North Reading Public Schools
Digital Learning and Technology Plan
2018-2021

NORTH READING
PUBLIC SCHOOL DISTRICT
"Pursuit of Excellence"

"Preparing Our Students
To Be Future Ready"

Thank you to the team of Administrators, Teachers, Parents, and Students who were part of the Digital Learning Technology Planning Team who contributed to the vision and goals of this document.

Jon Bernard,Superintendent
Patrick Daly, Assistant Superintendent
Daniel Downs, Director of Digital Learning
Anthony Loprete, Principal, North Reading High School
Cathy O'Connell, Principal, North Reading Middle School
Michael Maloney, Assistant Principal, North Reading Middle School
Michael Downs, Assistant Principal, North Reading High School
Sean Killeen, Principal, L.D. Batchelder Elementary School
Glen McKay, Principal, J.T. Hood Elementary School
Christine Molle, Principal, E. Ethel Little Elementary School
Sam Anthony, Elementary Digital Learning Specialist
Kim Smith Brown, Library/Media Specialist, North Reading High School
Lauren Walton, Library/Media Specialist, North Reading Middle School
Kathy Dasho, K-12 Digital Learning Specialist
Shereen Tyrrell, Parent, North Reading High School
Michael Tyrrell, Student, North Reading High School

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District Technology Planning Process and Vision

"When we talk about 21st century pedagogy, we have to consider many things—the objectives of education, the curriculum, how assessment strategies work, the kind of technology infrastructure involved, and how leadership and policy facilitate attaining education goals." - Chris Dede, Harvard University

Introduction

In the past three years, there has been accelerated change across the country and in the state of Massachusetts in the essential conditions connected to the visioning of educational technology. This has had a direct outcome in the planning, processing, and procuring of resources to support educational technology in the North Reading Public Schools. This plan represents the forward direction and goal setting for Digital Learning in the North Reading Public Schools.

North Reading Public Schools has increased its wireless connection to broadband for all of its classrooms in the district and has supported the use of new online and blended learning technologies which are empowering students and teachers to innovate in the classroom. These expanded technologies place a greater emphasis on the use of data to support student learning and to assist students and staff in representing the tenets of proper digital citizenship.

An increased emphasis on preparing and supporting teachers to lead with their use of technology in the classroom is essential as we increase access to wired and wireless technologies. Supporting students K-12 with the essential digital competencies and skills to support college and career readiness at every level is one of the principal initiatives central to this plan. This Digital Learning Plan is a learning plan as well as a plan for the strategic implementation of technology to meet student and educator needs.

Key Components & Forward Direction of Digital Learning in North Reading:

- Introduction and Implementation of the Digital Literacy and Computer Science Standards
- Digital Learning Specialists Model at All Schools
- Robust Digital Learning Resources and Technical Support
- Wireless Access in All Classrooms District Wide
- District Guidance for the Use Of Social Media
- K-12 Implementation of Robotics and Computer Science
- 1:1 Learning Initiative
- Personalized & Data Assisted Instruction
- STEAM and Digital Learning Interdisciplinary Pathways That Support 21st Century Skills

The North Reading Public Schools has continued its commitment to providing a technology-rich learning environment that promotes the development of skills and understandings necessary for students and staff to compete in the global workforce. We strive to meet the needs of our 21st-century learners with a technologically infused and progressive curriculum that utilizes technology to help us collect and analyze student, educator, and district achievement. This plan is designed to set specific targets to monitor and evaluate our success using technology as an instructional tool.

Over the course of the 2016-2017 school year, the MassTrax (TRAx Digital Learning and Online Assessment Tools, 2017) digital learning surveys were administered across all schools. These surveys gathered data from district key stakeholders: teachers, students, administrators, digital learning staff, and parents and guardians to provide the district with an overview of readiness in each of the “gears” included in the Future Ready Framework for strategic technology planning.

A team of stakeholders from the NRPS met as a strategic district technology planning team to discuss and review rubrics and learning resources derived from the Friday Institute Digital Learning Progress Rubric. The Friday Institute’s “Digital Learning Progress Rubric” is a strategic planning tool, or “roadmap.” This roadmap supports educators and learning communities in the transition to digital-age teaching and learning; it serves as a support to the district technology planning team in reflecting on the current stage of our transition, planning our next steps, and tracking our progress as we develop goals (North Carolina Digital Learning Initiative, 2016).”

The NRPS Digital Learning Planning Team developed strategic focus areas that include the areas of technology infrastructure and devices, professional learning, content and instruction, and data assessment within the framework of the Digital Learning Progress Rubric. This work was performed in alignment with NRPS 2021 Digital Learning Goals and the Future Ready Framework; in addition, this group worked to map the data gathered from the Digital Learning Progress Rubric to the Future Ready Gears. Furthermore, district administration has been utilizing the Future Ready Leadership Assessment to further identify areas of alignment between the NRPS 2021 and Future Ready Gears to formalize strategic connections to Digital Learning Goals and the Future Ready Framework.

NRPS 2021 Technology Planning and Future Ready Benchmarks

The NRPS 2021 plan cites several specific content areas for the robust integration of technology into the curriculum. These areas are supported within the implementation of the Future Ready Gears planning process which strategically reviews and develops goals to support digital learning environments and technology integration into the curriculum. These goal areas will be included under the gear heading descriptions in a series of tables, beginning on *page 43 of* this plan.

The action items in this technology plan are derived from a strategic review of the results of the MassTrax survey data, reviews of the district's use of the Friday Institutes Digital learning Progress Rubric and the strategic planning of the Administrative Team utilizing the Future Ready Framework. This plan includes an accounting of the current initiatives undertaken as part of NRPS 2021 and their relationship to the strategic planning process of the Future Ready Framework. Below you will find descriptions for each of the eight gears of the framework.

Curriculum, Instruction, and Assessment

In a Future Ready district, curriculum, instruction, and assessment are tightly aligned and redesigned to engage students in 21st century, personalized, technology-enabled, deeper learning. Curricula and instruction are standards-aligned, research-based, and enriched through authentic, real-world problem solving. Students and teachers have robust and adaptive tools to customize the learning, teaching, and assessment, ensuring that it is student-centered and emphasizing deep understanding of complex issues. Assessments are shifting to be online, embedded, and performance-based. Data and associated analysis serve as building blocks for learning that is personalized, individualized, and differentiated to ensure all learners succeed.

Use of Space and Time

Personalized learning requires changes in the way instructional time is used and the learning space is designed. Many schools are shifting away from Carnegie units to competency-based learning. This type of system adapts learning to meet the needs, pace, interests, and preferences of the learner. As the pedagogy shifts, so too must the learning space.

Robust Infrastructure

When employed as part of a comprehensive educational strategy, the effective use of technology provides tools, resources, data, and supportive systems that increase teaching opportunities and promote efficiency.

Data and Privacy

Data privacy and security are foundational elements of digital learning. The district ensures that sound data governance policies are enacted and enforced to ensure the privacy, safety, and security of confidential data sets. Such policies and procedures ensure that access to authorized persons is secure. Education professionals have a range of resources, trainings, and services available to build their awareness and capacity to implement such policies and procedures with precision.

Community Partnerships

Community partnerships include the formal and informal local and global community connections, collaborative projects, and relationships that advance the school's learning goals. Digital communications, online communities, social media, and digital learning environments often serve as connectors for these partnerships.

Personalized Professional Learning

Personalized learning is a student-centered approach designed to help all students develop a set of skills collectively known as the deeper learning competencies. These skills include thinking critically, using knowledge and information to solve complex problems, working collaboratively, communicating effectively, learning how to learn, and developing academic mindsets.

Budget and Resources

The transition to digital learning will require strategic short-term and long-term budgeting and leveraging of resources. All budgets at the district and the school should be aligned to the new, personalized vision for learning, with consistent funding streams for both recurring and non-recurring costs to ensure sustainability. During the transition, district leaders should strive for cost-savings and efficiencies through effective uses of technology.

Collaborative Leadership

The Future Ready framework provides a roadmap toward digital learning; success within a district is dependent on innovative leadership at all levels. First and foremost, leaders within a district must be empowered to create cultures of innovation and must believe in the district's shared, forward-thinking vision for deeper learning through effective uses of digital, 21st century technologies.

Utilizing the Future Ready Framework for the systematic review and evaluation of the North Reading Public Schools Digital Learning and Technology program aligns the district with recommendations made in the National Educational Technology Plan (National Education Technology Plan, 2017) which incorporates strategies for implementation, budgeting and leadership roles around digital learning programs.

> "The *Future Ready District Pledge* is designed to set out a roadmap to achieve success and to commit districts to move as quickly as possible towards a shared vision of preparing students for success in college, career, and citizenship (Dashboard Future Ready Schools, 2018). This roadmap can only be accomplished through a systemic approach to change, as outlined in the Future Ready Framework. With personalized student learning at the center, a district must align each of the seven (7) key categories, called 'Gears', in order to ensure a successful digital conversion" (Dashboard Future Ready Schools, 2018).

Strategic Objectives and District Technology Initiatives

The Digital Learning vision outlined in this plan is also aligned with the district's NRPS 2021 strategic plan to supports robust technology driven learning environments and strategic teaching and learning to meet the ever evolving needs of the 21st century student. These environments encourage more pathways for students to meet the demands of college and career readiness and increased opportunities to acquire 21st century skill sets which include student fluency with digital tools, computer science content knowledge and hands-on applied technology and robotics.

The accelerated rate of change in the educational technology landscape has expanded the needs of districts to access outside resources and collaboration to support district goals. The North Reading Digital Learning Team has participated in and coordinated national and statewide collaborative conferences and learning tours to support its continual digital transformation. The initiatives outlined in this plan reflect the work done as part of the NRPS 2021 Strategic Planning process and also the district's commitment to digital learning.

The selection of initiatives and goals developed from the technology planning process represents an innovative and progressive approach to support 21st century student needs and developing a culture of innovation. These initiatives also support some of the priority areas which have evolved from the strategic planning process of this technology plan.

The areas of priority and focus this plan will address are listed below. Please review the Future Ready Gear tables on page 43 for a full description of each of the goals connected to these focus areas. These areas were selected for their dominance in coding and categorizing the themes from the MassTrax data collection and the strategic goal development process of the district technology planning team.

- Digital Citizenship
- STEAM Pathway and Awareness
- Computer Science and Robotics Curriculum
- Personalized Learning
- Digital Learning Specialist Model
- Digital Resources to Support Curriculum, Instruction, and Assessment
- Competency-Based Assessment and Instruction
- Student Learning Opportunities Requiring Extra Time and Self Directed Learning
- Professional Development to Support Personalized and Self Directed Learning
- Device Access For 21st Century Learning
- Data Informed Instruction for Personalized Learning
- Resources for Personalized Learning
- Internet Connectivity and Network Security and Governance
- District Digital Learning and Technology Staff
- Student and Staff Data Privacy
- Data Literacy and Data Informed Instruction
- District Data Review and Data Processes
- Community Digital Partnerships
- Community Awareness Around Digital Learning Initiatives
- Online Communication with Parents/Guardians
- Personalized Learning
- District Academic Budgeting Process for Technology
- Development and Measurement of 21st Century Skills

Strategic Partnerships and Digital Learning Initiatives

The North Reading Public Schools has been an active and collaborative partner in the space of educational technology with the Massachusetts Department of Elementary and Secondary Education's initiatives around Personalized Learning, Streamlining Digital Content, Open Education Resources Curation, 1:1 Learning, Implementation of the Digital Literacy and Computer Science Standards ("Digital Literacy and Computer Science Standards", 2016), and Future Ready district strategic planning.

Host of #GoOpen Regional Summit at Amazon Cambridge

NRPS Hosts #GoOpen Summit-Amazon Cambridge

The North Reading Public Schools is one of three fully recognized #GoOpen launch districts in New England and was the host of the #GoOpen Regional Summit for districts at Amazon Cambridge. The event allowed educators from around New England to learn more about the US Department of Education's #GoOpen initiative (#GoOpen District Launch Packet, 2017) and included presentations and panel discussions from experts in the area of Open Educational Resources.

Educators discussed strategies, shared their work, and reflected on the impact that Open Educational Resources can have within their schools. As a #GoOpen Launch District, the North Reading Public Schools identified a team of educators to begin the process of reviewing, evaluating and sharing OER resources with school learning communities such as our middle school 1:1 teams and digital learning resources. This technology plan includes next steps for the district to continue on its process of reviewing these and other digital resources. Increasing access to our students and educators to the highest quality digital resources is a focus area for our district as outlined in this plan.

Digital Partnership Grant Recipient

Wireless Infrastructure Project

This North Reading Public Schools was one of the fifteen recipients of the Digital Connections Partnership Schools Grant to fund a wired and wireless connectivity infrastructure project for its three elementary schools. The Digital Connections Initiative provides tools, assistance, and funding to bridge the digital divide that exists in some schools across the Commonwealth and looks to strengthen 21st century teaching and learning by providing enhanced connectivity to students through wired and wireless access. The initiative is a partnership between the Office of Digital Learning (ODL) within the Department of Elementary and Secondary Education (DESE), the Massachusetts Department of Information Technology (MassIT), and the nonprofit Education Super Highway (ESH).

