examples of student led conferences by members of personalized learning cohorts.	Assistant Superintendent for Teaching and Learning School Principals Curriculum Directors Grades 6-12 Personalized Learning Cohort Teachers	Implement student-led conference-Spring 2023
Year Three 2022-2023	1.3.1 Support the continued use of learner profiles and personalized learning plans in grades K-12.	Assistant Superintendent for Teaching and Learning Curriculum Directors Grades 6-12 Personalized Learning Specialist Instructional Coaches All grades 2-12 Teachers	Evaluate implementation of learner profiles and PLPs June 2022 Implement and support revisions September 2022
	1.3.2 Support implementation of digital portfolios at K-1 in addition to continue implementation in grades 2-12.	Assistant Superintendent for Teaching and Learning School Principals	Update Learning profiles three times a

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		Personalized Learning Specialist Academic Facilitator Instructional Coaches Teachers in Grades K-12	year-November 2022, February 2023, May 2023
1.3.3	Implement student-led portfolio showcase in grades K-12. Continue to support student centered inquiry projects across content areas that will be one component of students' portfolios.	Assistant Superintendent for Teaching and Learning School Principals Curriculum Directors Grades 6-12 Personalized Learning Specialist Instructional Coaches Teachers in Grades K-12	Introduce portfolios-October 2022 Update portfolios end of each trimester or quarter
1.3.4	Utilize learning progressions, success criteria, and next step rubrics to support students in tracking their own learning progress towards proficiency.	Teachers in Grades 3-12	Share additional examples-Fall 2022 Curate additional examples-Winter 2023
1.3.5	Support implementation, monitor, and evaluate assigned goals and objectives of Technology Plan through existing Curriculum, Professional Development, and Technology Committee. Begin planning for next steps for three years.	Assistant Superintendent for Teaching and Learning Curriculum Committee Member Professional Development Committee Members Technology Committee Members	Assign Objectives to Committees-September 2022 Update Plan Based on Progress-May 2023
1.3.6	Revise and continue school based goals from Technology Plan into school accelerated improvement plans.	Superintendent School Principals School Site Councils	Fall 2022
1.3.7	Evaluate the effectiveness, impact on student achievement, and engagement of the implemented	Assistant Superintendent for Teaching and Learning Personalized Learning Specialist	Revise measures Fall 2022 Collect pre-assessment data Fall 2022

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	instructional practices that support personalized learning.	Academic Facilitator	Collect post-assessment data Spring 2023
	1..3.8 Share examples and resources for student led conferences.	Assistant Superintendent for Teaching and Learning School Principals Personalized Learning Specialist Academic Facilitator Instructional Coaches Teachers in Grades K-12	Implement student-led conference-Spring 2023

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Infrastructure, Data, and Privacy			
Goal 2: MPS will provide a robust infrastructure that supports tools, resources, data, and systems that enable powerful digital learning opportunities while ensuring privacy, safety, and security for all students and staff.			
	Objectives:	Person Responsible:	Timeline:
Year One 2020-2021	2.1.1 Continue 1:1 device program in grades 6 and 9 (Grades 6, 7, 9 & 10 will have Chromebooks through bring-your-own-device initiative within three years). Open purchasing of Chromebook devices to all K-12 students.	Superintendent Chief Information Officer Middle School Principal High School Principal	September 2020
	2.1.2 Replace Roosevelt and Lincoln School telephone systems.	Chief Information Officer Technology Department Staff	June 2020-August 2021
	2.1.3 Replace printer district-wide. (\$180,000)	Superintendent Chief Information Officer School Committee CIP Project Approval Committee City Council	June 2020-August 2021
	2.1.4 Replace projector in the Winthrop, Hoover and Horace Mann schools. (\$196,000) Replace touchscreen LCD projector. (\$431,200)	Superintendent Chief Information Officer Director of Finance School Committee CIP Project Approval Committee City Council	June 2020-August 2021
	2.1.5 Finance and install Beebe School technology upgrades. (\$359,835)	Superintendent Chief Information Officer Director of Finance	June 2021-August 2021

