

**Maynard Public School District**

**Technology Plan**

**October 2015**

**Presented to the Maynard School Committee**

**October 22, 2015**

**Approved by the Maynard School Committee**

**Maynard Public School District**

**Technology Plan**

*The Maynard Public Schools are committed to a superior academic experience for Maynard's students that prepare them to be productive citizens in an interconnected technological world.*



## MAYNARD PUBLIC SCHOOLS

[www.maynardschools.org](http://www.maynardschools.org)

[rgerardi@maynard.k12.ma.us](mailto:rgerardi@maynard.k12.ma.us)

3-R Tiger Drive

Maynard, Massachusetts 01754

*Robert J. Gerardi Jr., Ph.D.*

*Superintendent of Schools*

978-897-2222

October 22, 2015

Dear Members of the Maynard School Committee:

It gives me great pleasure to present to you a long-range Technology Plan for the Maynard Public Schools. This plan builds on the progressive work done by the educational community in 2008 and again in 2011. This latest technology document is more comprehensive as it addresses the six benchmarks established by the Massachusetts Department of Elementary and Secondary Education, recommendations by the members of the Technology Committee, a complete inventory of the technology assets in the district, and a preliminary overview of our technology budget needs over the next ten years.

To ensure that the Maynard Public School District keeps pace with technology advances and provides students with experiences that prepare them for their future, careful and thoughtful planning is essential. In addition to keeping our technology up-to-date, the Maynard Public School District is committed to providing necessary technical support and high quality professional development that assure educators can engage students in instructional practices that lead to improved student learning.

I am particularly indebted to the members of the Maynard community for their willingness to help us fund necessary infrastructure upgrades at Green Meadow and Fowler that will allow our students access to learning without the difficulties associated with outdated structures.

Special thanks are also due to the members of the District Technology Committee for their efforts over the past twelve months in revise our previous technology plans for the purpose of improving digital learning for the students and staff in the Maynard Public Schools.

Sincerely,

Robert J. Gerardi, Jr., Ph.D

## Table of Contents

<b>Introduction</b>	<b>p. 2</b>
<b>Members of the District Technology Team</b>	<b>p. 4</b>
<b>Benchmark 1 Commitment to a Clear Vision and Implementation Strategies</b>	<b>p. 5</b>
<b>Benchmark 2 Technology Integration and Literacy</b>	<b>p. 7</b>
<b>Benchmark 3 Professional Development</b>	<b>p. 8</b>
<b>Benchmark 4 Accessibility of Technology</b>	<b>p. 10</b>
<b>Benchmark 5 Virtual Learning and Communication</b>	<b>p. 12</b>
<b>Benchmark 6 Technology Integration and Literacy</b>	<b>p. 13</b>
<b>Recommendations</b>	<b>p. 15</b>
<b>Inventory</b>	<b>p. 17</b>
<b>Ten-Year Projected Budget</b>	<b>p. 20</b>

## Introduction

In September 2014, Dr. Robert Gerardi, Superintendent of the Maynard Public Schools, formed a District Technology Committee (Digital Learning) and charged the members with three very important tasks:

1. Draft a District Technology Plan that aligned with the Massachusetts Department of Elementary and Secondary Education's benchmarks
2. Conduct needs assessments from various stakeholders
3. Make budgetary recommendations that will span at least five years.

The District Technology Committee met monthly during the 2014-2015 school year. Members studied the Local Technology Plan Guidelines issued by the Department of Elementary and Secondary Education and examined the most recent Maynard Technology Plan which was updated in 2011. The previous district technology plan was forward-thinking and set the tone for many excellent initiatives throughout the three schools. Goals in that plan were related to technology integration; professional development; staffing; community collaboration and communication; funding resources; instructional software and online resources; hardware; network infrastructure and connectivity; administrative software; access to Internet outside the school day; student technology standards; and technology standards for teachers and administrators. Although many of the goals of the 2011 plan have been fulfilled, some of the initiatives have been stalled, perhaps due to funding constraints or a lack of personnel. Committee members felt strongly that a District Technology Committee ought to be a permanent fixture, so that initiatives that are adopted can be reviewed on a regular basis and that a structure will be in place for a representative group of teachers, paraprofessionals, administrators, and community members to advocate for excellent instructional technology.