This grant provided the elementary schools the infrastructure to support student learning with technology and the ability to improve the efficiency and productivity of education in their schools through the use of technology. This improved infrastructure

supports student access to individualize rigorous digital learning experiences. The grant process enabled the district to describe its plan to ensure that North Reading educators and administrators have the knowledge and skills to develop and implement digital learning curricula and maximize taxpayer value. The grant also required that the North Reading Public Schools provide specific strategies to provide students increased access to information technology and provide their plan for scaling digital tools and resources. This grant greatly enhances the learning opportunities for the entire elementary community.

Benefits of the Digital Partnership Grant for the North Reading Elementary Schools:

- Enhanced connectivity will bring the benefits of the cloud based learning resources and tools into all elementary classrooms. Our teachers look forward to a level of connectivity which will enable them to streamline student learning with resources like Google Classroom, Chrome Web Apps and online collaboration tools.
- Students will continue to benefit from the current use of digital assessments utilized within our district. This includes the I-Ready diagnostic and MCAS 2.0 Computer Based Tests.
- Teachers are enabled to create more dynamic experiences for students with increased access to a wireless connection in all classrooms to create projects, find learning resources, and connect with the world beyond their classroom.
- As a #GoOpen district, the district will be better positioned to supplement student learning with high quality online content. This content is best delivered digitally and targeted to support courses moving to digital formats.

Empowering students to take ownership of their learning through the access of resources and their ability to create on their devices supports the higher goals and missions of the North Reading Public Schools. When students have access to technology on a 24/7 basis they also have access to the resources that can empower them to learn in any environment at any time.

North Reading Future Ready Strategic Planning Process

In the fall of 2016 the North Reading Public Schools, along with other Massachusetts school districts on the forefront of digital innovation, signed on to become a Future Ready School, a "district [that] is making a firm commitment to implementing meaningful changes toward a digital learning transition that supports teachers, and addresses the district's vision for student learning (Dashboard Future Ready Schools, 2018)".

"Future Ready Schools helps district leaders plan and implement personalized, research-based digital learning strategies so all students can achieve their full potential. We believe every student deserves a rigorous, personalized learning environment filled with caring adults and student agency" (Dashboard Future Ready Schools, 2018). The North Reading Public Schools participation as "Future Ready District" includes the use of rigorous framework of assessments to support school and district leaders to recognize the power and potential of digital tools and align necessary technologies with instructional goals to support teaching and learning (Dashboard Future Ready Schools, 2018).

North Reading Becomes a MAPLE Catalyst District

MAPLE
Massachusetts Personalized Learning Edtech Consortium

The North Reading Public Schools became one of only fourteen initial Catalyst MAPLE (Massachusetts Personalized Learning Edtech) districts in Massachusetts. As a Catalyst MAPLE District, the North Reading Public Schools committed to developing a strategic plan with personalized learning as a key initiative and to share with other districts their experiences in implementing approaches to personalized learning (MAPLE About Us, 2016). MAPLE is a partnership between the LearnLaunch Institute and the Massachusetts Department of Elementary and Secondary Education to implement personalized learning in the Commonwealth in order to better prepare students for the future. The benefits for this alliance include meeting with a peer learning group of Catalyst Districts to receive expert recommendations to accelerate progress and provide feedback to Massachusetts Department of Elementary and Secondary Education (MA DESE) on policies needed to advance personalized learning in the state. This relationship has provided insight into the sharing of "what works" in educational technology to support personalized learning and participation in targeted convening's on key topics identified by Catalyst Districts (MAPLE Members, 2016).

The goals of technology integration and digital learning initiatives in the North Reading Public Schools will always be to best support the instructional strategies and resources that enable students to reach the highest standards possible. This partnership supports the sharing necessary to support the implementation of personalized learning instructional approaches and the opportunity to evaluate the technology to support these shifts. The partnership with the MAPLE catalyst districts enables North Reading to share in the rich experiences and feedback of other districts experiences with implementing 1:1 learning initiatives, supporting innovative student driven learning pathways.

1:1 Learning Initiative

Middle School 1:1 Roll-Out

North Reading Public Schools looks to leverage technology to enhance student learning and provide students essential 21st century competencies. The understanding is that technology is no longer an adaption to the classroom environment but is the norm to assess, share, collaborate, create, inform and deliver dynamic educational resources for student learning goals and styles.

The introduction of the 1:1 initiative in the 7th grade in the 2017-18 school year supports empowering and connecting students to learn at their own pace, access updated learning resources and utilize the enhancements that technology brings to teaching and learning.

The 1:1 initiative began with a roll out of Chromebook devices to the incoming 7th grade class in the fall of 2017, immediately providing enhanced learning opportunities for anytime and anywhere access for students to their own device to connect, collaborate and develop the essential technology literacy and 21st century skills. The focus on increased information literacy and adaptive, global and cultural awareness which supports student learning at home and at school. The Digital Learning team continues to provide support and professional development for teachers and students to more seamlessly integrate digital learning resources in the classroom and support instruction.

The thoughtful forward progression of the district's goals to deepen student learning and instructional goals with technology was evident with the successful roll out procedure with parents and community. It was clear that the value the district places on student

success at both home and at school with utilizing technology to learn is a priority which is thoughtfully supported.

In furthering this initiative the district has been generously supported by the town to provide funds to support the cost of these devices for the 7th grade during the 2017-18 school year in the amount of $60,000. This amount funds one grade level implementation of Chromebook devices for students. Additional funding would enable a broader support for the benefits of technology infused learning at additional grade levels, and provide the district an opportunity to develop a vision which can expand past the proposed year by year expansion. The current initiative's target is for students in grades 7-12 by school year 2021-2022 (5 Years) to each have a device which supports their learning needs.

Since 2013 the district has continually needed to increase the number of devices to support ongoing computer replacement and student learning. This need continues each year as the school district strives to meet the demands of computer-based state standardized testing, advancing the 1:1 initiative and providing all students with a comprehensive 21st century learning experience.

The table below maps the current expansion of the 1:1 learning initiative proposing that each new 7th grade class receives new devices starting in 2017-18 school year and this progression continues as students currently will take their devices to their next grade level.

Graduating Class	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Class Of 2022	New	1 Year	2 Years	3 Years	4 Year	5 Year
Class Of 2023		New	1 Year	2 Years	3 Year	4 Year
Class Of 2024			New	1 Year	2 Year	3 Year
Class Of 2025				New	1 Year	2 Year
Class Of 2026					New	1 Year
Class Of 2027						New

Progression Of 1:1 Program 2016-2022

Digital Learning Specialist Instructional Content Focus Areas

Digital Learning Competencies

The introduction of the Digital Learning Specialist positions coincides with the updating of the Massachusetts Digital Literacy and Computer Science Standards ("Digital Literacy and Computer Science Standards", 2016) to support digital learning and computer science. The Digital Learning Specialist model provides essential digital citizenship, digital literacy, and digital computer science skills to all students throughout elementary, middle and high school.

This model provides in-class coaching to support teachers' use of technology tools within the classroom and during the digital learning blocks in the elementary schools and within integrated classrooms on all levels. All digital learning specialists provide instructional coaching, guidance and support to teachers and students using technology in the classroom. The Digital Learning Specialist roles also include supporting the strategic implementation of the makerspaces and design thinking curriculum in the elementary schools and continue to drive the vision of these innovative practices into the middle and high school curriculums. This Strategic Technology Plan makes the synthesis of these initiatives part of a cohesive planning process around digital learning for all students, which includes the goals of NRPS 2021 and the strategic planning of the Future Ready Schools Framework and the ISTE Standards (ISTE Standards FAQ, 2018). These roles are essential in in the process of increasing teacher and student fluency with the use of technology.

Identified below are the central strands of the Digital Learning & Computer Science Standards ("Digital Literacy and Computer Science Standards", 2016). The strands represent the core topical areas addressed in a robust, sequenced, digital learning curriculum. These areas are embedded into our K-12 digital learning pathway for students. Identified in this plan are the targeted focus areas the digital learning team will address district-wide. The approach to addressing these strands as well as new and innovative learning opportunities will continue to be refined and enhanced by new program offerings and pathways detailed in this plan.

Massachusetts DESE Digital Literacy & Computer Science Vision & Learning Progression

Within each grade span, standards are grouped in four strands: Computing and Society, Digital Tools and Collaboration, Computing Systems, and Computational Thinking. Each strand is further subdivided into topics comprised of related standards. Standards define performance expectations, as well as what students should know and be able to do ("Digital Literacy and Computer Science Standards", 2016).

Vision
Digital Literacy and Computer Science (DLCS) knowledge, reasoning, and skills are essential both to prepare students for personal and civic efficacy in the twenty-first century and to prepare and inspire a much larger and more diverse number of students to pursue the innovative and creative careers of the future. The abilities to effectively use and create technology to solve complex problems are the new and essential literacy skills of the twenty-first century.

Learning Progression				
Grade Spans	**Strands**			
K-2	**CAS: Computing and Society** a. Safety and Security b. Ethics and Laws c. Interpersonal and Societal Impact	**DTC: Digital Tools and Collaboration** a. Digital Tools b. Collaboration and Communication c. Research	**CS: Computing Systems** a. Computing Devices b. Human and Computer Partnerships c. Networks d. Services	**CT: Computational Thinking** a. Abstraction b. Algorithms c. Data d. Programming and Development e. Modeling and Simulation
3-5				
6-8				
9-12				
Practices: Connecting, Creating, Abstracting, Analyzing, Communicating, Collaborating, Research				

In addition to the Digital Learning Specialists, students also receive targeted instruction from the Library/Media Specialists at the Middle School and High School to support and foster student's digital literacy skills and their ability to conduct research utilizing a range of flexible print and digital resources. Additional topics covered by the Library Media Specialists include addressing media and technology literacy and instruction for students and staff on how to locate, evaluate, and effectively use information in print and electronic resources within their academic work. Supporting this work in the Elementary schools is the role the Digital Learning Paraprofessionals who provide in-class support for the Digital Learning Specialist during the elementary digital learning classroom blocks and provide additional support within the library media center and Makerspace classrooms.

The roles of the Digital Learning Specialists and Digital Learning teaching staff must be flexible to shift and adjust to the challenges that are presented with the variety of tools, resources and learning strategies that are now possible in education. Identified below are the areas of goal setting in this plan which are central to the work of the Digital Learning Specialists position. The goals of the specialist position will also be guided by

the Digital Literacy & Computer Science Standards ("Digital Literacy and Computer Science Standards", 2016) and the ISTE Standards for Coaching (ISTE Standards FAQ, 2018). Identified below are instructional and curriculum content focus areas which share the scope of work that will help guide the work of the leadership, specialists and classroom teachers. These areas address not only the core elements developed from the districts data collection to prepare for this plan identified at the introduction of this plan but also specific strategic goals identified in the goal tables on page 44.

Digital Learning Instructional & Curriculum Content Focus Areas

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District Awareness and Assessment for 21st Century Skills & Competencies

Work to increase district staff awareness around 21st century skills (Framework for 21st Century Learning, 2006) and supportive rubrics for assessment of 21st century skills, which include: critical thinking, self-direction, collaboration, digital citizenship, communication, creativity and innovation, and online research and information literacy. This work will also include the development of building based and system-wide professional development to support instructional technology initiatives.

Digital Citizenship & Digital Competencies

Prepare and support educators to provide emphasis on digital citizenship education in all classrooms. This includes the skills essential to support our 1:1 learning initiative and the embedded digital learning instruction within the elementary digital learning blocks and middle school Digital Literacy course. These standards are outlined in the DESE DLCS Standards ("Digital Literacy and Computer Science Standards", 2016) and the Digital Intelligence guidelines of the DQ Institute ("What is DQ? | DQ Institute", 2018).

STEAM Pathway & Awareness

Specialists & Digital Learning Teachers will support and teach the skills through coaching, classroom co-teaching and direct instruction that supports students' acquisition of knowledge and skills that empower them to select courses or curriculum sequences which will enable students to develop college and career readiness aligned with 21st Century Skills and Digital Competencies (Framework for 21st Century Learning, 2017). This includes the development and implementation of district wide rubrics to measure students 21st Century skills within STEAM learning environments (The Movement Towards a STEAM Education in Schools, 2018).

Computer Science & Robotics Curriculum

Specialists across the district will be continuing to align and review the current computer science and robotics curriculum competencies, alignment of courses, and sequence of learning. Specialists will also facilitate the development of curriculum units that fully-

integrate the DLCS benchmarks into these content areas and communicate their connections to STEAM initiatives and 21st century skills.

Personalized Learning

Embedding personalized learning into the fabric of classroom instruction requires a specialist who can identify appropriate strategies, resources and tools for the successful implementation of personalized learning which can empower student choice. It provides the opportunity to demonstrate learning through many varied and diverse types of media, and support our 1:1 Chromebook initiative using Google Suite for Education (formerly Google Apps for Education). Digital Learning Specialists will continue to work with classroom teachers in the development of co-taught lessons aligned to DLCS standards and continue to develop instruction which employs the use of the K-12 Digital Learning vocabulary and addresses students with diverse learning styles or those on Individual Education Plans (IEP).

Digital Resources to Support Curriculum, Instruction, and Assessment

The specialist's model must continue to review and support technology resources used to foster self-direction, such as by accessing and using varied and diverse media; critical thinking; and college readiness in and out of the classroom. As part of this targeted area, specialists will provide support and training for digital based assessment and tools. New resources and curriculum will support the use of new and emerging technologies within traditional classroom settings and invigorate the work being done in the district Makerspaces, Media Centers and STEAM content areas.