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		School Committee CIP Project Approval Committee City Council	
	2.1.6 Upgrade PC desktops at schools. (\$857,000 contained in Capital Improvement Funding already allocated).	Chief Information Officer	June 2021-August 2021
Year Two 2021-2022	2.2.1 Replace projectors in the High School. (\$238,000) Replace projectors with touchscreen LCD projector. (\$523,600).	Superintendent Chief Information Officer School Committee Director of Finance Superintendent CIP Project Approval Committee City Council	June 2021-August 2021
	2.2.2 Upgrade of audio systems in each classroom in addition to projectors. Preferred audio systems should be ceiling type and accommodate for amplification of the teacher's voice during instruction.	Superintendent Chief Information Officer School Committee Director of Finance Superintendent CIP Project Approval Committee City Council	June 2021-August 2021
	2.2.3 Replace projector in the Roosevelt and Lincoln. (\$213,000) Install touch screen LCD projector replacement. (\$468,600)	Superintendent Chief Information Officer Director of Finance School Committee CIP Project Approval Committee City Council	June 2021-August 2022
	2.2.4 Continue program to support bring-your-own-device in Grades 6 and 9. (Grades 6-8 and grades 9-11 will	Superintendent Chief Information Officer Middle School Principal	June 2021-August 2022

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	have Chromebooks via program).	High School Principal	
	2.2.5 Install a middle school generator. (\$500,000) This generator would power IT assets as well as some HVAC and power the building as an emergency shelter.	Superintendent Chief Information Officer Director of Finance School Committee CIP Project Approval Committee City Council	June 2021-August 2022
	2.2.6 Replace middle school cameras. (\$100,000)	Superintendent Chief Information Officer Director of Finance School Committee CIP Project Approval Committee City Council	June 2021-August 2022
	2.2.7 Multi-Functional Printers (MFPs) refresh in all schools. (Operating Budget increase 9%)	Superintendent Chief Information Officer Director of Finance	August 2022
	2.2.8 Replace computer network infrastructure equipment (network switches) districtwide. (\$200,000)	Superintendent Chief Information Officer Technology Department Staff Director of Finance School Committee CIP Project Approval Committee City Council	August 2022
Year Three 2022-2023	2.3.1 Continue bring-your-own-device in grade 6 and 9. (Grades 6-12 will have Chromebooks)	Superintendent High School Principal Middle School Principal Chief Information Officer Technology Department Staff Director of Finance	June 2022-August 2023

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	<p>2.3.2 Replace Roosevelt and Lincoln camera. (\$49,900)</p>	<p>Superintendent Chief Information Officer</p>	<p>June 2022-August 2023</p>
	<p>2.3.3 Replace Chromebooks at all levels. (\$220,600).</p>	<p>Superintendent Chief Information Officer Director of Finance School Committee CIP Project Approval Committee City Council</p>	<p>June 2022-August 2023</p>

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Personalized Professional Learning			
Goal 3: MPS will leverage technologies and digital learning strategies to expand access to high-quality, ongoing, job-embedded professional learning opportunities for all teachers and administrators.			
	Objectives:	Person Responsible:	Timeline:
Year One 2020-2021	3.1.1 Revise new teacher curriculum to reflect personalized learning practices. Evaluate impact at the end of the year.	Assistant Superintendent for Teaching and Learning New Teacher Leaders	Revision August 2020-September 2020 Evaluation May 2021
	3.1.2 Establish a second year of Personalized Learning Cohort. Continue second year for first year cohort. Curate and disseminate additional examples from Personalized Learning Cohort.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Personalized Learning Cohort Teachers	September 2020-May 2021
	3.1.3 Pilot examples of professional development that make use of online, hybrid, video conferencing, and blended learning.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Grades 6-12 Curriculum Directors	September 2020-June 2021 (At least one example per month)
	3.1.4 Create an online video library of best practices to support onboarding of new teachers and support all teachers to incorporate elements of personalized learning.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Grades 6-12 Curriculum Directors	At least two videos per month of key instructional (one elementary and one secondary) practice-August 2020-June 2021
	3.1.5	Superintendent Assistant Superintendent for Teaching and Learning	Identify needs of school leaders-Fall 2020 Plan professional