It soon became clear to members of the District Technology Committee that infrastructure difficulties at Green Meadow and Fowler were slowing the progress we hoped to see in excellent instructional technology. Connectivity to the Internet for students and teachers has been inconsistent. While educators are eager to acquire new equipment to integrate technology into the curriculum, the hardware will not work ideally until the infrastructure is updated. To address this concern, a small group of District Technology Committee members submitted an eighty thousand dollar (\$80,000) Digital Connections Partnership Grant to the Massachusetts Department of Elementary and Secondary Education in November. Although we were not among the districts that were initially funded, our application remains in the pipeline pending further federal funding. The Digital Connections Partnership Grant requires matching funds from the town, and we were delighted to learn that the Maynard Town Meeting last spring voted to approve \$103,000 toward infrastructure updates.

In addition to the need for infrastructure updates, the members of the District Technology Committee identified the importance of obtaining reliable data regarding the state of technology integration in the Maynard Public Schools. In the fall of 2014, the District contracted with BrightBytes, a highly regarded on-line service that helped us analyze data obtained from teachers, administrators, parents, and students (grades 3-12) for the purpose of improving student learning. Gathering and analyzing data about the effective integration of technology in the Maynard Public Schools will be an ongoing initiative that will help us with future budgetary and educational decisions.

During the past year, members of the District Technology Committee held several forums for the purpose of informing educational stakeholders about updates to the District Technology Plan and obtaining their input. A community-wide forum was held in February 2015; faculty presentations at all three schools occurred in March and April; and a brief presentation to the Maynard School Committee took place in May. Feedback from these meetings proved to be most valuable and suggestions have been incorporated into this document.

Many of the goals and the initiatives for the coming years are embedded in the benchmark section of this document. The six guidelines established by the Department of Elementary and Secondary Education are thorough and contain recommendations that school districts would want to embrace. The members of the District Technology Committee have also included in this document a Recommendations Section where some of the most important goals and initiatives have been listed. In addition, Technology Committee members felt strongly that this document should contain a brief inventory of technology hardware and software in the district, listing not only the equipment, but also the year of purchase. The final section of this document contains a projected ten-year technology budget.

It is important that this technology plan be seen as a living document that is revisited at least annually so that stakeholders in Maynard can assess our progress in preparing students to be productive citizens in an interconnected technological world.

**Maynard Public Schools**  
**District Technology Committee (Digital Learning)**  
**October 2015**

Peter Martin	Technology Director
Jack Colombo	Network Administrator
Janice Lind	Maynard High School
Rita Murphy	Maynard High School
Sue Bradley	Fowler School
Lauren Giunta	Fowler School
Jeff Mela	Fowler School
Tarah dePatino	Green Meadow School
Melissa McPhail	Green Meadow School
Jennifer Gaudet	Central Office
Charles Gobron	Central Office
Don Holm	Central Office
Dawn Capello	Maynard School Committee

## **Benchmark 1 Commitment to a Clear Vision and Implementation Strategies.**

The first sentence of the district's mission statement emphasizes the important role technology plays in the education of students in the Maynard Public Schools. The schools "are committed to a superior academic experience for Maynard's students that prepare them to be productive citizens in an interconnected technological world."

We firmly believe that all students should have the opportunity to utilize technology to become actively engaged and challenged in their learning. The effective use of technology enables students to conduct inquiries, solve problems, create meaning, and communicate in settings inside and outside of the classrooms without restrictions, so that learning can take place anytime, anywhere. We believe that in order for students to emerge from our schools prepared to practice life-long learning as effective citizens in our democratic way of life and productive members of society, they should demonstrate the ability to use comprehensive and powerful digital tools in an effective and confident manner.

### **Guiding Principles**

- Technology is a tool that supports 21st Century learning skills including information seeking, analysis, reasoning, problem solving skills, information and communication skills, and inter-personal, collaborative, and self-direction skills.
- In order for technology to support the diverse access and learning needs of our school community, adequate resources in the areas of staffing, infrastructure, professional development, and equipment are essential.
- The learning community must have equal access to tools, technology, training, and support. Access to assistive technology is an important priority.
- Educators must be supported in their use of technology with working, up-to-date technology, timely technical support, and continuous, meaningful, high quality professional development and coaching.
- To ensure students are equipped with the skills required of digital citizens, technology literacy standards must be integrated into existing content-area curriculum.
- Technology must be used to improve and streamline the administrative functions in the district and to provide consistent and timely communication with the community.
- The constant evolution of technology and its advances over time requires flexibility; we must be willing to investigate and be open to the possibilities that emerging digital resources will provide our students.