Future Ready District Strategic Planning

Future Ready Planning: NRPS Administrative Retreat

In November of 2016 members of the North Reading Public Schools Digital Learning Team attended the Future Ready Schools Summit to begin the process of planning strategically as a district. Future Ready Schools assists district leaders to plan and implement personalized, *research-based* digital learning strategies so all students can achieve their full (Dashboard Future Ready Schools, 2018). The strategic Future Ready Planning process works to ensure that every student receives a rigorous, *personalized learning* environment filled with caring adults and student agency. District leaders must recognize the potential of digital tools and align necessary technologies with instructional goals to support teaching and learning (Dashboard Future Ready Schools, 2018).

STEAM and 21st Century Learning Competencies and Pathways

NRHS Students share their Mobile App idea at the Fall MassCUE Computer Educators Conference. Hands-on building in the robotics classroom and digital learning vocabulary driven instruction.

What the workforce of tomorrow will be asked to do on a daily basis will be dramatically different from today. The use of digital tools with fluency will be essential and the highest paying jobs will require a set of finely tuned skills that includes the ability to plan, design, program and test in a variety of environments. The necessity to troubleshoot and build a resiliency with problem solving will be at the core skill set for those innovating within a variety of conditions. These are conditions and experiences in which education will need to adapt in order to take on the challenging role of preparing students for success in college and career.

The district continues to review, develop, and implement courses for students, which support STEAM (Science, Technology, Engineering, Arts, and Math) and Computer Science pathways for students K-12. In the 2017-2018 school year, revisions to the Web Design and Development course, as well as the introduction of the Robotics Academy course for students at North Reading High School, are part of a strategic plan to provide additional opportunities for students to learn essential 21st century skills. These updates correspond with the growing Middle School robotics program and integration of robotics and computer science skills across the elementary schools. Providing multiple and varied options for students to attain skills aligned with those of STEAM focused content areas will support students in identifying and selecting learning paths to prepare them for future college and career readiness.

Supporting how student learning evolves with the ever-changing digital resources available is at the center of the work of the digital learning team. We look to empower students to develop the skills of the 21st century in which they will be able to leverage their digital skills to improve their ability to collaborate, innovate, design, develop and work in strategic teams. These skills continue to weave their way into how students learn, teachers teach and sets the expectation that students move beyond having a particular set of skills with technology but also the ability to work successfully in new work environments.

The “The Partnership For 21st Century Skills” (Framework for 21st Century Learning, 2007) has identified a core group of these essential skills for review. These skills are essential to all students and expand beyond the traditional classroom:

- Thinking critically and making judgments
- Solving complex, multidisciplinary, open-ended problems
- Creativity and entrepreneurial thinking
- Making innovative use of knowledge, information and opportunities

Current State of Technology, Resources, and Schools

The current framework of digital learning support and resources in the North Reading Public Schools provides support for the continually increasing utilization of blended and online learning resources in the classroom. The digital transformation of teaching and learning with technology in the North Reading Public Schools is supported by a hands-on approach with the Digital Learning Specialists, and incorporate a range of methods, including:

- Co-Teaching and Classroom Support for all Technology Implementations (Online, Curriculum Based, Device Support, Computer Based Testing)
- Building and District Based Professional Development Promoting Technology Independence and Connected to the Educator Evaluation System
- Co-Teaching and Support For Robotics, Computer Science and Digital Citizenship
- Co-Teaching and Support in the 21st Century Learning Spaces such as Makerspaces, Library/Media Center, Break Out Spaces and Computer Labs
- Work to Promote the District Pledge that all Students and Educators are Representative of the Tenets of Digital Citizenship
- Identification and Evaluation of Digital Tools and Resources to support Personalized Instruction

The North Reading Public Schools has invested in resources to support instruction with applied hands-on technology such Robotics and Computer Science. Robotics courses and curricula now exist in all schools and continue to grow. Computer Science curricula is now actively embedded in all grades. The high school Web Design and Development course and the Robotics Academy course have a vision for continual updates to support the integration of skills important for real world application. These improvements will include interdisciplinary approaches to incorporate computer science and 21st century skills.

As part of the digital transformation in the North Reading Public Schools, the district has expanded access to student devices to support learning K-12 and to support access to resources for teachers in the classroom. The Elementary Wi-Fi Project in the summer of 2016-

17 has expanded access for students in the classroom so teachers can integrate technology more seamlessly into their classrooms and matches the level of connectivity of the Middle School and High School campus.

Continued is an overview of the initiatives and programs currently implemented across schools:

Elementary Curriculum Initiatives and Focus Areas

The digital learning resources, initiatives, curriculum and teaching models are consistent between the three Elementary schools. Digital Learning instruction is embedded within scheduled curriculum blocks for all grade levels as well as through additional classroom coaching and curriculum support provided by Digital Learning Specialists.

Elementary Vision and Model for Digital Learning

The Digital Learning team at the elementary level has worked to align its curriculum to support digital citizenship, digital tools, and computer science/robotics initiatives across schools. This curriculum addresses the development of students' skills around the use of a range of digital devices and multimedia creation tools. Students and staff utilize the GSuite Software for Education in order to share, collaborate, and work with projects which require cloud storage.

The Digital Learning Specialists within the Elementary schools provide classroom instruction, co-teaching and classroom hardware support which supports the integration of digital tools and collaboration, digital citizenship, computer systems, computational thinking and computing and society in alignment with the Digital Learning and Computer Standards published in 2016 by the Department of Elementary and Secondary Education ("Digital Literacy and Computer Science Standards," 2016).

Several key innovations in the elementary schools' digital learning environment include the implementation of makerspaces and the development of a repository of shared digital learning resources that support personalized learning and data informed instruction, developed by elementary teachers and digital learning specialists. The digital learning specialists work to transform the utilization of digital tools to support student choice and media project creation, in line with the "design thinking" curriculum-

methodology. Additionally, the Digital Learning Specialists provide curriculum development and technology hardware support.

Digital Learning support in the elementary schools plays an integral part in the support of the makerspaces in which students learn exciting new skills and innovative learning opportunities through curriculum which implements design thinking models and the development of co-developed digital learning lesson plans. It supports personalized learning opportunities using technology and encourages the strategic collection of data to improve classroom instruction.

The elementary Digital Learning Specialists (DLS) provide robust digital learning support to classroom teachers and also within the Library Media Center. Instruction is focused on the 4 strands of the DLCS Standards with additional content which includes robotics and computer science based assessments and learning targets. The DLS also provide support for the makerspaces in each elementary school and also provide students with opportunities to experiment with STEAM content (circuits, robotics, 3D printing, maker projects, electronics) and learn design thinking in an open, age appropriate and creative environment with interdisciplinary approaches (Science, Technology, Engineering, Art and Math) and connections through problem/project based learning.

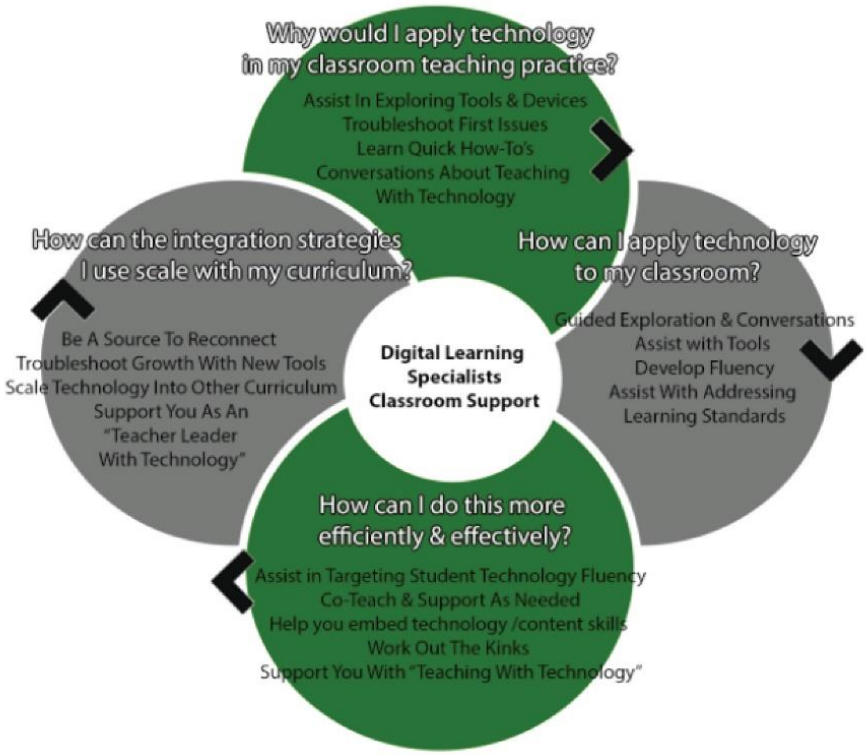
Digital Learning Support: Co-Teaching Model

Digital Learning Specialists work collaboratively with classroom teachers to support their integration of technology within classroom instruction. Digital Learning Specialists lead digital learning instruction during the digital learning blocks and also provide technical support for teachers and staff. Digital Learning Specialists are working to create a repository of co-developed lesson plans, which reflect teacher's growth in integrating digital skills and competencies within their classrooms. Digital Learning Specialists are working with classroom teachers to develop lesson plans that meet the updated digital literacy and computer science standards.

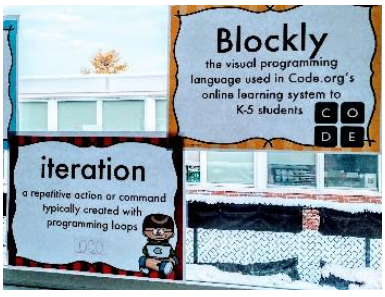
North Reading Public School Digital Learning Co-Teaching Guidance Model

The "North Reading Public School Digital Learning Co-Teaching Guidance Model" is used to assist Digital Learning Specialist consider instructional and coaching approaches with digital learning tools in the classroom. It provides a series of questions and potential topics of entry that a specialist can use with classroom teachers.

Collaborative conversation and discussion around instructional objectives with digital learning tools is a continual goal for the digital learning team.



Shared Digital Learning Language



Digital Learning Language & Vocabulary Displayed at J.T Hood Elementary School

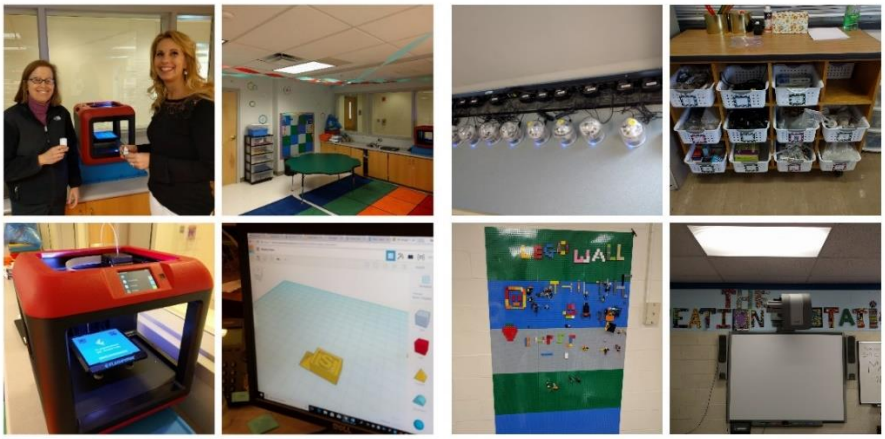
To assist in scaling the digital learning initiatives in North Reading, it is essential to keep in mind the key terms and goals in educational learning environments. Digital Learning Specialists and classroom teachers continue to work to identify a common language of terms to assist in scaling student and teacher understanding around powerful dialogues in educational technology. Scaling student understanding between grade levels will require compelling conversations around the integration of technology to support student learning that are considerate of the most innovative strategies.

Evidence of this language is often seen included with co-developed lesson plans as well as displayed within classrooms and the media centers around the district.

Design Thinking and Makerspaces

Makerspaces have made their home within the elementary schools in North Reading. The makerspace classroom is an exploratory, design-driven space for students to learn how to build, collaborate, create, and explore (Makerspace for Education, 2017). A makerspace is a place where students can gather to create, invent, tinker, explore and discover using a variety of tools and materials. Each year the makerspaces continue to evolve with new technology and innovative teaching methods to support both hands-on activities and building lessons as well as video production with green screen technology, robotics and 3D printing.

Makerspaces in all elementary schools provide flexible learning environments for a range of Digital Learning and STEAM focused learning.



3D Printing In the Batchelder Elementary Maker Space. Sphero robots and Lego wall in the "Creation Station" at the J.T. Hood Elementary.

Coding and Robotics

The elementary schools have incorporated within their Digital Learning & Makerspace curriculum the core competencies of robotics and computer science within their curriculum. Robotics and Computer Science are taught both independently within the digital learning block and also integrated within core content in lessons and in the makerspaces. The elementary level now boasts multiple robotics platforms and student opportunities to explore computer science topics. Identified below is the current elementary robotics competencies which allow students to explore a range of robotics skills and competencies prior to leaving grade five.