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	Support school leaders in implementing personalized learning in their schools such as highlighting examples at staff meetings, PTOs, or staff newsletters. .	School Principals Curriculum Directors Grades 6-12 Personalized Learning Specialists Instructional Coaches	development-Winter 2021
	3.1.6 Update micro-credentialing/badging system which aligns to district initiatives leveraging personalized learning and technology.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches	Revision August 2020-September 2020 Evaluation May 2021
	3.1.7 Support learning walk-throughs at least twice a year using locally developed look fors for personalized learning.	Learning Walk-through Leaders School Principals	Fall Walk-through-October-November 2020 Spring Walk-through-February-March 2021
	3.1.8 Create a self-assessment tool for teachers to identify implementation of personalized learning. Collect pre-assessment data. Identify content areas of specific need or grade spans including professional development.	Assistant Superintendent for Teaching and Learning School Principals Personalized Learning Specialists Instructional Coaches	Create tool-September 2020 Administer tool-October 2020 Evaluate data-November 2020
Year Two 2021-2022	3.2.1 Update new teacher program to support personalized learning district goals based upon data from the previous year.	Assistant Superintendent for Teaching and Learning New Teacher Program Leaders	Revision August 2021-September 2021 Evaluation of the program: May 2022
	3.2.2 Implement third year of additional Personalized Learning Cohort. Continue previous years' cohort. Curate and disseminate examples from cohorts.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Personalized Learning Cohort	September 2021-May 2022

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		Teachers	
3.2.3	Identify additional personalized learning lead teachers to provide increased teacher leader capacity to support district professional development opportunities.	Assistant Superintendent for Teaching and Learning Personalized Learning Teacher Cohort	Identify teachers-Fall 2021 Support opportunities for Teacher Leaders-Winter-2021-Spring 2022
3.2.4	Develop model classrooms for personalized learning and procedures in which teachers will have the opportunity to observe colleagues.	Assistant Superintendent for Teaching and Learning School Principals Personalized Learning Specialists Instructional Coaches Model Classroom Teachers	Identify model classrooms-September 2021 Develop procedures-Fall 2021 Support classroom visits-Winter 2022
3.2.5	Encourage, support, manage, and celebrate risk-taking and experimentation for teachers to apply new learning through school leadership specific practices such as highlighting examples from each department.	Superintendent Assistant Superintendent for Teaching and Learning School Principals Curriculum Directors Grades 6-12 Personalized Learning Specialists Instructional Coaches	2021-2022
3.2.6	Continue learning walk-throughs at least twice a year using locally developed look fors for personalized learning. Compare data with previous year.	Assistant Superintendent for Teaching and Learning School Principals Personalized Learning Specialists Instructional Coaches Learning Walk-through Leaders	Fall walk-through-October-November 2021 Spring walk-through-February-March 2022
3.2.7	Administer self-assessment tool for teachers to identify implementation of personalized learning by grade span. Collect and analyze the data. Respond to	Assistant Superintendent for Teaching and Learning School Principals Curriculum Directors Grades 6-12	Implement self-assessment tool-Fall 2021 Analyze and compare data-Winter 2022

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	identified needs including adjusting professional development.	Teachers Grades K-12	
Year Three 2022-2023	3.3.1 Establish new teacher program to support personalized learning district goals based upon data from the previous year	Assistant Superintendent for Teaching and Learning New Teacher Program Teacher Leaders	Revision August 2022-September 2023 Evaluation of the program: May 2023
	3.3.2 Implement fourth year of additional Personalized Learning Cohort. Continue previous years' cohorts. Curate and disseminate examples from Personalized Learning Cohort.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Personalized Learning Cohorts	September 2022-May 2023
	3.2.3 Expand district professional development opportunities on personalized learning using teacher leaders.	Assistant Superintendent for Teaching and Learning Personalized Learning Teacher Cohort	Identify teachers-Fall 2022 Support opportunities for teacher leaders-Winter-2022-Spring 2023
	3.3.4 Ensure at least three model classrooms in each school for teachers to visit.	School Principals Personalized Learning Specialists Instructional Coaches Model Classroom Teachers	Support classroom visits-Fall 2022 and Winter 2023
	3.3.5 Formalize a professional learning culture which engages faculty in successful digital learning strategies, successes and failures. School leadership will encourage, support, manage, and celebrate risk-taking and experimentation for teachers to apply new learning.	Superintendent All School Principals Curriculum Directors Grades 6-12 Assistant Superintendent for Teaching and Learning Instructional Coaches Personalized Learning Specialists	2022-2023
	3.3.6	Superintendent School Principals	Fall walk-through-October-November