### **Technology Team**

The Maynard Public Schools has formed a standing District Technology Committee (Digital Learning) consisting of representatives from the school committee, administrators, teachers, paraprofessionals, and parents. This committee is endorsed by the Superintendent of Schools who will consider the input of this committee in making his recommendations to the Maynard School Committee.

### **Needs Assessment**

In the fall of 2014, members of the District Technology Committee contracted with BrightBytes, a highly regarded on-line service that will help us analyze data obtained from educators, administrators, parents, and students (grades 3-12) for the purpose of improving student learning.

It is our hope that the data will be used to improve, expand, and sustain technology in the district and enable us to articulate a strategic technology plan that will provide guidance for us as we formulate budgets, district improvement plans, professional development plans, school improvement plans, and individual educator goals over the next five years.

## **Budget**

The Maynard Public Schools recognize that the use of technology and its integration into the curriculum play a critical role in advancing student learning. To this end, a ten-year recommended technology budget will be presented to the Maynard School Committee in the fall of 2015. This budget contains recommended infrastructure updates, staffing needs, hardware (including one-to-one initiatives), software, professional development, technology support, and contracted services. The District will continue to seek funding from federal, state, and private resources. The District will continue to explore ways that technology can reduce costs and create efficiencies in other areas of the district budget

### Recommended Budgetary Considerations:

A projected ten-year budget spreadsheet can be found at the end of this document. The following is a brief summary of recommended budgetary considerations.

1. Infrastructure update -- \$200,000. A combination of local, state, and federal funding is necessary to update the infrastructure of the Fowler and Green Meadow School. This is a one-time expense that will allow greater Internet access to improve teaching and learning and to allow students to participate in future state testing, such as on-line PARCC (Partnership for the Assessment of Readiness for College and Career). At the present time students at both Fowler and Green Meadow are only able to participate in the paper and pencil version of the testing, which could result in an added expense.
2. Adequate staffing for the future -- This will be an ongoing operational expense. It is the hope that beginning in FY'17, one instructional technology specialist will be added to the budget each year until all three schools have a full-time licensed professional who will assist educators in their efforts to improve student learning through the use of technology. Under this plan, the district will be fully staffed in FY'19. It is important to maintain, and, if necessary, enhance the present positions of data specialist and network administrator to support the technology needs of the district.
3. Supplies and Equipment -- It is our hope that we can employ a five year replacement cycle, either through purchasing or leasing, that will ensure that students have access to state-of-the-art technologies. Although this may appear to be an expensive recommendation, the costs will be partially offset by the reduction of major repairs to equipment that is often needed as computers and other electronic devices near the end of their useful life. It is our vision that each classroom in the district will be equipped with the tools necessary for students to access a curriculum that is current and prepares them to be "productive citizens in an interconnected technological world."
4. Professional Development and Contracted Services -- The goal is to provide professional development and relevant contracted services through the existing operational budgets. This will require that modest increases in these line items continue over the next five years. Any budget reductions in the areas of professional development or contracted services will negatively affect the progress we hope to make in overall student learning.



## **Evaluation**

The Maynard Public Schools will continue to consult with the technology staff as well as the members of the District Technology Committee as budgets are developed to ensure that items or services purchased are appropriate, cost-effective, and sustainable.

The District Technology Plan includes an evaluation process that enables us to monitor progress and recommend any needed adjustments as new technology and new policies are created and emerging technology develops.