Elementary Robotics Competencies

Elementary Robotics Competencies Topics	Descriptions & Skills
Robotics In Everyday Life	**Students learn how robots function in everyday life and in work scenarios.**
Simulations: Sequencing & Patterns	**Students learn the essential building blocks of robotics movement.**
Breaking Programs Into Behaviors (Pseudocode)	**Introducing the iterative features of programming. Introducing the Programming Life-Cycle, algorithms and directional movement.**
Problem Solving Techniques	**Make sense of problems and persevere in solving them. Introduction to programming and troubleshooting. Students are introduced to the Engineering Design Process to meet challenges.**
Robotics Software	**Students are introduced to a range of software to produce text or block based programming sequences.**
Robotic Building & Hardware Platforms	**Students learn essential building skills for a variety of robotic platforms and technologies (sensors, systems, powered hardware and power systems) and Makerspace projects.**
Interdisciplinary Connections	**How does robotics connect with other subject areas and learning environments?**

The digital learning teams at all levels have identified a list of competencies for robotics instruction at each level. The introduction of these competencies is to strategically align schools instruction of robotics without depending on the feature of a specific platform. These competencies will be used to align lesson development, assessments and select vocabulary focus areas with subject area and grade level teachers. Below are the competency topics developed for the elementary level.

Photo on left: Superintendent Bernard visits with Digital Learning class learning to code with Bee-Bots at the Little School. Digital Learning Specialist Sam Anthony introduces programming lesson at the Hood School. Local business iRobot presents robots to students at the Little School.

Elementary Digital Learning Focus Areas

The focus areas defined below represent areas of growth, next steps and goal targets for the central themes of this technology plan for the elementary level. Deeper targeted goals are found within the "Future Ready Gear Assessment" within the summary of this plan.

District Awareness and Assessment for 21st Century Skills & Competencies

- Identify and implement Language Model for Digital Learning Instruction that is represented in co-developed and co-taught digital learning lessons, units and projects.
- Provide support and leadership for the variety of instructional tools and teaching methodologies present in Makerspaces and innovative learning environments through target professional development.

Digital Citizenship & Digital Competencies

- Continue to identify assessment models and competencies for digital citizenship skills and student competencies with digital tools.
- Continue to asses and monitor the digital learning specialist co-teaching model to meet the goals of this plan and the K-12 digital learning curriculum sequence.

STEAM Pathway & Awareness

- Communicate, assess and share identified student skill sets which scaffold student learning to meet K-5 skills and knowledge's identified in the DLCS standards.
- Continue to collaborate and provide students interdisciplinary learning opportunities in the school Makerspaces.

Computer Science & Robotics Curriculum

- Continue to create co-developed CS and Robotics Lessons which support selected grade level standards, content vocabulary and skill sets.
- Review and align computer science and robotics curriculum for consistent implementation across schools.

- Utilize and continue to update the shared robotics competencies of NRPS to align robotics platforms and instruction.

Personalized Learning

- Research, identify and utilize digital learning tools, resources and instructional strategies which can best personalize instruction and measure student success.
- Define and implement tools to measure the elementary levels of instructional implementation of personalized learning strategies.
- Implement instructional models which support the core four elements of personalized learning: Flexible Content and Tools, Targeted Instruction, Data-Driven Decisions, Student Reflection and Ownership (Personalized Learning Requires Flexibility, 2017).

Digital Resources to Support Curriculum, Instruction, and Assessment

- Continue to compile, review, evaluate and streamline access to digital learning tools to meet student needs.
- Implement a robust process for evaluating and reviewing educational applications for student and educator privacy.
- Develop broader awareness and methodologies for using data driven instructional practices with digital tools.
- Provide strategic professional development and trainings to meet the needs of the districts learning initiatives.

Middle School Curriculum Initiatives Focus Areas

1:1 Learning Pilot in 7th Grade

In the fall of the 2016-2017 school year the district embarked on a 1:1 learning pilot in the Middle School, for which all students in the seventh grade had access to a device continuously throughout the school day in their core subject area classes. This pilot initiated the support for digital learning environments, which fully embrace increased access for students and teachers to digital learning resources to support more personalized instruction. This progression of this initiative been supported with professional development sessions and team meetings to assist teachers with utilizing the technology in the classroom and support the range of topics such as Google Classroom, GSuite Applications, Student Data Privacy and classroom management with the Chromebooks.

The 1:1 initiative strategically supports the implementation of computing devices which digitally enhance teacher and student application of technology in the classroom for instructional purposes. Additionally, this initiative supports enhanced learning opportunities for anytime and anywhere access to their own device to connect, collaborate and develop the essential technology literacy and 21st century skills such as information literacy, flexibility and adaptive and global and cultural awareness to support their learning.

The thoughtful forward progression of the district's goals to deepen student learning and instructional goals with technology were evident in the roll out procedure and the topics covered with the 7th grade students and parents during the roll out of devices. During a roll out event the district was able to share with the community the tremendous value the district places on each student's success at both home and at school with utilizing technology to learn. The 1:1 learning initiative assists in preparing our students for college and career readiness and also aligns strategically with the robust digital learning support and professional development teachers are provided during the school year to seamlessly integrate digital learning resources in the classroom.

Robotics and Digital Literacy and Computer Science Curriculum

In the Middle School there are digital learning, computer science, and robotics courses available to students as a general arts courses. These course are taught by Digital Learning classroom teachers. Students in the Middle School have a range of opportunities to experience robotics, computer science, and the benefits of one-to-one learning in grades seven and eight. Below are the current content coverage areas for the Digital Literacy & Computer Science Courses and Robotics offerings.

Robotics and Digital Literacy & Computer Science Curriculum Updates

Below is the proposed curriculum sequence updates for the Middle School Digital Literacy & Computer Science course. Within this graphic there is a clear focus on a progression of student learning which addresses the students understanding of Digital Literacy and Digital Citizenship in 6th grade with a progression which moves into a more Computer Science focused 7tha and 8th grade sequence in which students will be developing a fluency with a programming language and learn how to write progressively more challenging programs with and inquiry based approach to problem solving and self-directed challenges. The 7th and 8th grade sequence will also incorporate the essential skills related to digital project management, computer hardware knowledge and modeling and simulation programs.

The robotics curriculum is planning an expansion of platforms to include the VEX IQ platform in addition to the current Lego EV3 platform. The new platform aligns strategically with course offerings and robotics competencies for higher level courses in the high school curriculum. The platform also expands students' abilities to build robots which have expanded capabilities to learn engineering, sensor hardware and programming skills through challenge and problem based instruction and group work.

Proposed Digital Literacy and Computer Science Course Sequence		
DLCS Course Focus Areas By Grade Level		
Grade 6	**Grade 7**	**Grade 8**
Digital Tools & Collaboration	Essentials Of Computer Science	Data Management Essentials
Digital Learning Safety & Security	Object Orientated Programming Data Structures Algorithms	Modeling & Simulation
Digital Ethics & Laws	Digital Project Management & Collaboration	Digital Research Projects
Interpersonal and Societal Impact Of technology	Human & Computer Partnerships	Programming Object Interfaces
Computing Devices	Abstraction	Internet Of Things
Networks & Services		Inquiry Based Programming
Communication & Research		Maker Projects & Challenges
Typing & Digital Documents		
Elements of Computer Science		

North Reading Middle School Robotics Competency Areas		
Course Competencies	**Description/Resources**	**Required Skills**
Project Management	Students learn the basics of project management and how the engineering design process can be used as an approach to problem solving. Students learn how to work in adaptable environments.	Generating ideas Identifying Criteria and Specifying Constraints Communicating Results Identifying a problem
Autonomous Movement & Programming For Decision Making	Students learn how to program robots for autonomous movement. Students employ pre-programming decision making.	Program a robot using software to do several autonomous tasks. Testing and evaluating a design Refining a design
Iterative Design Process &	Students utilize an iterative approach to design, deconstruct and deepen their	Problem analysis Critical thinking

Advanced Problem Solving	problem solving skills (Advanced problem solving and debugging skills).	Logical thinking programming skills Essential vocabulary Engineering Design Process Troubleshooting, invention, innovation, and experimentation
Teamwork & Accountability	Student project teams work together to solve problems using grit, resilience and accountability.	Team cooperation Leadership and responsibility
Designing Elegant Solutions	Students work to provide the most elegant solution to problems. Students consider the simplicity of their programming and problem solving thought process.	Programming switches and loops Deconstructing code and seeing patterns in the code Simplifying code Reusing subroutines Programming Practice
Robotic Building: Understanding Basic Structures	Students experience a range of projects to enhance their knowledge of basic structures and mini challenges to scaffold their building skills.	Making a model or prototype Inventory of parts Part types and use Mechanical Design Sub-assemblies
Robotics Hardware & Software	Student develop their knowledge and understanding about the Lego and Vex IQ Platforms and the software and hardware capabilities that are used. Additional topics will include: sensors, building components and programming languages.	Input, output ports Connector cables Handling the equipment Charging the brick Downloading the code onto the brick Connecting sensors to the brick

Personalized and Blended Learning

The Middle School is experiencing transformative learning in their one-to-one classrooms. The North Reading Publics Schools participate in the MAPLE Consortium (MAPLE About Us, 2017) and its participation as a Future Ready District. The Middle School 1:1 Teams meet regularly to review best practices and instructional strategies to assist with the digital transformation taking place in their classrooms. Teacher and students development within this initiative has been transformative as teachers are utilizing a range of new applications to assess, personalize and redesign their instruction utilizing digital tools. Student access and flexibility of use of digital resources at school and at home has increased their engagement with content and their adaptability with digital tools to collaborate, share and benefit from increased access to learning resources.

The digital transition to more personalized learning with students is fully supported by the work of the Middle School and K-12 Digital Learning specialists and Middle School Library Media Specialists. Their work includes classroom coaching and technical support for the newly introduced tools and resources and well as monthly meetings to debrief new resources and the progress in their classrooms. Multiple teaching teams collaborate on their use of digital tools and resources to streamline research and interdisciplinary projects with students. These resources include the use of Google Classroom for digital classroom management, targeted Instruction on citation tools and video based assessment tools.

North Reading Middle School Digital Learning Focus Areas

The focus areas defined below represent areas of growth, next steps and goal targets for the central themes of this technology plan for the middle school level. Deeper targeted goals are found within the "Future Ready Gear Assessment" within the summary of this plan.

District Awareness and Assessment for 21st Century Skills & Competencies

- Develop and utilize grade level assessments for 21st Century skills and students skill competencies
- Identify areas in which interdisciplinary connections in STEAM disciplines can be nurtured both within and outside of the school day

Digital Citizenship & Digital Competencies

- Continue to align and support curriculum to address digital citizenship and digital competencies to meet student needs in and out of the classroom
- Continually review student and educator needs, accessibility and skill sets related to digital competency and independence

STEAM Pathway & Awareness

- Ensure aligned curriculum supports student skills and prepares students to engage in ever increasing skills related to STEAM knowledge sets
- Increase access for all students to participate in Computer Science and Robotics courses.

Computer Science & Robotics Curriculum

- Target specific grade level skills and competencies which are sequenced to maximize student learning and prepare them for more advanced computer science, robotics and engineering pathways and learning contexts.
- Define and implement Maker learning environments which support a range of student entry points.
- Review opportunities to expand experiences for students to experience introductions to STEAM related college and career readiness topics

Personalized Learning

- Continue to support educator and student use of digital tools to support enhanced instructional goals within 1:1 learning environments.
- Utilize digital learning tools, resources which can best personalize instruction and measure student success

- Implement instructional models which support the core four elements of personalized learning: Flexible Content and Tools, Targeted Instruction, Data-Driven Decisions, Student Reflection and Ownership (Personalized Learning Requires Flexibility, 2017).

Digital Resources to Support Curriculum, Instruction, and Assessment

- Continue to compile, review and evaluate digital learning tools to meet student and educator needs across learning environments
- Meet yearly goals for expansion of 1:1 learning devices and necessary resources to support this growth (instructional support, data support, network infrastructure and filtering)
- Implement a robust process for evaluating and reviewing educational applications for student and educator privacy.
- Provide targeted subject area support for technology integration through the digital learning specialist model and professional development opportunities

High School Curriculum Initiatives and Focus Areas

Each year classroom teachers deepen their students' learning experiences with the utilization of the Chromebook and iPad carts for research and assessment, and classroom management with tools such as Google Classroom at North Reading High School. A school-wide expectation exists that students and staff in the High School utilize technology in responsible ways which reflect the tenets of Digital Citizenship. The High School curriculum offers a range of courses in which technology is embedded to produce creative products and productive students.

The High School has introduced the online math curriculum Big Ideas Math and is utilizing a cart model for the use of Chromebook devices within the classrooms. In the World Language Department teachers are utilizing technology to assess student learning, record student voice and create global lessons for students. As the access to digital resources expands, teachers and students experiences will continue to evolve within the 21st century spaces of the High School. Students and Teachers benefit from access to 21st century learning spaces such as the Digital Learning Lab, Performing Arts Center, video studio and Macintosh labs to explore their creativity and digital skill development.

The opportunities for enhanced digital learning experiences will continually grow and enhance student learning with the progression of the district's 1:1 learning program. With additional devices, student access to innovative learning spaces and new curriculum choices; the opportunity to review and assess 21st century learning pathways

which incorporate STEAM competencies correlating with college and career readiness can be embedded within the framework of digital learning instruction.

