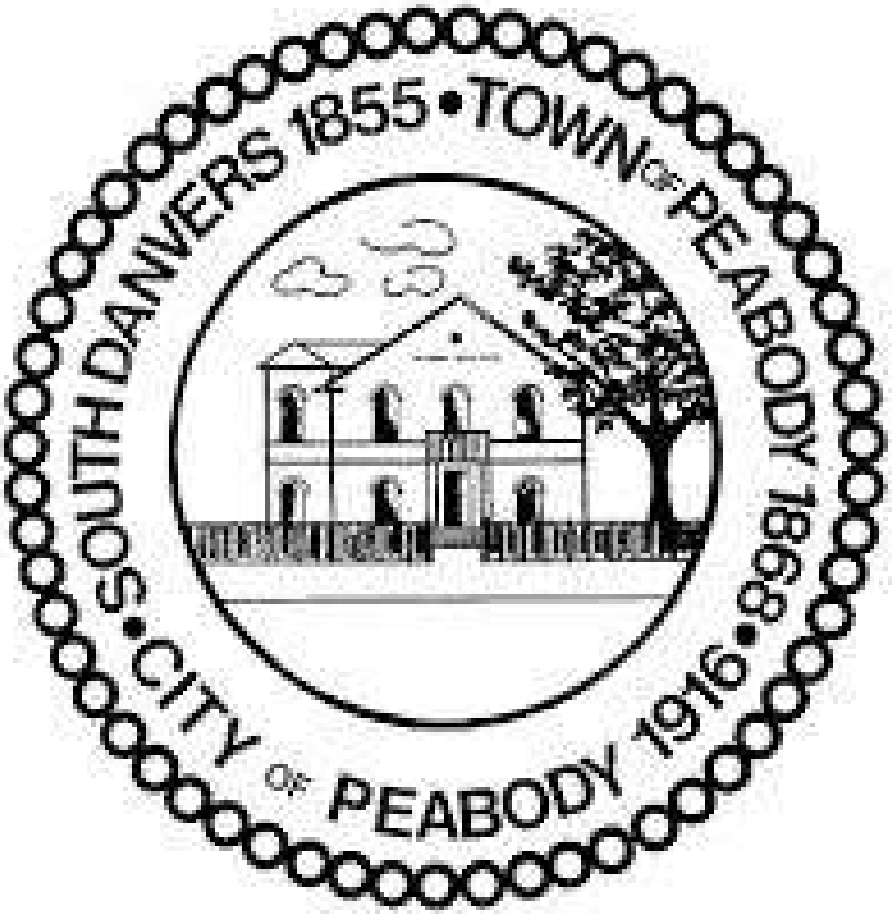

PEABODY PUBLIC SCHOOLS

Technology Plan 2016-2020

Mission: Peabody Public Schools is committed to providing a technology rich learning environment that nurtures the development of skills and competencies that foster self-sufficiency, promote responsible citizenship and ensure success in the global economy.

Introduction

In the Fall of 2014, the Technology Department in coordination with the Assistant Superintendent conducted an assessment of the current state of the schools regarding technology. The team explored five technology categories: building infrastructure, classroom hardware, professional development, personnel, and curriculum. At the request of the School Committee, a team was formed comprised of staff, faculty and administrators to develop a new technology plan which would highlight Peabody's technology needs and our alignment with state technology goals.

The Technology Department collected data from various sources including building principals, teachers, students and staff. This data was presented to the Technology Committee for review and feedback. A five year Technology Plan was developed using the Department of Elementary and Secondary Education guidelines. The plan is designed to meet the changing and ever-expanding role of technology in the classroom.

Technology Plan Committee Members

Chris Mitchell, IT Operations Manager and Co-Chair

Marc LeBlanc, Sr. Systems Manager and Co-Chair

Jarrod Hochman, School Committee Member

Cara Murtagh, Assistant Superintendent

David Jack, Interim Business Manager

Eric Buckley, PVMHS Principal

Todd Bucey, HMS Principal

Lacey Becotte, Burke School Principal

Maria Ferri, Vocational Director

Jarred Haas, Digital Learning Coach, HMS

Ken McCue, History Dept. Chair, PVMHS

Rosemary Slattery, Business Teacher, PVMHS

Anthony Furnari, History Teacher, HMS

Michael Bowler, Math Teacher, HMS

Erica Rossitto, Math Teacher, HMS

Susan Connor, Elementary Teacher, West School

Harolyn Fucile, Elementary Teacher, West School

Sandra DaCunha, Administrative Assistant, Carroll School

A Technology Committee will reconvene annually to further develop and refine this plan.