## **Benchmark 2 Technology Integration and Literacy**

The Massachusetts Department of Elementary and Secondary Education has established technology integration benchmarks, suggesting that 90% of teachers use technology every day in such areas as research, lesson planning, organization, administrative tasks, communication, and collaboration. These guidelines also suggest that at least 90% of teachers use technology appropriately with students every day to improve student learning of the curriculum. Student activities may include research, multi-media, simulations, data analysis, communications, and collaboration

According to data received from the March 2015 BrightBytes survey of the district's teachers, administrators, paraprofessionals, students and parents, access to digital technology in the Maynard Public Schools is very good. Ninety-three percent of teachers report that they have access to a computer for their own use all the time in school. One hundred percent of teachers and 97% of students report that they have Internet access at home. According to the BrightBytes research, teachers who have access to computers at home are more likely to use technology more frequently and thus exhibit better technology skills. Students who have access to computers and the Internet at home are able to engage in anytime, anywhere learning. Unfortunately, technology access across all three schools in Maynard is not even. Only 70% of educators at Green Meadow School report that they have access to a computer for their own use all the time in school. This is in stark contrast to 100% of Maynard High School educators and 95% of Fowler School educators who have daily access. While nearly 70% of Maynard High School teachers report that students use computers daily in their classrooms, only 38% of Fowler School educators and 33% of Green Meadow School educators report the same finding.

A recent initiative of the Department of Elementary and Secondary Education involves the development of voluntary Digital Learning and Computer Science standards for Massachusetts schools. A future goal of the Maynard Public Schools will be to create learning opportunities and formative assessments for students throughout the grades whereby they can demonstrate proficiency in the new standards. While recent BrightBytes data reveal very good foundational skills for both Maynard teachers and students, it is interesting to note that students, often referred to as digital natives, show significantly more skill and confidence than educators in such multi-media tasks as editing photographs, recording and editing video, and downloading music.

Because today's students have grown up with constantly evolving technology and because this evolution will undoubtedly continue for years to come, the standard of digital citizenship takes on great importance. BrightBytes data indicate that these digital citizenship skills are still emerging in the Maynard Public Schools. Explicit instruction on how to respond to online bullying, how to create an online presence, how to act respectfully online, and how to cite online

information will be incorporated into the curriculum throughout the grade levels.

In order to facilitate the integration of technology and literacy standards in the Maynard Public Schools, it is important to meet the Massachusetts Department of Elementary and Secondary Education's technology staffing guidelines. The Maynard Public Schools complies with these guidelines by having a district-level technology director as well as a staff member specifically dedicated to data management and assessment. The district does not yet provide one full-time equivalent instructional technology specialist per 60-120 instructional staff. The district is committed to achieving this ratio over the next three years so that both integration of technology into the curriculum and student and staff learning will be improved through effective modeling and coaching. The need to increase technology integration specialist staffing levels at all schools was documented in the technology plan submitted to the Maynard School Committee seven years ago in 2008. *"Technology integration specialists are critical in assisting classroom teachers with the integration of technology into their practice. They are the experts in how technology facilitates and improves teaching, learning, and understanding across all subject levels. They provide day-to-day support, ongoing coaching, small-group professional development, and facilitate cross-curriculum projects. Our current technology integration staffing levels at the Elementary and High schools are insufficient to support the levels of technology integration we seek."*

Budgetary constraints have restricted the district's ability to fund these positions, so members of the District Technology Team are recommending to the Superintendent that beginning in FY17, one technology integration specialist be added to the budget each year until an appropriate staffing level is reached.

### **Benchmark 3 -- Professional Development**

Professional development opportunities continue to be essential in our efforts to ensure the effective integration of technology. Technology integration is challenging and the role of professional development in its success is paramount. It takes professional development that is systemic, sustained, and high-quality to transform the curriculum. In these times of budget constraints, it is imperative that the district consider every available resource in its quest to provide high quality professional development to all educators.

Members of the District Technology Committee are enthusiastic about helping educators meet the following four guidelines presently recommended by the Massachusetts Department of Elementary and Secondary Education:

- A. At the end of five years, at least 90% of district staff will have participated in high-quality, ongoing professional development that includes emerging technology issues, technology skills, universal design, and research-based models of technology integration.*
- B. Technology professional development is sustained and ongoing and includes coaching, modeling best practices, district-based mentoring, study groups, and online professional development.*
- C. Professional development planning includes an assessment of district and teachers' needs. The assessment is based on the competencies listed in the Massachusetts Technology Self-Assessment Tool (presently being revised).*

*D. Administrators and teachers consider their own needs for technology professional development.*

Data from the March 2015 BrightBytes survey indicate that 22% of Maynard educators reported receiving more than eight hours a year of school-sponsored technology professional development and more than eight hours of out-of-school technology professional development. Yet research from the Center for American Progress (2013) found that teachers need at least 14 hours of high quality Professional Development on a single topic for effective classroom teaching. A clear need to improve technology professional development opportunities both in and out of school for Maynard educators is documented. The BrightBytes data indicate that 81% of Maynard educators believe that using technology enhances student learning. Sixty-three percent of Maynard educators expressed an interest in professional development in the area of multimedia skills, and only 16% reported they feel highly knowledgeable about digital citizenship skills.