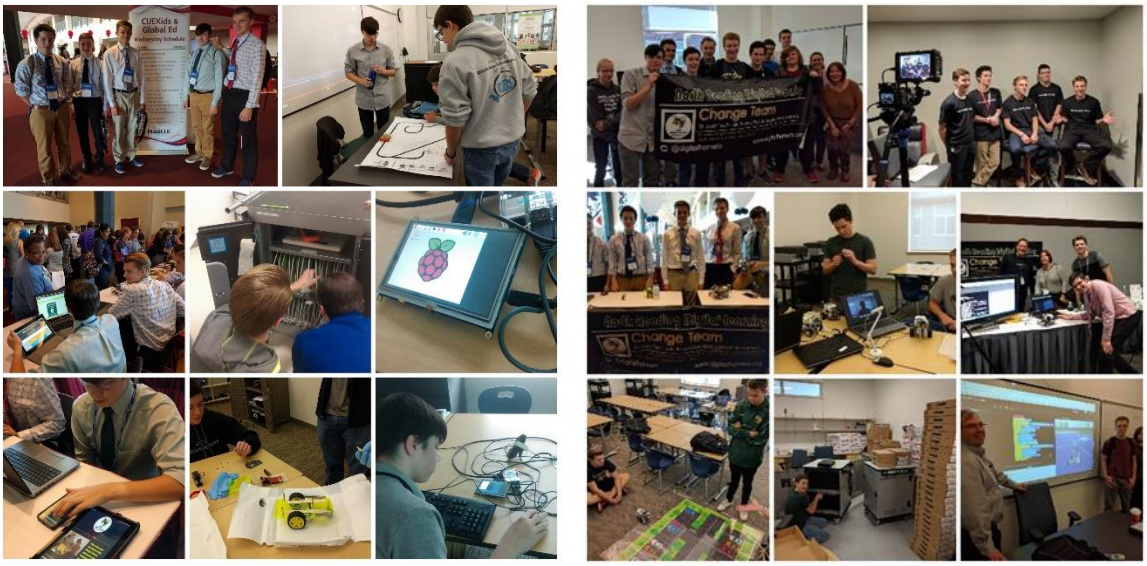
Expansion of Robotics and Computer Science Courses

Students completing challenges and building autonomous robots in the Robotics Academy course.

In the 2016-2017 and 2017-2018 school years, the High School has updated its Web Design and Development Course and also introduced the Robotics Academy course to students. A Robotics Academy II course will be introduced for the 2018-2019 school year. These courses represent the vision of embracing hands-on multidisciplinary opportunities for students in STEAM (What is STEAM?, 2017) and digital learning content areas. These courses look to enhance students' hands on skills in their content area while also providing a range of interdisciplinary skills targeted at the 21st century skills of collaboration, communication, critical thinking and creativity (An Educator's Guide to the "Four Cs", 2017).

Enhanced Student Opportunities With Technology: "Change Team: Student Technology Support & Innovative Learning"

Since 2015 a growing number of High School students are interested in expanding their learning experiences with technology and interested in assisting the Digital Learning team with technical support and hardware maintenance. Students in the Change team program have participated in a range of professional learning conferences and have become a model for sharing their learning and experiences with other student help desk programs and innovative learning labs.



21st Century Skill Focus Areas and Student STEAM Pathways

In addition to the updated courses there has been a streamlining of course opportunities for students and the newly-developed Digital Learning and Entrepreneurship Department. This department is focused on enhancing opportunities for students' digital learning tools and technologies as well as providing student opportunities to enhance their 21st century skills. The STEAM pathways below have been collaboratively developed to maximize student learning in core content areas and provide students choice of learning options while still maintaining academic rigor and college and career readiness.

Anticipated High School Course Progression/Pathway for Digital Learning and Entrepreneurship

This table represents the sequence of course opportunities for students to obtain one of the STEAM and Digital Learning Pathway Certificates. These courses have been strategically selected and ordered to provide students a range of pathways and choices which focus is based on current pre-requisites within the program of studies:

STEAM & Digital Learning Certificate Pathway Options

Digital Learning & Computer Science: A comprehensive course pathway in which students complete four programming centric courses and complete one AP course. The three year vision for this pathway includes adding the AP Computer Science Principles course.
Digital Learning & Entrepreneurship: Students develop a range of 21st century business knowledge, skills and background which prepares them for a college

preparatory AP Seminar and Research course sequence which supports students independently researching, presenting and scaling their business knowledge.
Pre-Med/Nursing: Pathway tracks students to experience the most beneficial courses to prepare students for potential majors in the area of Pre-Med or Nursing.
Engineering: A four course pathway concluding in an AP course which supports student skill sets and knowledge for engineering in a range of contexts. Students develop skills with Computer Aided Design software and can explore robotics and architectural design courses.
Digital Arts Portfolio: Art based pathway for students interested in studying studio art, graphic design, web design, digital art or video production. This pathway assists students in developing their digital portfolio for college entrance**.**

STEAM & Digital Learning Certificate Pathway Progression

Please note there are a number of pathways in various departments outlined in the table below. Departments may use pathways as a recommended course of study for students with specific college or career goals, and may choose to recognize pathway completion with a formal certificate. It is important to note that not every pathway may lead to a formal certificate.

The table below contains both courses currently included in the North Reading High School 2018-2019 Program of Study as well as course titles for courses that have yet to be formally developed. Information included in this table is not meant to replace or supplant the North Reading High School 2018-2019 Program of Study; all current and respective prerequisite and/or co-requisite courses remain in effect.

New Courses: Bolded and italicized with course development year.

Digital Learning & Computer Science: Four Courses including an AP		
Pathway Entry Courses	***Pathway Core Choice***	***Pathway Conclusions***
▪ Web Design & Development ▪ Intro To Programming ▪ Introduction To Engineering Design ▪ ***Introduction To Computer Science & Hardware (2019-2020)***	▪ Robotics I ▪ Architectural Design ▪ Computer Aided Design ▪ Principles Of Engineering: Academic ▪ ***Introduction to Data Science (2018-19)*** ▪ ***Principles of Mobile Design and Marketing(2019-20)***	▪ ***Robotics II (2018-19)*** ▪ ***AP Computer Science Principles CS (2018-19)*** ▪ AP Computer Programming A

Digital Learning & Entrepreneurship: 4 Courses Including AP Seminar or AP Research		
Pathway Entry Courses	***Pathway Core Choice***	***Pathway Conclusions***
▪ Introduction to Business	▪ Accounting I ▪ Marketing ▪ Sports Marketing ▪ Entrepreneurship ▪ ***Principles of Mobile Design and Marketing(2019-20)***	▪ *Accounting II,* ▪ ***Entrepreneurship and Enterprise Finance Honors(2018-19)*** ▪ ***Digital Media Studies & Entrepreneurship Seminar AP(2019-20)*** ▪ ***Digital Media Studies & Entrepreneurship Research AP(2020-2021)***
Pre-Med/Nursing: Choose either AP Chem or Biochem		
Pathway Entry Courses	***Pathway Core Choice***	***Pathway Conclusions***
▪ Biology	▪ Chemistry ▪ Physics ▪ Statistics ▪ AP Chemistry	▪ Honors Anatomy ▪ AP Biology ▪ Calculus ▪ Biochemistry
Engineering: Choose two other courses prior to AP and after entry course.		
Pathway Entry Courses	***Pathway Core Choice***	***Pathway Conclusions***
▪ Intro to Engineering ▪ Web Design & Development	▪ Physics ▪ ***Robotics II (2018-19)*** ▪ Robotics ▪ Computer Programming ▪ Computer Aided Design	▪ AP Calculus, ▪ Principles of Engineering, ▪ AP Science
Data Science: Four courses including AP Statistics		
Pathway Entry Courses	**Pathway Core Choice**	**Pathway Conclusions**
▪ ***Introduction to Data Science (2018-19)*** ▪ Geometry	▪ Algebra II ▪ Introduction to Computer Programming	▪ AP Statistics
Digital Fine Arts: Select four courses. This pathway includes portfolio component.		
Pathway Entry Courses	***Pathway Core Choice***	***Pathway Conclusions***
▪ Graphic Design	▪ Advanced Graphic Design ▪ Digital Illustration ▪ Digital Photography ▪ Video Production	▪ Web Design & Development ▪ ***Game Design and Multimedia Animation Projects(2020-21)***

Proposed Progression of Course Development and Implementation

In the tables below are brief course descriptions of courses which can chronologically fit into the “STEAM and Digital Learning Certificate Pathway” sequence of courses over time. Each year represents a thoughtful progression of courses that meet student needs and current scaffold of curriculum. This list also includes courses which will be refreshed in order to better meet student needs and curriculum drivers such as updating to meet

grades 9-12 DLCS standards, 21st century assessments and developing student skills within the 1:1 learning initiatives.

2018-2019: Proposed Course Development
Robotics Academy II: Robotics Academy II expands students' experiences with robotics building and programming and prepares students to complete more advanced teacher-led as well as self-directed robotics challenges. Students will deepen their electromechanical design and building experience and build fluency with the Arduino C-Based programming language.
Digital Literacy Seminar (Existing Course Update): This quarterly freshman seminar course provides students essential digital competencies and skills to support their traditional learning with technology.

2019-2020: Proposed Course Development
Digital Media Studies & Entrepreneurship Seminar AP: Students will develop an individual and group projects which will include individual essays and presentations demonstrating the strength of their entrepreneurial or digital media idea concept.
Introduction to Data Science: Introductory course introducing students to the fundamentals of data science and statistics and the R programming language.
Entrepreneur and Enterprise Finance (Honors): Students will be able to evaluate the financial viability of, and apply financial insights to, both institutional businesses and start-ups.
Advanced Placement CS Principles: Offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to the creative aspects of programming, abstractions, algorithms, large data sets, the Internet, cybersecurity concerns, and computing impacts.

2020-2021: Proposed Course Development
Game Design and Multimedia Animation Projects: Students will learn a multidimensional approach to the field of game development. Students will learn strategies for customizing games and building options with the use of a variety of programming tools.
Digital Media Studies & Entrepreneurship Research AP: This is a cumulative experience for students in which they apply the competencies from their digital learning and entrepreneurship and develop a real world business idea through an academic paper representing their research and business knowledge.
Exploratory Concepts in Computer Science and Hardware: Supporting the Change Team Student Help Desk model, this course asks students to provide hands-on support for teacher and staff digital learning needs. This course also provides a formal introduction to computer science on a High School level and an introduction to a range of Operating Systems and understandings of essential hardware concepts. This course will support the establishment of a makerspace curriculum and projects.
Principles of Mobile Design and Digital Marketing: In this course, students will learn how to design and code mobile applications and learn strategies to market them to a wide-variety of users. Concepts central to this course will be app navigation, understanding user search trends, user experience design, monetization and customer conversion, and usability.

Hour of Code Participation & STEAM Summit

Each December the Digital Learning Specialists across the district connect with teachers and students around the value of computer science education during a week of activities centered around each student experiencing an "Hour of Code"(Hour of Code: Join the Movement, 2018). Over the past 3 years this very special week has also enabled the district to bring in a wide range of speakers who work in programming, robotics and STEAM related fields.

The Hour of Code week has truly infused the entire district with the experience for students to meet and connect with professionals in the world of technology as well as experience a range of activities and lessons that have been strategically designed for their age level. Each year this event inspires students with real world connections and understanding of the continuing change that technology brings in the world and the high need for the development of these skills in their future.

In the winter of 2016 the North Reading Public Schools' Middle & High School hosted its very own STEAM Summit. The goal of the summit was to bring in professionals from the world of STEAM and have presentations to students in a range of locations with a range of topics for students to experience. It was during this week that we had visitors from the North Reading Digital Learning team host teachers and administrators from multiple districts as part of a MassCUE Learning Tour focused on STEAM, Robotics and Digital Learning. The district proudly shared the work happening in all elementary digital learning classrooms as well as the robotics and 1:1 pilot in the Middle School and curriculum content of our High School "Change Team" student work.

High School Digital Learning Focus Areas

The focus areas defined below represent areas of growth, next steps and goal targets for the central themes of this technology plan for the high school level. Deeper targeted goals are found within the "Future Ready Gear Assessment" within the summary of this plan.

District Awareness and Assessment for 21st Century Skills & Competencies

- Develop school based assessment to support and refine instruction which supports 21st Century students skills and competencies
- Utilize a shared vision for 21st Century Skills & Digital Competencies to continue develop student opportunities directly connected to college and career readiness.

Digital Citizenship & Digital Competencies

- Utilize course planning and development to support the integration of digital citizenship and competencies for all students.
- Review and initiate new Digital Learning & Entrepreneurship course offerings and Capstone opportunities.

STEAM Pathway & Awareness

- Continue to refine and adapt STEAM pathways to support interdisciplinary pathways for students.

Computer Science & Robotics Curriculum

- Review and enhance computer science offerings to support multiple pathways and diverse student learning targets.
- Support and refine instruction in robotics courses.
- Continue to develop deep and self-directed learning environments with robotics curriculums.
- Review opportunities to enhance student entry points to computer science and robotics through opportunities through the “North Reading Change Team” and promoted activities such as STEAM events, ”Hour Of Code” and invited speakers.

Personalized Learning

- Introduce and support tools and instructional strategies which support increased personalized learning through modeling and professional development.
- Target subject area support for increasing personalized learning through digital learning tools and resources.
- Continue to support educator and student use of digital tools to support enhanced instructional goals within 1:1 learning environments.
- Utilize digital learning tools, resources which can best personalize instruction and measure student success.
- Provide professional development opportunities and in classroom support for Implement instructional models which support the core four elements of personalized learning.