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	Continue learning walk-throughs at least twice a year using locally developed look fors for personalized learning. Compare data with previous years implementation.	Curriculum Directors Grades 6-12	2022 Spring walk-through-February-March 2023
	3.3.7 Administer self-assessment tool for teachers to identify implementation of personalized learning by grade span, and collect post assessment data. Compare results. Address areas of need with professional development and support.	Assistant Superintendent for Teaching and Learning School Principals Personalized Learning Specialists Instructional Coaches Learning Walk-through Leaders	Implement self-assessment tool-Fall 2022 Analyze and compare data-Winter 2023

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Digital Computational Literacy Curriculum			
Goal 4: Melrose Public Schools will have a sequenced set of courses and curriculum that meets the Massachusetts Digital Literacy Curriculum Frameworks.			
	Objectives:	Person Responsible:	Timeline:
Year One 2020-2021	4.1.1 Revise the scope and sequence of curriculum from 2019-2020 school year. Continue to revise each grade level curriculum as students progress through grade spans.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Director of Science and Technology	Revise curriculum-Summer 2020 Implement and document curriculum-2020-2021 school year
	4.1.2 Create cross-curricular computational thinking activities in the areas of math and science. Create a resource bank for teachers that maps Digital Literacy Standards to specific instructional practices and content, such as portfolio work connections; integration of technology.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Curriculum Directors Grades 6-12	Create resource bank for classroom teachers-2020-2021
	4.1.3 Develop assessments and feedback measures to gauge efficacy of the digital literacy curriculum. Collect pre and post assessment.	Assistant Superintendent for Teaching and Learning Digital Literacy Teachers Library Media Specialists Director of Science and Technology	Develop measures-Fall 2020 Collect pre-assessment data-Fall 2020 Collect post-assessment data-Spring 2021
	4.1.4 Ensure all middle school students are able to take at	Middle School Principal Director of Science and	Schedule development-June-August 2020

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	least one trimester of educational technology in the grades 6-8 grade span.	Technology Director of Guidance	
	4.1.5 Identify teachers and electives, A block, opportunities for electives to support DLS standards at middle school. Support curriculum and professional development for newly identified electives.	Middle School Principal Director of Science and Technology Director of Mathematics	Identify teachers-October-November 2020 Program of Studies Update-February 2021 Support with curriculum and professional development-April-June 2021
	4.1.6 Identify teachers at Grades 9-12 who can teach computer science courses. Provide training and support to develop additional courses. Revise program of studies.	High School Principal Director of Science and Technology	Identify teachers-October-November 2020 Program of Studies Update-February 2021 Support with curriculum and professional development-April-June 2021
	4.1.7 Using principles for Universal Design for Learning, curate examples and resources that support students with diverse needs.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Curriculum Directors Grades 6-12	Curate examples-Fall 2020 Share examples-Winter 2021
	4.1.8 Establish school-wide expectations for digital citizenship across schools' Positive Behavior Intervention Systems (PBIS). Create elementary lessons for general education teachers as part of PBIS Tier I. Create expectations for PBIS digital citizenship for middle and high school.	Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists School Principals Curriculum Directors Grades 6-12 School Based PBIS Teams	PBIS teams review and share with Staff-Fall 2020