Consultants used as part of our March 2015 BrightBytes project stress that effective professional development for teachers can have an enormous impact on teaching and learning in an organization. They emphasize, however, that professional development experiences for teachers must be sustained and of high quality for improved learning outcomes to be realized. Specifically, the *Center for American Progress* reports that 14 hours of high quality professional development on a single topic is needed before the classroom is impacted to a statistically significant degree. However, data collected from hundreds of other schools indicate that as in Maynard, the majority of teachers report significantly less time spent on professional development activities in a twelve-month period.

Research from the International Society of Technology Education (ISTE) also reveals that high quality professional development is job-embedded, personalized, and designed to promote skill transfer. Professional learning experiences must respond to teachers' interests, needs, and classroom settings. In many cases, these types of learning experiences can extend beyond the traditional school in-service setting to include webinars, Twitter chats, and other virtual experiences.

This type of dynamic instruction helps both teachers and students alike. A *Walden University* study reports that teachers who use technology frequently place the highest emphasis on using technology to promote problem-solving, critical thinking, and communication.

Being aware of teachers' skill profiles and interests with technology can greatly inform the development of a cohesive, integrated professional development plan that will enhance student learning outcomes.

One of the most important goals of the district technology plan is to build a culture of continuous growth in educator technological skills for the purpose of improving student learning. In order to achieve this goal, the following strategies are recommended:

1. The District Technology Team should help create rich and differentiated professional development opportunities that can take place during early release programs, as part of faculty

meetings, after school, during vacations, and, as part of online, anytime, anywhere learning. Technology needs are ever-changing and a plan cannot be mapped out in its entirety for the year.

2. The district web site should become a rich resource for student and staff learning.
3. Members of the District Technology Team should help identify staff experts or technology leaders who can present workshops, share best practices, and assist colleagues in promoting the effective use of technology.
4. Sufficient funds should be allocated from the existing professional development line item to promote participation in state and regional technology conferences, such as the annual MASS/MassCue event.
5. Educators should be encouraged to broaden personal learning through access to such tools as Twitter, ASCD Smart Briefs, Educational Technology and Mobile Learning, Edutopia, and other free websites and blogs.
6. The teaching of digital citizenship, including activities that address the legal and ethical implications of technology use, should be documented from kindergarten through high school.

#### **Benchmark 4 Accessibility of Technology**

The Massachusetts Department of Elementary and Secondary Education has made several recommendations for districts to follow under the benchmark *Accessibility of Technology*. Although a great deal of progress has been made, it has not been possible for the Maynard Public Schools to have adhered to each guideline because of present budgetary constraints. The district is committed, however, to providing resources over the next five years to be as consistent with as many of these guidelines as possible.

##### **A. Hardware Access**

1. The Maynard Public Schools have made progress in meeting the Department of Elementary and Secondary Education hardware access guideline that calls for an average ratio of one high-capacity, Internet-connected computer for each student. At Maynard High School, the district has been able to achieve this goal with the continuation of the 1:1 initiative begun in 2013. At Fowler School there is one high-capacity, Internet-connected computer for every 1.58 students, and at Green Meadow School, the ratio is one high-capacity, Internet-connected computer for every 2.36 students. The district is committed to improving the ratio at Fowler School and Green Meadow School over the next five years to be in compliance with DESE guidelines. Studies show that increased levels of access to computers, namely in 1:1 programs, result in increased attendance rates and a decline in school-wide discipline problems (Holcomb, 2009).
2. DESE recommendations call for districts to provide students with emerging technologies appropriate to their grade levels. The Maynard Public Schools has done a very commendable job of aligning budgetary priorities to this guideline. All students, grades 8-12, have a personal

tablet for their exclusive use, including a wide variety of applications that enhance the delivery of the curriculum. At Fowler School and at the Green Meadow School, students have access to iPads, Chromebooks, and laptops, and computer labs, and the district is committed to budget priorities that will facilitate student use of a variety of devices as emerging technologies develop.