Digital Resources to Support Curriculum, Instruction, and Assessment

- Continue to support resources which support student and staff access to high quality digital resources.
- Continue to expand professional development and embedded support for high quality instruction utilizing digital tools.
- Implement a robust process for evaluating and reviewing educational applications for student and educator privacy.

Digital Learning Professional Development

There has been great progress in the development of high quality professional development related to Digital Learning (NRPS 2021). The Director of Digital Learning has worked with the Digital Learning Team to offer a range of options for teachers to learn new skills and explore new digital learning resources. Professional development opportunities have been largely focused around teachers learning to use the Google Apps for Education (G Suite for Education).

Professional development opportunities have also reflected, and informed the staff of, the professional learning initiatives North Reading has become the part of in the past three years. The focus areas of professional development include:

- Personalized Learning
- Google Apps (G Suite) For Education
- Digital Learning Lesson Plan Development
- 21st Century Skills
- Student Data Privacy
- Web Based Resources For Research
- Identifying Opportunities for Badging and Credentialing
- Digital Learning Goal Setting Tied To The Educator Evaluation System
- Online Opportunities for Educators
- Apps & Integrated Websites Which Support Real Time Web Based Assessment

Robust Technology Infrastructure

In the summer of 2017 a wireless infrastructure project was completed at the three elementary schools to provide wireless access to all classrooms and improve the wired access to classrooms. This robust implementation of a wireless system provides the elementary schools with a much-needed environment to expand learning initiatives into the classroom. The increased wireless access provides not only a robust environment for digital learning but also provides increased access for students during the computer-based MCAS testing and new types of learning environments. This upgrade brought a more comparable digital learning experience across the district in terms of wireless connectivity and increased the capacity to support digital learning initiatives and the introduction and expansion of new devices.

District Technical Support

A focus of the Digital Learning Team is to provide high quality support for technology devices and the infrastructure to support student learning and organizational functionality. The learning needs of students strongly guide the decisions which the district makes with technology. Technology support needs are met with a tiered support model which utilizes a ticketing system to address school and district based technical support needs in a timely manner.

The increased access for wireless internet connectivity in all elementary schools and a new 21st century learning facility at the Middle and High School campus provide that students and staff are enabled to connect to 21st century learning resources and reliably and effectively. It is the role of the Digital Learning Team to continue to support enhanced connectivity, device access, adhere data protocols and support all students and staff to foster technical independence.

Focus Areas for the District Technology Support & Infrastructure

The focus areas for the district technology support and infrastructure have been selected from the “Future Ready Gear Assessment” goals and the work done with the technology planning team. The goals in this plan call for support which fosters student and staff independence and providing a reliable network infrastructure which supports robust digital tools and resources. The district plans to streamline its central inventory processes and continue to review the critical roles which support the data and network infrastructure.

- Timely and Supportive Technology Device, and software and end-user support
- Foster Student and Staff Technology Independence
- Effectively Manage District Data and Data Management Portals
- Reliable Access to Devices To Support 21st Century Learning
- Effective Network Filtering and Device Management
- Implement Effective Protocols For Technology Support
- Implement Practices and Procedures To Support Computer Based Testing
- Provide Fast and Reliable Internet Connectivity Throughout The District
- Maintain a single, centralized and relational inventory database For asset lifecycle management
- Implement Effective Protocols To Ensure Effective Student and Staff Privacy, Security and Online Safety
- Review and Evaluate The Most Effective Use Of The Districts Digital Learning Team Roles

Digital Learning Support Roles and Teams

A range of roles and skills are necessary among the Digital Learning staff to support the diverse needs of the district's users with effectively supporting classroom technology and computer hardware. The district is in constant review and strategic planning around the proper procedures and protocols for ever expanding computer based testing and increased use of devices in the classroom to assess, share and collaborate effectively. Specific roles, teams and targets for the districts resources are outlined in the "Future Ready Gear Assessment ".

Summary and Future Ready Gear Assessment

The strategic goals and action steps outlined in this strategic technology & digital learning plan look to guide the program of digital learning in the North Reading Public Schools for the next three years. The action steps outlined look to set the stage for enhanced learning experiences for both the students and the educators who support student learning.

In the past three years North Reading Public Schools have taken tremendous strides in supporting the infrastructure of resources, personnel and strategic planning related to Digital Learning. The North Reading Public Schools have taken the challenge to develop a technology plan which strategically looks to support some of the most compelling frameworks and exciting goals which target empowering the districts use of technology to support student and staff learning.

The goals in this plan are rigorous and will guide deep conversations and innovation in the day to use of technology to support all students and staff to use technology in a safe, productive and effective manner. The goals in this plan also seek to support our users outside of the classroom both before and after school and as they transition into new educational experiences and careers. The effective and safe utilization of technology is no longer a secondary discussion to meeting student needs in the classroom and beyond, it is an essential skill and set of competencies which will determine the student and staff success.

The goals in this plan seek to address the most critical areas with concise action steps to support their thoughtful completion over the course of three years. This plan includes several comprehensive components that are relatively new core component of technology and digital learning plans and that is the inclusion of specific action steps to implement more personalized approaches to instruction and also the dedication to strategies to protect student data and privacy.

The success of this plan will require a dedicated and committed effort to improve the day to day instruction in all schools with the use of technology and pedagogical practices which empower students and teachers to learn more deeply and personally with increased access to resources and educators who are prepared to support a digital transformation in the classroom. his plan will also require a commitment of the leadership team of the North Reading Public schools to continue the amazing collaboration, support and visioning which will be necessary to support a new age of teaching and learning in the district.

Future Ready Gear Assessment

The use of the Future Ready Gear framework helps to gauge the district's readiness to begin implementing digital learning. The individual gears help to frame a vision for digital learning and recognize the elements of the Future Ready Framework. The work of the technology planning team and the data collected from the MassTrax survey assisted to align the goals specific to the framework areas.

Curriculum, Instruction, and Assessment

Through a flexible, consistent, and personalized approach to academic content design, instruction, and assessment, teachers with the support of robust and adaptive tools can customize instruction for groups of students or on a student-to-student basis to ensure relevance and deep understanding of complex issues and topics. Providing multiple sources of high-quality academic content offers all students greater opportunities to personalize and reflect on their own work, think critically, and engage frequently to enable deeper understanding of complex topics.

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-2020	Strategic Goals 2020-2021
District Awareness and Assessment For 21st Century Skills[1] Increase district awareness around 21st century skills and supportive rubrics for assessment of 21st century skills, which include: critical thinking, self-direction, collaboration, digital citizenship, communication, creativity and innovation, and online research and information literacy.	1. Professional Development Targeting 21st Century Skills Awareness and Assessment. 2. Digital Learning and Entrepreneurship Team Goals Identify Areas Of 21st Century Competencies. 3. Investigate student learning opportunities in and out of the classroom that will increase collaboration and promote dynamic instructional models.	1. Begin the development of district wide rubrics for 21st Century Skills and Competencies. 2. Begin the process of developing district-wide rubrics and assessments for online research and information literacy. 3. Provide support to foster collaboration and explore student learning opportunities in and out of the classroom (shared applications, collaborative instruction models).	1. Utilize rubric to measure district wide implementation of 21st century digital learning skills and assess current professional development and team goal building to ensure they convey 21st century digital learning skills. 2. Begin development of district-wide rubrics and assessments for creativity and innovation. 3. Implements a review of the ISTE (International Society for Technology in Education) Standards for Students[2]: Digital Citizen, Knowledge Constructor, Innovative Designer, Computational Thinking, Creative Communicator, Global Collaborator, Empowered Learner as part of a review process of our 21st Century Skills rubrics. 4. Implement strategic learning opportunities for students that reflect the core tenets of 21st century skills and the innovate classroom.

Digital Citizenship Prepare and support educators to provide an emphasis on digital citizenship education in all classrooms NRPS 2021 Goal: All students and educators are representative of the tenants of Digital Citizenship.	1. Investigate and begin development of co-developed digital learning lesson plans. 2. Investigate the possibilities and potential strategies of a shared repository of shared resources K-12 Digital Learning. 3. Professional Development around proper use of social media. 4. Review District Policies around Social Media. 5. Support educators with the Digital Learning Specialist model to provide emphasis on digital citizenship education in all classrooms through co-teaching and collaborative lesson development. 6. Review opportunities for introducing social media into the classroom. 7. Begin the Development of a shared, tiered vocabulary for Digital Learning and Digital Citizenship instruction for K-12.	1. Continue the sharing the repository of co-taught, cross curriculum digital learning/citizenship lessons across that support teacher and student digital learning skills. (Technology is fully embedded in curriculum). 2. Expand the sharing of artifacts of effective practice district wide (videos, projects photos etc.). 3. Support teachers in designing instruction which supports the use of social media with the Digital Learning Specialist model. 4. Initiate a robust evaluation of the effectiveness of the Digital Learning Specialist model on K-12 classrooms. 5. Continue to review current curriculum supports for student digital citizenship, including embedded information on the acceptable-use policy (AUP).	1. Review the implementation and effective use of a repository of shared resources and co-developed digital learning lesson plans (reword). 2. Develop curricula that incorporate social media in the classroom and educate students on responsible social media use. 3. Investigate the development of a student friendly AUP (Acceptable Use Policy) which reflects the values of Digital Citizenship and the benefits of instructing with digital tools.
STEAM Pathway and Awareness The selection of courses and course sequence which will enable students to develop college and career readiness aligned with 21st Century Skills and Digital Competencies.	1. Identify courses which reflect the core skills of 21st Century Learning and Digital Skills and review their content for inclusion into a core student pathway for active college and career readiness learning.	1. Initiate discussions and strategic planning around providing students more opportunities to obtain 21st century skills, computer science knowledge, and digital competencies within a series of strategically aligned courses.	1. Implement a series of courses, which support students in experiencing a seamless tract to obtain a wide range of 21st century skills, computer science knowledge, and digital competencies within a sequence of strategically aligned courses that correspond with core curriculum.
Computer Science and Robotics Curriculum Aligning and Reviewing Current Computer Science and Robotics curriculum alignment.	1. Investigate and review ways to expand the District Robotics Inventory. 2. Launch new robotics and web development courses. 3. Examine current curriculum for potential alignments with 21st century skills/digital learning and STEAM[3] initiatives. 4. Evaluate opportunities and initiate a process for collecting student feedback around 21st century skills and digital citizenship.	1. Initiate a course review for the review of a potential additional of a CS course to the STEAM Pathway of courses. 2. Support a balance and increased integration of robotics, computer science, simulations, and social media for classroom instruction. 3. Increase the effectiveness of current CS curriculum through alignment with 21st century skills, digital learning, and STEAM initiatives.	1. Assess ways to continually increase the integration of robotics, computer science, simulations, and social media in classroom instruction. 2. Continue to monitor and evaluate the effectiveness of new STEAM/Digital Learning courses through updating existing and creating new curriculum and rubrics. 3. Utilize student feedback in the review of the implementation of CS and robotics curriculum, instruction, and assessment.

		4. Collect student feedback around 21st century skills and digital citizenship. 5. Identify potential new CS courses and opportunities to implement increased computer science concepts into K-12 classrooms.	4. Evaluate the effectiveness of embedded computer science principles into curriculum and classroom instruction and assessment.
Personalized Learning Identify potential areas for the implementation of personalized learning, student choice, and the opportunity to demonstrate learning through many varied and diverse types of media. NRPS 2021: Online learning opportunities are available to all students. NRPS 2021 Goal: Digital Learning Course offerings exist K-12.	1. Identify potential areas for the implementation of personalized learning, student choice, and the opportunity to demonstrate learning through many varied and diverse types of media. 2. Provide opportunities for teachers to identify a process of developing a knowledge base around the benefits of utilizing data informed instruction, self-direction, critical thinking, and college readiness. 3. Continually review and ensure that students have access to online learning applications for instruction both at home and in school.	1. Review existing and developing implementation of personalized learning strategies across K-12 (1:1 Program MS). 2. Maintain the district's support for teachers' ability to identify a process of developing a knowledge base around the benefits of utilizing data informed instruction, self-direction, critical thinking, and college readiness. 3. Investigate deficiencies in students' access to online learning applications for instruction both at home and in school (Big ideas Math, Clever). 4. Introduce personalized learning concepts to teachers to support students with more choice and the opportunity to demonstrate learning through many varied and diverse types of media.	1. Begin the implementation of personalized learning strategies across K-12 through that include the development of rubrics and curriculum that support embedded personalized instruction. 2. Monitor, review and begin to utilize proven personalized learning instructional approaches and assessment tools. 3. Continually investigate and support teachers' ability to identify a process of developing a knowledge base around the benefits of utilizing data informed instruction, self-direction, critical thinking, and college readiness. 4. Strategically share the district's vision for accessing and utilizing centralized online resources to support personalized learning. 5. Measure the classroom effectiveness of personalized learning strategies on classroom instruction.
Digital Learning Specialist Model NRPS 2021 Goal: A Digital Learning Model consistently supports the needs of all staff and students. NRPS 2021 Goal: Technology is fully embedded in K-12 curriculum. NRPS 2021 Goal: Connect Digital Learning to District, Team, and Individual Goals.	1. Support the daily use of technology for classroom instruction through the digital learning specialist model. 2. Investigate opportunities for expanding the roles for the Digital Learning Specialists in classroom support. 3. Support Digital Learning Specialists and classroom teachers in the development of co-taught lessons aligned to DLCS[4] standards. 4. Support Digital Learning Specialists in the development and instruction of K-12 Digital Learning vocabulary and the	1. Continue to align and support curriculum 2. Begin investigating more robust district wide assessments for digital learning. 5. Begin the process of reviewing district wide rubrics for assessing 21st century, digital learning and information(put under digital learning model consistently supports all staff and students) Personal learning 6. Implement the sharing of a shared, tiered vocabulary for Digital Learning and Digital Citizenship instruction for K-12.	1. Review the effectiveness of the digital learning specialist model and curriculum across all schools. 2. Monitor and assess the Digital Learning Specialists required skill-set for supporting classroom instruction with 21st Century Skills and Digital Tools. 3. Investigate and begin to implement an evaluation tool and/or system to measure the effectiveness of the Digital Learning Specialist model and recommend improvements. 4. Continue to monitor and measure the effectiveness of

	implementation of 21st century skills. 5. Examine additional opportunities for providing high quality technical support and in classroom co-teaching and classroom integration through the Digital Learning Specialist model.		the digital learning specialist model.
Digital Resources to Support Curriculum, Instruction, and Assessment NRPS 2021 Goal: The 21st century learning spaces (i.e. Distance Learning Lab, TV studio, Performing Arts Center, "use computer labs," etc.) exist at all five schools to support Digital Learning	1. Review and support technology resources used to foster self-direction, such as by accessing and using varied and diverse media; critical thinking; and college readiness in and out of the classroom.	1. Develop a list of digital learning resources district wide. 2. Review the ability of resources on the above list in their ability to address the fostering of self-direction, such as by accessing and using varied and diverse media; critical thinking; and college readiness in and out of the classroom.	1. Continue to compile and review educational technology resources available in all classrooms in the district.