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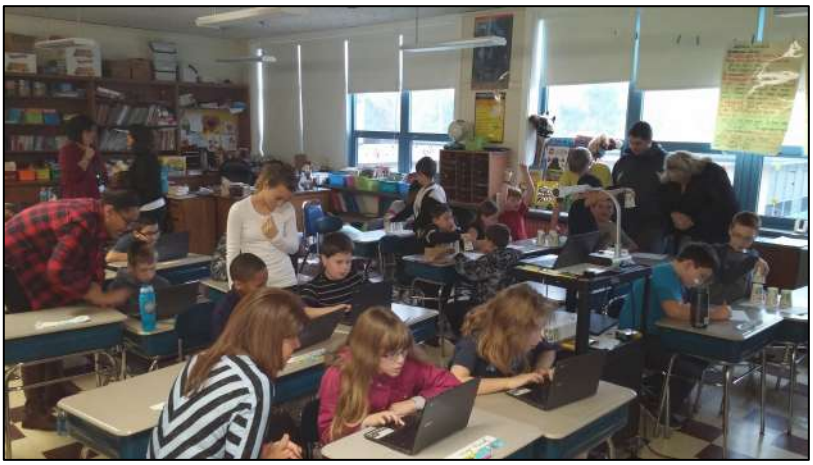
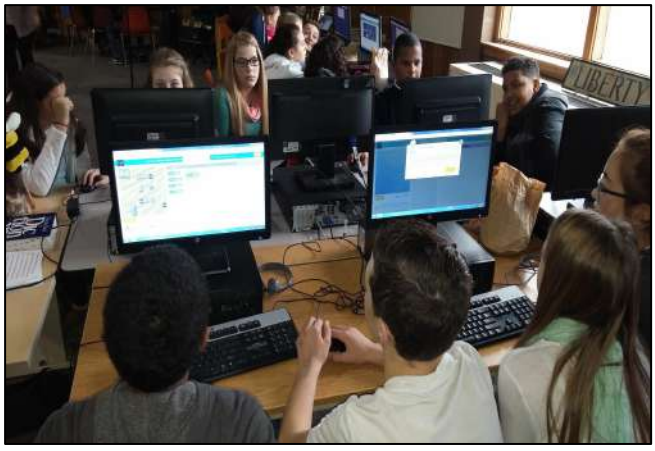
The Peabody Public Schools believe *that technology empowers students to take control of their learning outcomes.*

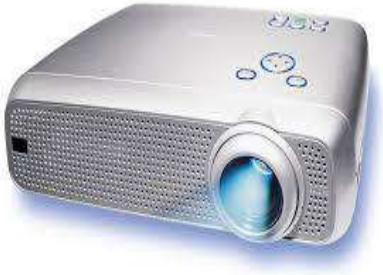


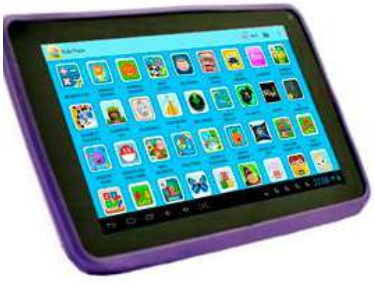
Technology is not one size fits all, but a toolkit available to teachers and students to better serve the needs of the individual learner. Our use of collaborative and creative applications to support learning and assessment better reflect the realities of the 21st century.

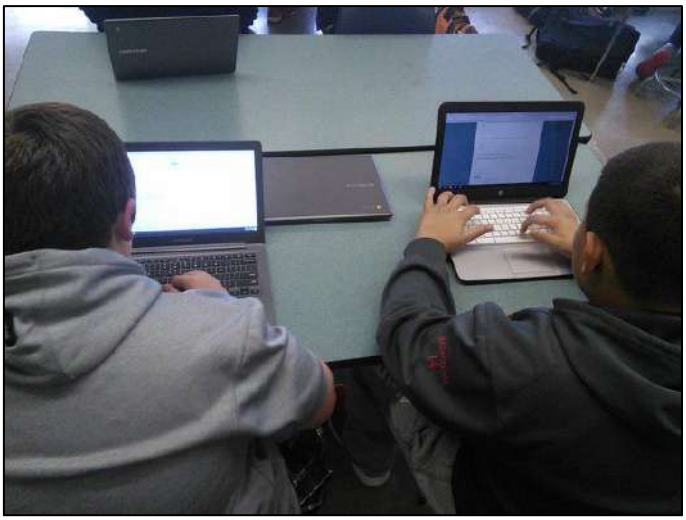


We believe *that technology should be universal and integrated into daily practice in order to make a significant impact on the learning process.*

We believe *that technology alone will not enhance student success. Our staff therefore, is engaged in specialized training focused on integrating technology to support both content learning and skill development.*