3. Progress continues to be made on the third recommendation that urges districts to maximize access to the general education curriculum for all students, including students with disabilities, using universal design principles and assistive technology devices. Augmentative communication devices are widely utilized at the preschool level. The Special Education and Technology Departments partner in procuring assistive technology on an as- needs basis. Recommendations for purchases are often made as a result of the IEP process for a student, and auditory amplifiers such as FM sound systems, tablets, apps, and other assistive technology devices are immediately purchased.

4. The Maynard Public Schools are in compliance with the fourth recommendation that calls for the district to have procurement policies for information and instructional technologies that ensure usability, equivalent access, interoperability and SIF (School Interoperability Framework) compliance. These policies are carefully followed when purchases are made.

5. The district has made excellent progress in providing technology-rich classrooms, with access to devices such as digital projectors, electronic whiteboards, and student response systems. A complete inventory is kept and updated automatically with every new purchase.

6. The sixth guideline calls for the district to establish a computer replacement cycle of five years or less. This has not yet happened but it is among the many recommendations of the present Maynard District Technology Committee.

#### B. Internet Access

1. The district does provide connectivity to the Internet for all computers in all classrooms in all schools, including wireless connectivity. The Maynard Public Schools comply with this guideline.

2. The district meets the recommendation of providing an external Internet connection to the Internet Service Provider (ISP) of 100 Mbps per 1,000 students/staff. At the present time, Maynard has 150 Mbps per 1,000 students/staff members.

3. The Maynard Public Schools provide bandwidth of at least 10/100/1 Gb to each classroom. At peak, the bandwidth at each computer is at least 100 kbps. The network card for each computer is at least 100/1 Gb.

#### C. Networking (LAN/WAN)

1. The district provides an optical fiber connection between each school of at least 1 Gbps per 1,000 students/staff.

2. The Maynard Public Schools provide access to servers for secure file sharing, backups, scheduling, email, and web publishing, either internally or through contracted services.

#### D. Access to the Internet Outside the School Day

1. The district provides access to its computer labs before and after school to ensure that students and staff have adequate access to the Internet outside of the school day. In addition, each student in grades 8-12 has a 1:1 device that can be used outside of school hours wherever Internet access is available.

2. Since Internet access is widely available throughout the Town of Maynard, with very little restrictions, the district no longer disseminates an up-to-date list of places where students and staff can access the Internet after school hours. Students without Internet access at home are well aware of the access available at the library, in the schools, and at other convenient places throughout the town.

#### E. Staffing

1. The Maynard Public Schools meets the recommendation that staff or contracted services be provided to ensure that its network is functioning at all times. The district has a full-time Director of Technology, a full-time Network Administrator, and a full-time data specialist. This year, the technology department has introduced online self-help videos as an additional means of support to all staff members.

2. The technology staff members in the Maynard Public Schools generally resolve technical problems within 24 hours, so that these difficulties do not cause major disruptions to curriculum delivery. The district does an excellent job of providing clear information about how to access technical support.

3. The district does not yet provide at least one FTE person to support 400 computers. An additional support person is needed in the district to meet this recommendation. Members of the District Technology Committee recommend that an additional FTE be added to the FY'17 budget.

### **Benchmark 5 Virtual Learning and Communications**

The Maynard Public Schools continue to invest in virtual learning and communications for the purpose of enhancing student learning and improving administrative efficiency. The Department of Elementary and Secondary Education has established four guidelines under virtual learning and communications. The Maynard Public Schools have presently met or surpassed these guidelines.

A. The district encourages the development and use of innovative strategies for delivering high-quality courses through the use of technology. A vast array of resources is available to students and educators in the Maynard Public Schools. A partial list includes STAR Renaissance

Learning, Edgenuity, *its learning*, Kahn Academy, Lexia, Dibbles, Virtual High School, Go Math, Reflex Math, Type to Learn, Google Classroom, and Reading Counts. This list is continually refined as new technologies that enhance student learning are developed and older resources become less useful.

B. The district deploys IP-based connections for access to web-based and/or interactive video learning on the local, state, regional, national, and international level.