Use of Space and Time

Student-centered learning requires flexibility and adaptability in the use of instructional time. Many schools are shifting away from Carnegie units to competency-based and personalized learning. Competency-based learning fixes the content and processes that the student needs to learn, but allows variability in the time each student takes to reach mastery. Personalized learning is student-centric, empowering students to have a significant degree of control and choice in what, when, and how they learn.

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-2020	Strategic Goals 2020-2021
Competency-Based Assessment and Instruction Supporting instructional models and assessments in which students demonstrate that they have learned the knowledge and skills they are expected to learn as they progress through their education.	1. Increase awareness of competency-based assessment and instruction and its value through the dissemination of explanatory resources, including online videos, designed to inform educators.	1. Initiate the development of new professional development surrounding competency-based assessment and instruction and the value of such assessment and instruction.	1. Adapt existing and develop new rubrics and curriculum to further implement competency-based assessment and instruction.
Student Learning Opportunities	1. Provide an overview of the value of student learning	1. Initiate the development of new professional development	1. Adapt existing and develop new rubrics and curriculum to

Requiring Extra Time and Self Directed Learning The district values and works to implement student learning opportunities that require extra time and student self-directed learning.	opportunities that require extra time and student self-directed learning to district educators through the dissemination of explanatory resources, including online videos. 2. Identify courses that are most likely to benefit from student learning opportunities that require extra time and student self-directed learning.	surrounding student learning opportunities that require extra time and student self-directed learning. 2. Embed student learning opportunities that require extra time and student self-directed learning into courses most likely to benefit from them (determine in Year 1).	further embed student learning opportunities that require extra time and student self-directed learning into courses. 2. Monitor student learning opportunities that require extra time and student self-directed learning to ensure that these opportunities are a benefit to the course in which they are implemented.
Professional Development to Support Personalized and Self Directed Learning The district works to implement the tenets of personalized learning through professional development.	1. Introduce the Core 4 of Personalized Learning (Targeted Instruction, Integrated Digital Content, Data Driven Decisions, and Student Reflection) and the definition of personalized learning to educators through the dissemination of explanatory resources, including online videos.	1. Initiate the development of new professional development to elaborate on the Core 4 of Personalized Learning and the Station Rotation Model and aid educators in implementing them into classroom instruction.	1. Embed integrated digital content and resources into classroom instruction. 2. Develop additional personalized learning resources.

Robust Infrastructure

When employed as part of a comprehensive educational strategy, the effective use of technology provides tools, resources, data, and supportive systems that increase learning opportunities and promote efficiency and effectiveness. Many such environments use universal design for learning (UDL) specifications to enable anytime, anywhere learning for all students. Instructional approaches are based on competency and mastery. Within these environments, caring adults ensure that each student succeeds. High quality, high-speed technology and infrastructure systems within a school district and in each school are essential, however, the learning needs of students drive all decisions related to technology.

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-2020	Strategic Goals 2020-2021
Device Access For 21st Century Learning Ensure that all students and teachers have reliable access to devices to effectively facilitate 21st	1. Continue to implement the 1:1 program at the Middle School 7th Grade (Class of 2023) Level. 2. Ensure that effective network filtering and device management for 1:1 device use at-home are in place.	1. Expand the 1:1 program to cover both the 7th and 8th grade (Classes of 2024 and 2023). 2. Transition existing 8th grade Chromebook carts into North Reading High School.	1. Expand the 1:1 to cover the 9th, 8th, and 7th grade (Classes 2025, 2024, and 2023). 2. Frequently review and update network filtering and device management for 1:1 device use at-home to

century learning and skills development in the classroom. NRPS 2021 Goal: A comprehensive technology replacement plan exists for all classroom, lab, and instructional technology. NRPS 2021 Goal: There are sufficient student devices in the district for all learning needs (1:1 capabilities, personalized learning environment, assistive technology needs met.) NRPS 2021 Goal: 1:1 opportunities exist for students 6-12. Non 1:1 grades will be fully supported by device carts and BYOD opportunities.	3. Implement guidelines for home device use, Clever, and curated digital content. 4. Investigate current student access to labs for multimedia creation and strategies to improve student access to labs.	3. Monitor network filtering and device management for 1:1 device use at-home to ensure that proper protocols and systems are in place. 3. Monitor and adapt guidelines for home device use, Clever, and curated digital content. 4. Initiate the implementation of strategies (from Year 1) to improve student access to labs for multimedia creation.	ensure that proper up to date protocols and systems are in place. 3. Regularly update guidelines for home device use, Clever, and curated digital content. 4. Continually ensure that students have access to labs for multimedia creation.
District Academic Budgeting Process For Technology Utilization of the district's annual academic planning process to inform and guide the budgetary decisions in creating a robust device infrastructure that promotes 21st century learning and skills.	1. Review the current budgetary process and the use of the district/school's annual academic planning process to inform and guide budgetary decisions. 2. Assess the total cost of ownership for all computer purchases.	1. Utilize the district/school's annual academic planning process to inform and guide the budgetary decisions related to digital learning, technology, and infrastructure. 2. Ensure that the total cost of ownership for all computer purchases is reasonable and not unnecessarily high.	1. Continue to inform and guide the budgetary decisions related to digital learning, technology, and infrastructure with the district/school's annual academic planning process. 2. Regularly analyze the total cost of ownership for all device purchases to ensure that it is not unnecessarily high and make reasonable changes to the district's device infrastructure if the total cost of ownership is unnecessarily high.
Internet Connectivity Provide a fast and reliable internet connection throughout the district that facilitates the use of internet resources in the instruction of 21st century learning and skills. NRPS Goal 2021: The wired and wireless infrastructure at all five buildings supports all needs for teaching and learning for all students (1:1 capabilities, personalized learning environment, assistive technology needs met.)	1. Assess the internet connection in all facilities for its ability to support students and staff utilizing internet resources during classroom instruction. 2. Investigate the network bandwidth to ensure that it meets the needs of all students, anticipating the influx of devices caused by the expanding 1:1 initiative.	1. Initiate necessary changes to the internet infrastructure to ensure that it can support students and staff in utilizing internet resources during classroom instruction. 2. Initiate necessary adjustments to the network bandwidth to ensure that it meets the needs of all students and those in subsequent years.	1. Continue to ensure that the internet connection enables students and staff to utilize internet resources during classroom instruction. 2. Make recurring assessments of and adjustments to the network bandwidth to ensure that it meets the needs of all students and those in subsequent years.

Network Security and Governance Ensure that proper rules, procedures, protocols, and staff are in place under a network governance structure to support responsible student and staff privacy, security, online safety, and network and device reliability throughout the district	1. Begin the development of role matrix for technology professionals. 2. Investigate the ability of the network filtering within schools to protect student and staff data privacy, security, and safety. 3. Outline network protocols to support the student and staff data privacy initiative (Data and Privacy Gear). 4. Evaluate network procedures, functions, and services for their ability to support a robust and versatile network connection.	1. Continue the development of and update the role matrix for technology professionals. 2. Initiate necessary changes (if any) to the network filtering to ensure student and staff data privacy, security, and safety are protected. 3. Begin the implementation of the network protocols outlined in Year 1 to support the student and staff data privacy initiative (Data and Privacy Gear). 4. Update network procedures, functions, and services to ensure that they support a robust and versatile network connection.	1. Continually update the role matrix for technology professionals. 2. Monitor the network filtering to ensure that the changes in Year 2 and network filtering as a whole are protecting student and staff data privacy, security, and safety 3. Ensure that the network protocols implemented in Year 2 support the student and staff data privacy initiative; if they do not, outline and implement a different set of network protocols. 4. Implement a three year cycle in which network procedures, functions, and services are assessed for their ability to support a robust and versatile network connections and improved accordingly.
District Digital Learning and Technology Staff Ensure that technology support staff employ an effectual variety of strategies to support and empower students and staff in classroom instruction with digital tools and innovative practices. NRPS 2021 Goal: Digital Learning is supported by students with opportunities for independent learning and assistance with tiered digital learning and technology ticket support	1. Ensure that the technological support staff are employing an effectual variety of strategies to support and empower students and staffs, including the following: a. Providing professional development to support digital learning initiatives, b. Continuing the development of an online repository of digital educational resources and lessons, c. Vetting digital content (OER and Online and Blended Learning Platforms), d. Streamlining student and staff experiences with digital resources, e. Maintaining and monitoring a high level of technology customer support, f. Supporting, and fostering technological independence among staff and students, g. Designing and modeling lessons on digital learning.	1. Monitor digital learning and technology staff to ensure they are continuing to employ an effectual variety of strategies to support and empower students, including those listed in Year 1. 2. Enhance and update the list (Year 1) of core strategies used by the digital learning and technological staff.	1. Continue to monitor digital learning and technology staff to ensure they are continuing to employ an effectual variety of strategies to support and empower students, including those listed in Year 1. 2. Frequently enhance and update the list (Year 1) of core strategies used by the digital learning and technological staff.

Data and Privacy

Data, privacy, and security are foundational elements of digital learning. A personalized, learner-centered environment uses technology to collect, analyze, organize, and access data to improve the effectiveness and efficiency of learning. The district ensures that sound data, privacy, and security policies, procedures, and practices are in place and adhered to at the district, school, classroom, and student levels. The district and school based policies and procedures on the guidelines from TRAx statutes include the Family Educational Rights and Privacy Act (FERPA), the Child Internet Protection Act (CIPA), and the Children's Online Privacy Protection Act (COPPA).

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-2020	Strategic Goals 2020-2021
Student and Staff Data Privacy The district ensures that sound data, privacy, and security policies, procedures, and practices are in place and adhered to at the district, school, classroom, and student levels.	1. Investigate current district compliance with FERPA (Family Educational Rights and Privacy Act), CIPA (Children's Internet Protection Act), and COPPA (Children's Online Privacy Protection Rule). 2. Increase staff awareness of data privacy through the dissemination of explanatory online videos and other informatory resources discussing data privacy. 3. Consider the criteria that must be met by a learning application (i.e. iPad apps, websites) for it to be safely used in classroom instruction in accordance with student and staff data privacy. 4. Initiate the creation of a staff and student online safety team that will work to ensure and review student and staff data privacy, security and safety; disseminate information surrounding data privacy to both students and staff; and accommodate student requests for the use of applications and websites in school.	1. Evaluate the necessary steps that must be taken to continually ensure FERPA, CIPA, and COPPA compliance. 2. Initiate the development of new professional development surrounding student and staff data privacy. 3. Develop a process for approving a learning application for use in the classroom, ensuring that the learning application meets the criteria investigated in Year 1 and maintain a list of approved applications. 4. Expand and continue to develop the staff and student online safety team to best fulfill its goals and responsibilities. 5. Introduce staff and students to best data privacy practices through the dissemination of explanatory resources, including online videos.	1. Implement the initiatives, programs, and policies necessary to continually ensure FERPA, CIPA, and COPPA compliance. 2. Adapt existing and develop new rubrics and curriculum to further implement student and staff data privacy into classroom instruction and assessment. 3. Continually update the process for approving a learning application for use in the classroom to best ensure student and staff data privacy. 4. Enhance the role of the staff and student online safety team to ensure it fulfills its responsibilities and aligns with the district's data privacy initiatives. 5. Encourage the integration of proper data privacy practices into classroom instruction.