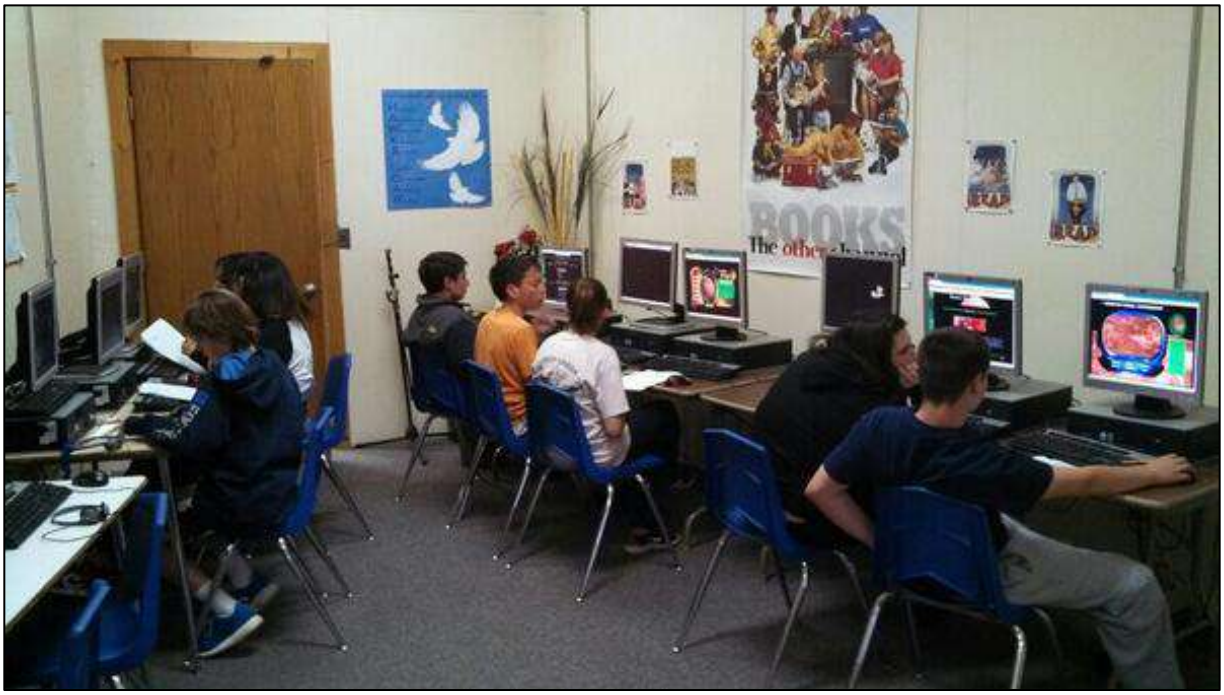






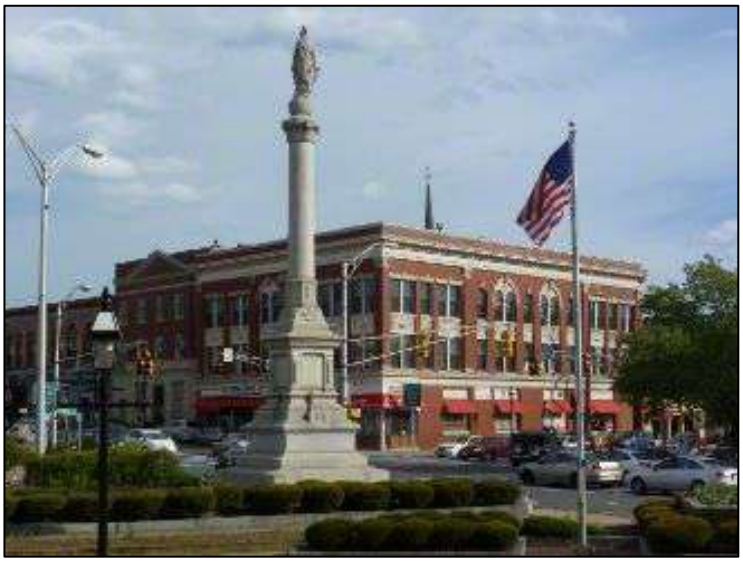
We believe *that true technology integration promotes better communication and collaboration between students, school, parents and among the greater community.*

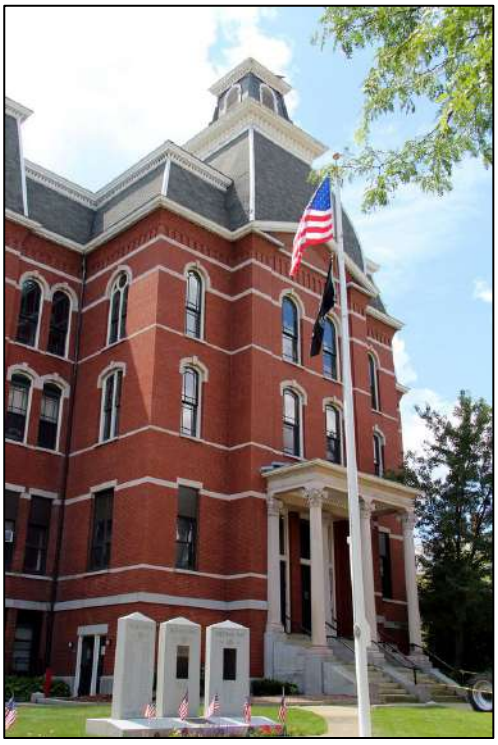
Technology allows for instant feedback, documentation of progress, and better accommodation of the needs of diverse learners.



Therefore*, we support our district enhanced with technology to enable the present and next generation of learners to have broadened choices for their future.*

District and Community Profile





The City of Peabody is located 22 miles north of Boston and is bordered by the cities of Lynn and Salem, and the towns of Danvers, Lynnfield and Middleton.

There are 56,000 people residing in this suburban community with approximately 6,100 students attending the public schools. It is forecasted that enrollment will be stable in the coming years. There are eight elementary schools (K-5), one middle school (6-8) and one high school (9-12).

Elementary Schools

The **Captain Samuel Brown Elementary School** is located at 150 Lynn Street and first opened in 2003. There are 140 Internet-connected digital devices accommodating 356 students.

The **John Burke Elementary School** is located at 127 Birch Street and first opened in 1963. There are 100 Internet-connected digital devices accommodating 284 students.