C. Classroom applications of virtual learning include courses, collaborative projects, field trips, and discussions. It is essential that professional development for educators be ongoing so that classroom applications are ongoing and virtual learning, implemented for the purpose of improving achievement, is appropriate for the developmental level of students.

D. The district maintains an up-to-date website that includes information for parents and community members. A great deal of effort has been devoted to refining the website so that it becomes a rich resource for learning, not only for educators but for the community at large. Each school also maintains an active web site that is updated daily to improve communication and to promote the myriad of learning experiences that take place in each building. In addition, teachers are encouraged to have an on-line presence and make use of the support available to them through the Technology Department of the Maynard Public Schools.

### **Benchmark 6 Safety, Security, and Data Retention**

The Maynard School Committee has adopted a comprehensive Computer Acceptable Use Policy and the Administration of the Maynard Public Schools has developed detailed regulations that ensure compliance with the four priorities outlined in Benchmark 6: Safety, Security, and Data Retention.

A. The district has a CIPA-Compliant Acceptable Use Policy (AUP) regarding Internet and network use. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students. Both the School Committee Policy and the Administrative Regulations were updated in December 2014.

B. The district educates teachers and students about appropriate online behavior. Topics include cyberbullying, potential risks related to social networking sites and chat rooms, and strategies for dealing with these issues. The School Committee Policy contains information about the risks to personal safety, privacy, and confidentiality, as well as the risks of viewing harmful material and the possibilities of criminal or civil liability. In this document, Maynard School Committee members explicitly state, "As a community it is our responsibility to mitigate these risks through the education and guidance of our users." At the present time, the formation of digital citizenship standards for all grade levels, K-12, is taking place.

C. The district has a plan to protect the security and confidentiality of personal information of its students and staff. Passwords are confidential; under no circumstances are they shared, published, or displayed. The Superintendent or his designee is responsible for disseminating

information regarding the security and confidentiality of personal information and enforcing related policies and procedures. Files, data, documents, and e-mail are stored on servers owned by the district and are subject to the same privacy and search policies as physical documents located on school grounds.

D. The district complies with federal and state law, and local policies for archiving electronic communications produced by its staff and students. The district informs staff and students that any information distributed over the district or school network may be a public record. In addition, the Maynard Public Schools employs CIPA-compliant content filtering. District regulations prohibit any attempts to bypass or disable content filtering or access control mechanisms. All restrictions against inappropriate language, conduct, and harassment apply to public messages, private messages, and material posted on web pages.



## **Recommendations**

### **1. Infrastructure Updates**

Infrastructure updates to Green Meadow and Fowler are essential for students to use technology in an effective way. The District is still waiting for possible funding from the Digital Connections Partnership Grant from the Massachusetts Department of Elementary and Secondary Education. The Town of Maynard has graciously allocated its share of this funding. Many of the recommendations in this document are predicated on making infrastructure improvements in the near future.

### **2. Adequate Technical Support and Staffing**

The Maynard Public Schools are fortunate to employ a full-time Director of Technology, a Data Specialist, and a Network Administrator. In order to meet the present and future needs of the district and be in concert with the Department of Elementary and Secondary Education's guideline of one technical person for every four hundred computers, an additional technology support position is needed. Members of the District Technology Committee recommend that an additional FTE be added to the FY'17 budget.

### **3. Instructional Technology Specialists**

The important role that an instructional technology specialist plays in improving student learning was documented in Maynard's 2008 technology plan. Fiscal constraints have prevented the addition of these positions. It is recommended that one instructional technology specialist be included in the FY'17 budget, another in FY'18, and a third in FY'19. These additions will not only allow us to adhere to the Department of Elementary and Secondary Education's guidelines of providing one instructional technology specialist for every sixty teachers, but it will significantly improve the integration of technology into the curriculum.

### **4. Five Year Replacement Cycle**

In May 2015, members of the Maynard School Committee, citing industry standards, emphasized the importance of planning for a five-year technology replacement cycle. The ten-year projected budget, in the last section of this document, outlines a measured approach to accomplishing this goal.

### **5. Sustained Professional Development**

Continual and sustained professional development for faculty members is essential to providing students with the best possible educational experiences. The District Technology Team, in conjunction with members of the Professional Development Council, will create rich and differentiated professional development opportunities in technology that can take place during early release programs, as part of faculty meetings, after school, during vacations, and, as part of online, anytime, anywhere learning.