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Year Two 2021-2022	<p>4.2.1 Using year one data, update the curriculum to match students progress through grades to support personalizing of student learning.</p>	<p>Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Director of Science and Technology Director of Mathematics</p>	<p>Revise curriculum-Summer 2020 Implement and document curriculum-2020-2021 school year</p>
	<p>4.2.2 Create cross-curricular computational thinking activities in the areas of humanities. Create a resource bank for teachers that maps Digital Literacy Standards to specific instructional practices and content, such as portfolio work connections; integration of technology.</p>	<p>Assistant Superintendent for Teaching and Learning Digital Literacy Teachers Library Media Specialists Director of Science and Technology</p>	<p>Revise assessment-August 2021 Collect pre-assessment Data-September 2021 Collect post assessment data-April 2022 Analyze data-May-June 2022</p>
	<p>4.2.3 Administer assessments and feedback measures to gauge efficacy of curriculum. Collect pre and post assessment.</p>	<p>Assistant Superintendent for Teaching and Learning Digital Literacy Teachers Library Media Specialists Director of Science and Tech</p>	<p>Revise measures-Fall 2021 Collect pre-assessment Data-Fall 2021 Collect post-assessment data-Spring 2022</p>
	<p>4.2.4 Implement electives at middle school to increase access to Digital Literacy Curriculum Standards. Identify additional middle school electives that support the standards.</p>	<p>Middle School Principal Director of STEM and Technology Director of Mathematics</p>	<p>Implement new elective courses-2021-2022 Identify teachers-October-November 2020 Program of Studies Update-February 2021 Support with curriculum and professional</p>

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			development-April-June 2021
	4.2.5 Implement newly identified electives in computer science at Grades 9-12. Revise program of studies to outline new electives.	Melrose High School Principal Director of Science and Technology Director of Mathematics Director of Guidance	Program of studies update-February 2022 Implement new courses-Fall 2022
	4.2.6 Using principles for Universal Design for Learning, increase the implementation of supports by using curated samples that are accessible for all but specifically meet the needs of students on the margins.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Curriculum Directors Grades 6-12	Curate examples-Fall 2020 Share examples-Winter 2021
	4.2.7 Integrate school-wide expectations for digital citizenship across schools' Positive Behavior Intervention Systems (PBIS). Create elementary lessons for general education teachers as part of PBIS Tier I. Create expectations for PBIS digital citizenship for middle and high school.	Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists School Principals Curriculum Directors Grades 6-12 School Based PBIS Teams	PBIS teams review and share with staff-Fall 2020
Year Three 2022-2023	4.3.1 Revise grades K-12 digital literacy each grade level curriculum as students progress through grade spans to allow for continued personalization of learners.	Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Director of Science and Technology Director of Mathematics	Revise curriculum-Summer 2020 Implement and document curriculum-2020-2021 school year

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<p>4.3.2 Create cross-curricular computational thinking activities in the areas of arts and global languages. Create a resource bank for teachers that maps Digital Literacy Standards to specific instructional practices and content, such as portfolio work connections; integration of technology.</p>	<p>Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Curriculum Directors Grades 6-12</p>	<p>Create resource bank for classroom teachers-2022-2023</p>
<p>4.3.3 Administer assessments and feedback measures to gauge efficacy of curriculum. Collect pre and post assessment.</p>	<p>Assistant Superintendent for Teaching and Learning Digital Literacy Teachers Library Media Specialists Director of Science and Technology</p>	<p>Revise measures-Fall 2022 Collect pre-assessment Data-Fall 2022 Collect post-assessment data-Spring 2023 Analyze data-Spring 2023</p>
<p>4.3.4 Ensure all middle school students are able to take at least two trimesters of educational technology in the grades 6-8 grade span.</p>	<p>Middle School Principal Direct of Science and Technology Director of Mathematics</p>	<p>Create student schedules-June-August 2022</p>
<p>4.3.5 Require a computer science elective for all entering the high school, the class of 2026, as part of their graduation requirements.</p>	<p>High School Principal Direct of Science and Technology Director of Mathematics Director of Guidance</p>	<p>Create student schedules-June-August 2022</p>
<p>4.3.6 Using principles for Universal Design for Learning, implement supports that are accessible for all but specifically meet the needs of students on the margins.</p>	<p>Assistant Superintendent for Teaching and Learning Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists Curriculum Directors Grades 6-12</p>	<p>Curate examples-Fall 2022 Share examples-Winter 2023</p>

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	<p>4.3.7 Support provided by general education teachers for PBIS digital citizenship expectations in grades K-12 through lessons and consistent expectations. Create additional lessons to support students' needs for reteaching (Tier II) for digital citizenship.</p>	<p>Personalized Learning Specialists Instructional Coaches Digital Literacy Teachers Library Media Specialists School Principals Curriculum Directors Grades 6-12 School Based PBIS Teams</p>	<p>PBIS teams review and share with staff-Fall 2020</p>
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