The **Thomas Carroll Elementary School** is located at 60 Northend Street and first opened in 2003. There are 177 Internet-connected digital devices accommodating 595 students.

The **Center Elementary School** is located at 18 Irving Street and first opened in 1953. There are 90 Internet-connected digital devices accommodating 378 students.

The **John McCarthy Elementary School** is located at 76 Lake Street and first opened in 1969. There are 87 Internet-connected digital devices accommodating 238 K-5 students plus 113 Pre-K students.

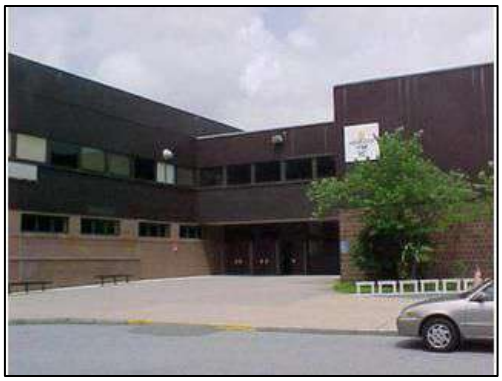
The **South Memorial Elementary School** is located at 16 Maple Street Ext. and first opened in 1950. There are 94 Internet-connected digital devices accommodating 371 students.

The **William Welch Elementary School** is located at 50 Swampscott Avenue and first opened in 1973. There are 85 Internet-connected digital devices accommodating 319 students plus 27 Title I Pre-K students.

The **West Memorial Elementary School** is located at 16 Bow Street and first opened in 1963. There are 94 Internet-connected digital devices accommodating 209 students plus 47 Pre-school students.

Secondary Schools

*The **J. Henry Higgins Middle School** is located at 1 King Street Ext. and first opened in 1965. There are 483 Internet-connected digital devices accommodating 1288 students. We are currently in the process of constructing a new State of the Art Middle School which will open its doors in September of 2016.*



*The **Peabody Veterans Memorial High School** is located at 485 Lowell Street and first opened in 1971. The High School also administers five Vocational programs, a Community High School and an Alternative Night School. There are 502 Internet-connected digital devices accommodating 1635 students.*

*The **Peabody Learning Academy** is located at the Northshore Mall and first opened in 2011. There are 30 Internet-connected digital devices accommodating 30 students.*

Current State of the Schools

Elementary

At the elementary level, most rooms have between two to four desktop computers for students and faculty to share. Teacher classrooms operate on Windows XP which has since had its support eliminated by Microsoft and therefore no longer has updated virus protection or other security software. Some laptops are scattered for projection with document cameras and interactive whiteboards. Each school is currently outfitted with a computer lab of at least 28 PCs running Windows 7.

The Burke and Brown labs have been dismantled as we transition to mobile computer carts. These lab computers have been disseminated across the district.

All buildings have 10/100 capable switching with coverage based WiFi using Aerohive WAPs. Internet and phone connectivity are provided through a 25 mb/s fiber connection.

Currently the classroom teachers are responsible for a 40 minute computer period per week for which they design the curriculum. The majority of computer use at the this level is content based games and online assessments such as STAR Reading and Math; at this point, there is no standard digital literacy curriculum across the schools.

There has been limited technology based professional development for faculty and staff. Staff have been offered Google Apps for Education since 2012 primarily for email and cloud based storage. There have been varied degrees of usage and technical competency.

Elementary school students were granted access to Google Accounts in 2015. There is no system-wide protocol for disseminating or training students how to use their Google Account.

Two team members of the Technology Department provide support for five elementary schools and over 700 Internet-connected digital devices. To ensure proper support for students and staff, the IT Operations Manager must balance district-wide administrative responsibilities while supporting three West Peabody schools and over 200 Internet-connected digital devices.

Current State of the Schools, cont.

Middle

At the Higgins Middle School, all classrooms have a working desktop for teacher and student use. There are two classroom labs consisting of 28 desktops used for Graphic Design and Engineering courses. Additionally, there are two general use labs offering 28 computers (main library) and 22 computers (library lab) respectively. Teachers have access to a shared supply of mobile learning devices including an iPad cart of 28, and two Chromebook carts of 28.

The building is supported by a 10/100 mb/s network with 6 IDFs and 1 MDF. The Internet and phone connection is provided through a 100 mb/s fiber connection and 36 Aerohive WAPs.

The faculty and staff have participated in approximately 30 hours of face to face technology based professional development with the technology integration specialist and as well as in house trainers and administrative support. Professional development included emerging technology issues, technology skills, universal design, and research-based models of technology integration as well as coaching, modeling best practices, district-based mentoring, study groups, and online professional development. All faculty and students have access to and have been trained on Google Apps.

There is no standardized digital literacy curriculum integrated across the grades.

The school is supported by a FTE Senior Systems Administrator, focused maintaining network and hardware functionality, and a Digital Learning Coach, responsible for staff and student technology development, student help desk, and curriculum integration.

There are currently two pilot 1:1 programs underway including a small group learning classroom of eight (8) students and a larger 8th grade cluster of 90 students.

Current State of the Schools, cont.

High

The building is supported by a Full Gigabit PoE capable network spread throughout 1 MDF and 5 IDFs. The Internet and phone connection is provided through a 100 mb/s fiber connection and 43 WAPs creating a coverage based WiFi solution. WiFi supports teacher driven lessons but does not provide the density required for a mass deployment of student devices.