## **6. Web Site a Rich Resource for Learning**

Work on revamping the district web page and ensuring that it serves as a rich resource for learning began in the spring of 2015. It is the recommendation of the District Technology Committee that school web sites also be continually updated and that staff members are exposed to the possibilities for improved communication and student learning that can be a result of individual teacher web sites.

## **7. Personal Learning Through Digital Tools**

As a result of data obtained from the BrightBytes surveys, it became apparent that while many educators use digital tools to update their knowledge and continue their personal professional development, others are not aware of the possibilities open to them. Members of the District Technology Committee believe that educators should be encouraged to broaden personal learning through access to such tools as Twitter, ASCD Smart Briefs, Educational Technology and Mobile Learning, Edutopia, and other free websites and blogs.

## **8. Teaching of Digital Citizenship K-12**

A digital citizenship course has been implemented this fall for all eighth grade students. Although many teachers in grades preK-12 regularly address concepts in digital citizenship, a comprehensive curriculum is not in place. Members of the District Technology Committee recommend that educators be involved in developing age-appropriate standards related to digital citizenship, including the importance of Internet safety, which will be implemented in the Maynard Public Schools, grades preK-12.

## **9. Standing District Technology Committee (Digital Learning)**

The establishment of a Standing District Technology Committee (Digital Learning) is strongly recommended so that initiatives that are adopted can be reviewed on a regular basis and that a structure will be in place for a representative group of teachers, paraprofessionals, administrators, and community members to advocate for excellent instructional technology.

# High School Inventory

Manufacturer	Model	Purpose	Number	Year	Anticipated Replacement	Actual Replacement
Dell	Optiplex 3010	Teacher/Office Computer	64	2013	2018	
HP	Probook 450	Laptop cart - Media Center	35	2013	2018	
HP	Latitude E530	Engineering Laptop Cart	25	2013	2018	
Dell	Chromebook 10	Student Chromebook	119	2015	Yearly	
Dell	Chromebook 10	Teacher Chromebook	9	2015	2020	
HP	Chromebook 14	Teacher Chromebook	5	2014		
Apple	iPad	Student iPad	374	Yearly		
Apple	iPad	Teacher iPad	31	2013		

# Fowler School Inventory

Manufacturer	Model	Purpose	Number	Year	Anticipated replacement	Actual Replacement
Dell	Optiplex 3020	Lab Computer	30	2014	2019	
Dell	Optiplex 380	Teacher Computer	71	2010	2015	
Dell	Optiplex 760	Lab Computer	25	2008	2013	
Dell	Optiplex 755	Lab Computer	30	2007	2012	
Dell	Optiplex 755	Classroom Computer	26	2007	2012	
Dell	Optiplex 740	Classroom Computer	43	2006	2011	
Dell	Optiplex 520	Classroom Computer	34	2004	2009	
HP	Latitude E5400	Teacher Laptop	8	2011	2016	
HP	Chromebook 11	Classroom Laptop	5	2014	2019	
HP	Chromebook 14	Classroom Laptop	5	2014	2019	
Acer	Chromebook C720	Classroom Laptop	17	2014	2019	

# Green Meadow School Inventory

Manufacturer	Model	Purpose	Number	Year	Anticipated replacement	Actual Replacement
Dell	Optiplex 380	Teacher Computer	27	2010	2015	
Dell	Optiplex 380	Library Computer	30	2010	2015	
Dell	Optiplex 760	Classroom Computer	1	2008	2013	
Dell	Optiplex 755	Classroom Computer	4	2007	2012	
Dell	Optiplex 740	Classroom Computer	4	2006	2011	
Dell	Optiplex 520	Classroom Computer	16	2004	2009	
Dell	Optiplex 170L	Library Computer	2	2004	2009	
HP	Probook 4540	Cart Laptop	27	2012	2017	
HP	Probook 640	Teacher Laptop	12	2015	2020	
HP	Probook 450	Teacher Laptop	1	2013	2018	
Dell	Latitude E5400	Teacher Laptop - 10Cart Laptop -15	25	2011	2016	
Dell	Latitude D620	Teacher Laptop	4	2006	2011	
Dell	Chromebook 11	Cart Laptop	24	2015	2020	
HP	Chromebook 14	Cart Laptop	26	2014	2019	