Data Literacy and Data Informed Instruction The district initiates and supports the development of new strategies of data informed instruction and digital literacy in the classroom.	1. Increase staff awareness of data storage and security, data informed decision making, legal and ethical data responsibility, the benefits of data resources, and other data literacy topics through the dissemination of explanatory resources, such as online videos. 2. Investigate current strategies and initiate the development of new strategies of data informed decision making in the classroom.	1. Initiate the development of new professional development surrounding data literacy topics, including data storage and security, data informed decision making in the classroom, legal and ethical responsibilities, and the benefits of data resources. 2. Encourage the implementation of data informed decision making in the classroom. 3. Consider opportunities for utilizing learning profiles in the classroom.	1. Adapt existing and develop new rubrics and curriculum to further implement data literacy topics (data storage and security, data informed decision making in the classroom, legal and ethical responsibilities, and the benefits of data resources) into classroom instruction and assessment. 2. Continually monitor the success of, further implement, and adapt data informed decision making in the classroom, aligning it with district data literacy and privacy initiatives. 3. Initiate the implementation of learning profiles into classroom instruction.
District Data Review and Data Processes The district reviews, defines, and updates protocols for district data and security. NRPS 2021 Goal: The Data Management System supports the needs of all educators in providing real-time access to a variety of data to all end users.	1. Evaluate current protocols for data review and assess potential areas of improvement. 2. Investigate the current security of district databases.	1. Establish new and modify existing protocols for data review. 2. Address immediate security concerns of district databases while considering potential protocols and systems that ensure the long-term security of district databases.	1. Monitor and continually adapt protocols for data review. 2. Institute protocols and systems that ensure the security and stability of district databases.

Community Partnerships

Community partnerships include the formal and informal connections with local and global communities. Such partnerships take the form of collaborative projects, establishing relationships that advance the school's learning goals. Digital communications, online communities, social media, and digital learning environments often serve as connectors for these partnerships.

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-2020	Strategic Goals 2020-2021
Community Digital Partnerships Community partnerships include the formal and informal connections with local and global communities.	1. Support the use digital tools to interact with experts outside of the local community in various fields of study. 2. Investigate current opportunities for students to interact with the local community and local experts through online channels. 3. Explore potential opportunities for student investigation of other cultures through digital projects and online communication.	1. Increase awareness surrounding the use of digital tools to connect with experts outside the local community in various fields of study through the creation of new professional development and the dissemination of resources that facilitate communication with experts and inform educators on the use of these tools. 2. Initiate the development of rubrics and curriculum that promote the incorporation of projects and assignments into classroom instruction in which students interact with the local community and local experts through online channels. 3. Initiate the development of rubrics and curriculum that promote student investigation of other cultures through digital projects and online communication.	1. Augment existing curriculum in multiple subject areas to incorporate the use of digital tools to interface with non-local experts into classroom instruction. 2. Evaluate the success of newly implemented curriculum and rubrics (Year 2) in promoting online connections with the local community and local experts; redesign or enhance such curriculum and rubrics to best incorporate these connections into classroom instruction. 3. Evaluate the success of newly implemented curriculum and rubrics (Year 2) in promoting student investigation of other cultures through digital projects and online communication; redesign or enhance such curriculum and rubrics to best incorporate this investigation into classroom instruction.
Community Awareness Around Digital Learning Initiatives Awareness around digital communications, online communities, social media, and digital learning environments in the community.	1. Investigate both online and physical opportunities in the community for storytelling around digital learning initiatives connected to the school and district brand. 2. Encourage community awareness of common internet access points, such as at libraries and community centers. 3. Continue work with the library to disseminate information surrounding common internet access points to the community. 4. Utilize the proper use of social media and sharing of	1. Initiate both online and physical storytelling in the community around digital learning initiatives connected to the school and district brand. 2. Evaluate and expand current common internet access points and determine potential future access points. 3. Evaluate the use of social media, media publications, and online newsletters as means to disseminate information surrounding digital learning initiatives connected to the school and district brand throughout the community.	1. Monitor and evaluate the effectiveness of both online and physical storytelling in informing the community of digital learning initiatives connected to the school and district brand. 2. Continually evaluate the prevalence and quality of common internet access points and make necessary adjustments. 3. Continue to enhance the use of social media, media publications, and online newsletters to best proliferate information surrounding digital learning initiatives connected to the school and district brand throughout the

	the districts brand through media publications and online newsletters.		community.
Online Communication with Parents/Guardians Online communications with parents/guardians That involve digital communications, online communities, social media, and digital learning environments.	1. Investigate existing channels and opportunities for new channels in which parents/guardians can communicate online with teachers and administrators. 2. Assess parents'/guardians' current online access to the school and district websites and their child(ren)'s class websites, materials, and grades on easily accessible and navigable platforms and websites	1. Update existing channels and initiate the development of new channels in which parents/guardians can communicate online with teachers and administrators. 2. Provide parents/guardians with online access to the school and district websites and their child(ren)'s class websites, materials, and grades on easily accessible and navigable platforms and websites.	1. Frequently review and update the channels by which parents/guardians can communicate online with teachers and administrators and improve these channels by necessary means. 2. Continually monitor parents/guardians ability to access school and district websites and their child(ren)'s class websites, materials, and grades on easily accessible and navigable platforms and websites and ensure that this access is reliable and straightforward.

Personalized Professional Learning

Technology and digital learning can increase professional learning opportunities by expanding local and global access to high-quality, ongoing, job-embedded opportunities for professional growth for teachers, administrators, and other education professionals. Such opportunities ultimately lead to improvements in student success and create broader understanding of the skills that comprise success in a digital age. Digital professional learning communities, peer-to-peer lesson sharing, and better use of data and formative assessment, combined with less emphasis on "sit and get" professional development sessions eliminate the confines of geography and time. These ever-increasing resources offer teachers and administrators vast new opportunities to collaborate, learn, share, and produce best practices with colleagues in school buildings across the country.

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-2020	Strategic Goals 2020-2021
Personalized Learning Professional Development and Measurement of 21st Century Skills The district provides professional learning opportunities on 21st century skills that actively engages staff in relevant application of tools, resources, and instructional practices in digital learning. The district utilizes tools to assist in	1. Increase professional awareness of 21st century skills and digital learning through the dissemination of explanatory resources, including online videos that are designed to inform educators of 21st century skills and the relevant application of tools, resources, and instructional practices in digital learning.	1. Initiate the development of new professional development designed to aid in the classroom instruction of and surrounding 21st century skills and the relevant application of tools, resources, and instructional practices in digital learning. 2. Ensure that district professional development is connected to district wide digital learning goals and staff professional growth and	1. Adapt existing and develop new rubrics and curriculum to further implement 21st century skills and digital learning into classroom instruction and assessment.

monitoring the district's implementation of digital learning and 21st century skills		allows staff to be proactive and self-directed in achieving their professional goals.	
Data Informed Instruction For Personalized Learning The district provides professional learning opportunities on data informed decision making and instruction.	1. Increase professional awareness of data informed decision making and instruction through the dissemination of explanatory resources, including online videos that are designed to inform educators.	1. Initiate the development of new professional development designed to aid in the classroom instruction of and surrounding data informed decision making and instruction.	1. Adapt existing and develop new rubrics and curriculum to further implement data informed decision making and instruction into the classroom.
Resources For Personalized Learning The district provides high-quality, accessible resources for use in classroom instruction and personalized professional learning, enabling staff to be proactive and self-directed in achieving their professional goals. NRPS 2021 Goal: High quality professional development (HQPD) related to Digital Learning is provided for all educators.	1. Increase awareness of personalized learning and OER resources. Share current sources of OER and collective resources and how they can be evaluated, through the dissemination of explanatory resources, including online videos that are designed to inform educators. 2. Evaluate current sources of OER and collective resources and explore additional sources of such resources. 3. Ensure that collective resources are shared with educators to provide professional learning opportunities within digital environments, such as online courses. 4. Encourage the utilization of collective resources in online professional learning and classroom instruction by educators.	1. Initiate the development of new professional development surrounding personalized learning and OER and collective resources, including current sources of OER and collective resources and the evaluation of such resources. 2. Utilize additional sources of OER and collective resources (after evaluation of these resources) and begin the development of new sources of collective resources. 3. Continue to share new sources of collective resources with educators to provide new professional learning opportunities within digital environments. 4. Provide support and resources to educators to transition them to professional learning online.	1. Adapt existing and develop new rubrics and curriculum to further implement personalized learning and the use of OER and collective resources into instruction. 2. Continue to expand the sources of OER and collective resources through investigation and evaluation of additional sources and the development of new sources of such resources. 3. Regularly update and inform educators on new sources of collective resources to provide updated and effective professional learning opportunities within digital environments. 4. Steadily transition educators to online professional learning and develop new opportunities through online professional learning.

Budget and Resources

The transition to digital learning will require strategic short-term and long-term budgeting and leveraging of resources. All budgets at the district and the school levels should be aligned to the new vision, with consistent funding streams for both recurring and non-recurring costs to ensure sustainability. During the transition to digital learning, district and school leaders should strive for cost-savings and efficiencies through effective uses of technology. The financial model should include the metrics and processes to ensure not only sustainability, but also total cost of ownership and accountability for learning returns on investments.

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-2020	Strategic Goals 2020-2021
Efficiency and Cost Savings	Review strategies for calculating the total cost of ownership (TCO) for all technology resources. Review direct costs (e.g., costs related to equipment, devices, Internet access, boxes, wires, etc.) and indirect costs (e.g., training, technical assistance, staff time, etc.) Review characteristics of technology which provides the most efficient and cost effectiveness implementations with the least amount of impact on student learning.	Develop and plan an implementation for strategies for calculating the total cost of ownership (TCO) for all technology resources. Evaluate the direct costs (e.g., costs related to equipment, devices, Internet access, boxes, wires, etc.) and indirect costs (e.g., training, technical assistance, staff time, etc.) Select and place for review the characteristics of technology which provides the most efficient and cost effectiveness implementations with the least amount of impact on student learning.	Implementation strategies for calculating the total cost of ownership (TCO) for all technology resources into the district strategic budgeting process. Continue to evaluate the direct costs (e.g., costs related to equipment, devices, Internet access, boxes, wires, etc.) and indirect costs (e.g., training, technical assistance, staff time, etc.) Integrate the reviewed characteristics of technology which provides the most efficient and cost effectiveness implementations with the least amount of impact on student learning into the budgeting and funding stream process
Alignment to District- and Building-Level Strategic and Tactical Plan	Develop a strategic budgeting plan to support the comprehensive replacement plan for classroom, lab and instructional technology for all schools.	Implement a strategic budgeting plan to support the comprehensive replacement plan for classroom, lab and instructional technology for all schools	Continue to implement a strategic budgeting plan to support the comprehensive replacement plan for classroom, lab and instructional technology for all schools
Consistent Funding Streams	Review potential and existing funding streams to strategically plan and budget for technology devices and resources.	Continue to investigate and review all funding streams to strategically plan and budget for devices and resources.	Continue to investigate and review all funding streams to strategically plan and budget for devices and resources
Learning Return on Investment	Review potential tools and methods to measure student learning in accordance with district technology expenditures.	Review and evaluate potential tools and methods to measure student learning in accordance with district technology expenditures.	Develop an implementation plan to support potential tools and methods to measure student learning in accordance with district technology expenditures.

Collaborative Leadership

Future Ready is a systemic planning framework around the effective use of and access to technology and digital learning to achieve the goal of "career and college readiness" for all students. While the seven interdependent Future Ready Gears provides a roadmap toward digital learning, success within a district is depended on innovative leadership at all levels. First and foremost, leaders within a district must be empowered to think and act innovatively, they must believe in the district's shared, forward-thinking vision for deeper learning through effective uses of digital, 21st Century technologies. Critical to their success will be a culture of innovation that builds the capacity of all students, teachers, administrators, parents, and community to work collaboratively toward that preferred future. The policy foundation that results must be coherent with that vision. Unleashed in a culture of vision and empowerment, leaders will have the flexibility and adaptability they require to prepare their students to thrive in the 21st Century. They will collaboratively hold one another accountable against established metrics, using continuous feedback loops to inform change management while leading from the middle.

District Initiative	Strategic Goals 2018-2019	Strategic Goals 2019-20	Strategic Goals 2020-21
Implementation and review of the Future Ready Framework To assist in District Decision Making	Review data from 2017-18 and begin to administer surveys to additional stakeholders (teachers, parents, students) as needed. Review strategies to close gaps and consider their inclusion in the district's strategic plan.	Review survey results and review strategies to close gaps.	Review survey results and review strategies to close gaps. Consider any updates to the Future Ready Surveys.
Support the development of district-wide measures for measurements of 21st Century Skills and Digital Learning Competencies	Form a team to develop the district-wide 21st century skills and digital learning competencies. Explore relationship between this document and any Social Emotional Learning competency measures.	Implement the tool as a pilot and analyze the results.	Implement the tool widely district-wide.
The District and school leadership teams have established a collaborative culture of innovation in which leaders at all level are empowered to innovate.	Leadership team identifies A process for reviewing Evidence based research on innovative learning practices and sharing these practices regularly.	Leadership selects a team activity to continue to support and maintain their collaborative leadership approaches in an area connected to innovative leadership. Leadership team self-assesses and shares their growth.	Within this culture, the school is being restructured to bring the vision to life. The capacity of leaders to innovate is maximized through a culture of trust and respect, providing leaders with the flexibility and adaptability they require to lead. This culture leads to sustainable change, informed by research and facilitated by digital leaders.

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