Each staff member has a laptop and there are 4 labs available for general class use: 1 stationary lab in the Library of 28 desktops, and 3 mobile Chromebook carts of 30. There is 1 iPad 2 cart with 30. There is 1 Writing lab reserved for ELA courses. There are 5 labs of 18 desktops used for Technology-specific content courses. There is 1 Graphic Design lab of 18 desktops. There are also 8 desktops used in the TV production studio.

Every classroom is outfitted with a projector. As of current, this is no formal replacement cycle for projectors. 18 Projectors and 12 Bulbs were replaced alone in the 2014-15 School Year. The projector types vary from ceiling mounted projectors to cart based. There are interactive boards used throughout the school including SMARTboards and Promethean.

There has been limited technology based professional development for staff. Staff have been offered Google Apps for Education since 2012 primarily for email and cloud based storage. There has been varied degrees of usage and technical competency.

PVHMS has an on-site FTE Junior Systems Administrator. Currently, there is no FTE digital learning coach.

Community High School

At the Community High School, there are eight desktops running GradPoint, 15 classroom desktops and one WAP.

Peabody Learning Academy

At the Peabody Learning Academy, located at the Northshore Mall, there are two labs of 15 desktops running GradPoint, three laptops, one WAP, and one MDF.

Current State of the Schools, cont.

Peabody Alternative Night School

At the Peabody Alternative Night School, located at PVMHS, there is one lab of 15 desktops running GradPoint

Kiley Administration

At the administration building, there are 35 desktops, 17 laptops, 10 WAPs, and 1 Chromebook cart (36).

Maintenance

The Maintenance Dept has two desktops running software to control the school HVAC systems.

Transportation

The Supervisor and Assistant Supervisor of Transportation each have a desktop.

Telecommunications

In 2014, the Technology Department absorbed the duties of the Communications Department including the district phone system, mobile phone service, voicemail, fax machines, and photocopier management.

The current phone system was deployed in 2004 and is a digital PBX system with PRI lines for external calling. All phones were communicating district wide via T1 connections until 2015, at which time calling was transferred onto the district leased fiber connection. Due to inability to add fiber to Transportation and the Peabody Learning Academy, those locations are still running on a T1 connection. The existing Expressions (Voicemail server) is housed in the IT Office at the Kiley Administration building.

Upon acquisition of Communications, the IT Department determined that our existing Sprint mobile service was not reliable at many of our locations. An assessment of AT&T and Verizon was done, and it was determined that AT&T provided the best overall coverage. Our 50 lines were transitioned in early 2015, resulting in better reliability and a more cost effective solution.

There 50+ multifunction copiers distributed throughout the district falling varying 2-3 year leasing plans.

PRIORITY GOALS

1. ***Modernize our network and WiFi infrastructure.***
2. ***Increase availability of Internet-connected digital devices in the general classroom through a cart-based model at the Elementary and 1:1 initiative at HMS and PVMHS.***
3. ***Establish a replacement cycle for infrastructure and hardware.***
4. ***Increase teacher use of technology for research, lesson planning, multimedia and graphical presentation focused on shared technology use with colleagues.***
5. ***Educate students about appropriate online behavior and develop a district digital citizenship curriculum.***
6. ***Create and implement school system wide protocols and expectations, through professional development, professional dialogue, and other means, which promote a culture of technology learning in every classroom that engages, encourages and empowers all learners.***
7. ***Provide additional personnel to support both systems administration and technology integration.***
8. ***Develop and regularly update appropriate district-wide technology policies as needed.***

BENCHMARK 1

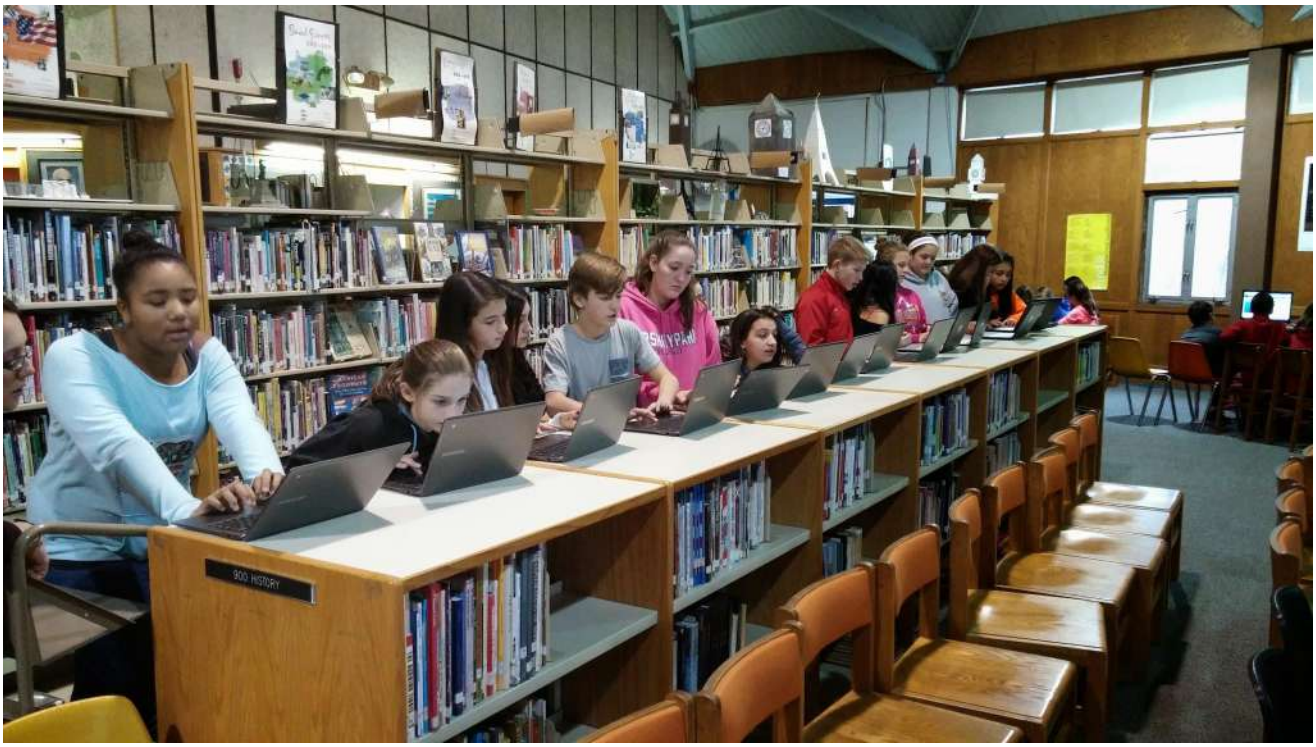
Commitment to a Clear Vision and Implementation Strategies

A. The district's technology plan contains a clearly stated and reasonable set of goals and implementation strategies. The district is committed to achieving its vision by the end of the school year 2019-2020.

B. We have a Technology Plan Committee comprised of administrators, teachers, staff and a school committee member.

C. The district has established a projected budget to illustrate the proposed changes in technology over the next five years (see appendices).

D. The district Technology Committee will revisit the technology plan at quarterly intervals throughout the year to assess how the district is meeting its priority goals. We will adjust our implementation strategies as needed.



BENCHMARK 2
Technology Integration and Literacy

A. Technology Integration

1. Outside Teaching Time - We will empower teachers to use technology every day, including some, but not limited to, the following areas: research, lesson planning, organization, professional responsibilities, communications, and collaboration. Teachers explore evolving technologies and share information about technology uses with their colleagues.

2. *For Teaching and Learning - We will empower teachers to use technology appropriately with students every day to improve student learning of the curriculum. Activities include some, but not limited to, the following: research, multimedia, simulations, data analysis, communications, and collaboration. Teachers integrate evolving technologies that enhance student interest, inquiry, analysis, collaboration, and creativity.*

B. Technology Literacy

1. A majority of eighth grade students will show proficiency in all the *International Society for Technology Education (ISTE) Standards* for grade eight. (see appendices)

2. *The majority teachers are working to meet the proficiency level in technology, and by the school year 2017-2018, most teachers will have mastered most of the skills in ISTE Standards for Teachers.*

C. Staffing

1. The district has a district-level FTE IT Operations Manager, one FTE Senior Systems Adminstrator, one FTE Junior Systems Administrator and one FTE IT Support Specialist. Plans are in the works to add an additional FTE IT Support Specialist by 2016-2017.

2. *The district provides one FTE Digital Learning Coach per 120 instructional staff to coach and model at Higgins Middle School. Plans are in the works to provide an FTE Digital Learning Coach at Peabody Veterans Memorial High School by 2017-2018 and two FTE Digital Learning Coaches at the Elementary level by 2019-2020.*

3. At the elementary schools, the Assistant Principals serve as Technology Facilitators with duties to be assigned by the building Principal and the Assistant Superintendent.

4. The district has two FTE staff members specifically dedicated to student data management. Plans are in the works to better connect the data management position with the IT department.

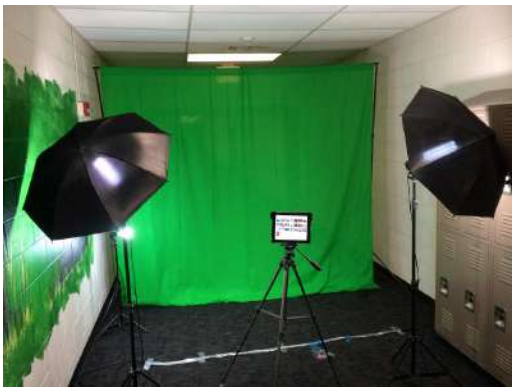
BENCHMARK 3
Technology Professional Development

A. At the end of five years, most of the 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, 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 ISTE Standards for Teachers. (see appendices)

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



BENCHMARK 4
Accessibility of Technology

A. What does access look like in the 21st century?

1. By 2020, the district supports a ratio of one Internet-connected digital device for every five students at the Elementary level and one Internet-connected digital device for every student at the Secondary levels.

2. *The district will provide students with emerging technologies appropriate to their grade level.*

3. All digital tools and content, including district, school, and teacher websites, shall meet Section 508 accessibility criteria for students with disabilities. All staff shall receive the appropriate level of training based on their position.

4. *The district shall establish procurement policies for information and instructional technologies that ensure usability, equivalent access, and interoperability. All technologies will be software agnostic. All platforms, apps and programs shall work on any Internet-connected digital device.*

5. The district provides technology-rich classrooms, with access to devices. Those updated classrooms reflect the following structures based on academic level:

A. Elementary

Every teacher has a laptop. Teacher laptops run Windows OS. There are four (4) permanent Chromebooks in each grade-level classroom. Each classroom has a projection device.

There are no physical lab spaces. There is one cart of 26 Chromebooks per 175 students.

All buildings have Gigabit capable switching with density WiFi. Internet and phone connection is provided through a 100 mb/s fiber connection.

B. Middle

Every teacher has a laptop. Teacher laptops run Windows OS. Every teacher has a tablet. Tablets are Android-based. Each classroom has a professionally mounted short throw interactive projector.

Students follow a one-to-one take home computing model utilizing Chromebooks. There are two carts of 26 Android tablets, available for classroom use in school.

The building has Gigabit capable switching with density WiFi. Internet and phone connection is provided through an 400 mb/s fiber connection.

C. High

Every teacher has a laptop. Teacher laptops run Windows OS. Each classroom has a professionally mounted short throw interactive projector.

Students follow a one-to-one take home computing model utilizing Chromebooks. There are four carts of 26 Android tablets, available for classroom use in school.

There are no stationary general use computer labs as students all have their own device. High school administration revisits the need for any stationary labs each year based the current curriculum.

The building has Gigabit capable switching with density WiFi. Internet and phone connection is provided through a 600 mb/s fiber connection.

D. Community High School

There is continuation of a lab based model with desktops running a module based self-guided learning system.

E. **Peabody Learning Academy**

There is a continuation of a lab based model with two labs of 15 desktops running a module based self-guided learning system, three laptops, and one WAP. The Peabody Learning Academy has been integrated into the district's wide-area fiber network.

F. Peabody Alternative Night School

There is a continuation of 15 desktops running a module based self-guided learning system.

G. Administration Headquarters

We continue to have desktops and WiFi to accommodate district based positions at this location.

H. Maintenance

The Maintenance Department continues to have two desktops running software to control the school HVAC systems.

I. Transportation

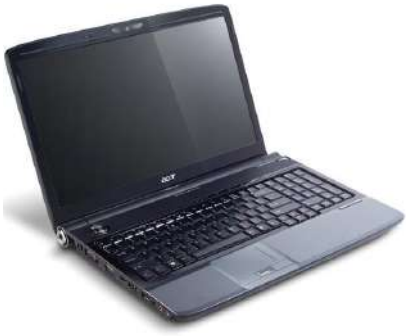
The Supervisor and Assistant Supervisor of Transportation continue to each have a desktop. The Transportation Office has been integrated into the district's wide-area fiber network.

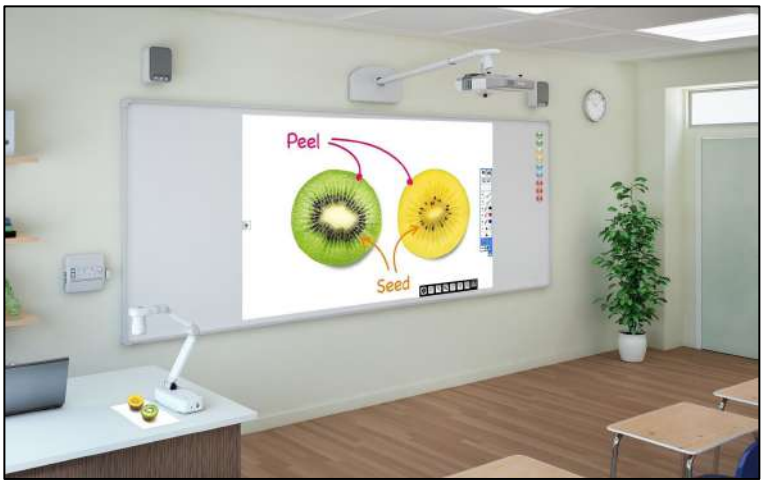
J. Telecommunications

All locations are outfitted with VoIP phones, and an integrated digital voicemail solution.

The district continues to provide a mobile phone solution to employees as needed.

All multifunction photocopiers continue to be turned over on a 2 to 3 year leasing plan.





B. **Replacement Cycle**

1. *Infrastructure Replacement*

    A. Our switching is lifetime warrantied and does not require annual upgrades or replacement.

    B. We will need to upgrade landline phones, WAPs, structured cabling and other network services as needed.

    C. Some replacement will be required when standard technology protocol changes. This is unpredictable and should be reassessed every year.

2. Hardware Replacement

    A. ***Chromebooks*** *have a lifespan of 3-4 years. As such a replacement plan must account for the need for new Chromebooks. Standard replacement of a Chromebook under a purchase cycle would cost approximately $300.*

    B. **Desktops/laptops** have a lifespan of 5 years. Every 5 years, teacher laptops and administrative desktops should be replaced. Standard replacement of a desktop/laptop under a purchase cycle would cost approximately $600.

    C. ***Tabletop projectors*** *have a lifespan of 3 years if used regularly in the classroom. Standard replacement of a table top projector under a purchase cycle would cost approximately $350.*

    D. **Ceiling Mounted projectors** should last 7 years with the need for some annual purchasing of bulbs ranging in $300-400 dollars. Full replacement of Interactive projectors such as the models installed in the Higgins Middle School project would cost approximately $2000 to replace.

3. Additional Technology

    A. Any technology procurement or replacement of existing technology outside this plan shall be the responsibility of the building principal and/or department administrator in coordination with the Technology Department.

C. External Internet Connection

1. The district currently provides an external Internet connection to the Internet Service Provider (ISP) of 75 mbps per 1,000 students/staff.

    A. **The district goal would be to provide an external Internet connection to the ISP of 1 Gbps per 1,000 students/staff.**

D. Cloud Computing

1. The district provides access to cloud computing for secure file sharing, backups, scheduling, email, and web publishing through the use of Google Apps for Education.

E. 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.*

2. The district will disseminate a list of up-to-date list of places where students and staff can access the Internet after school hours.

F. Staffing

1. *The district provides staff or contracted services to ensure that its network is functioning at all times.*

2. The district maintains both a telephone and email protocol to report technical issues. All requests for technical assistance and support shall be assessed and responded to within 24 hours. Some requests may require longer time to acquire necessary parts and/or contracted services.

3. *The district shall employ one FTE technology staff to support each 600 Internet-connected digital devices. Technical support will be provided by contracted services when necessary.*

BENCHMARK 5
Virtual Learning and Communication

A. The district encourages the development and use of innovative strategies for delivering high-quality courses through the use of technology.

B. Classroom applications of virtual learning include courses, collaborative projects, field trips, and discussions. The district uses Google Classroom as a virtual learning tool for communication between students and teachers, for collaboration in group work and in digital discussion boards.

C. We utilize a comprehensive district website. We will continue to revist the content and layout of the website as neccessary.

BENCHMARK 6
Safety, Security and Data Retention

A. The district has a CIPA-compliant Responsible Use Policy (RUP) regarding Internet and network use for both staff and students. The policy is updated as needed to help ensure safe and ethical use of resources by teachers and students.

i. **All students and staff will be issued the new RUP by the 2016-2017 school year.**

ii. All RUP student documents will be collected by the homeroom teacher and stored for legal record keeping purposes.

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.

i. Online behavior standards will be revisited yearly to reflect the changing nature of technology.

ii. All teachers will receive digital citizenship training by the start of school year 2017-18.

iii. A Secondary schools digital citizenship curriculum with be developed and implemented by 2017-18.

iv. **A district wide digital citizenship curriculum will be developed and implemented by 2018-19.**

B. *The district has a firewall and web filter to block incoming traffic to our network seen as malicious to protect the security and confidentiality of personal information of its students and staff.*

C. 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.

BENCHMARK 7
Assessment

A. The district will determine the feasibility of using technology for standardized assessments according the the state requirement of implementing computer-based testing for all students by 2017.

AMENDMENTS 2017-18

1. 4 year leases must be recalculated to 3 year leases
2. PE, Art, Health, SPED, Foreign Language, Vocational, Paraprofessionals
3. Higgins not funding their 6th grade Chromebooks. Need to figure out where the money is coming.

Glossary

PoE - Power Over Internet - Internet-connected devices receiving electrical power via the network opposed to a separate power source.

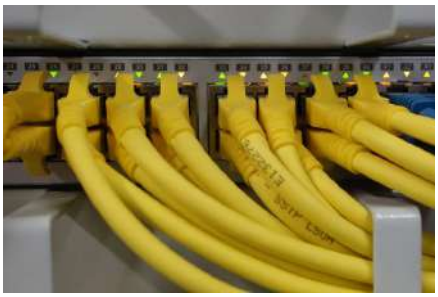
MDF - Main Distribution Frame - Usually the server room, a room that all network traffic goes back to before it leaves the building

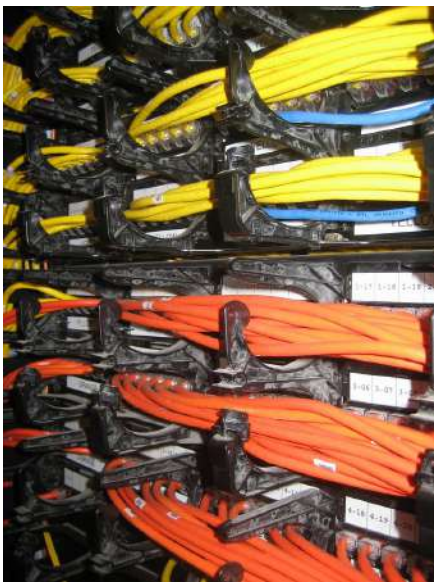
IDF - Intermediate Distribution Frame - Also called a network closet, a room that network traffic in a section of a building goes to before it go to the MDF

WAP - Wireless Access Point - A box that accepts wireless connections for Internet access.

Network Speed - mbps - Mega Bits Per Second - gbps - Giga Bits Per Second - refers to the amount of data that can be transferred over a cable in one second. This is measured in either 10, 100 or 1000.

Fiber - Connection using light instead of electricity which can send data faster, farther and without the possibly of electrical interference.





Appendix A: Equipment Needed

Elementary Schools	
Equipment	**Cost**
4x Chromebooks / Room	$1,072.00
1x Laptop / Teacher	$600.00
1x Projection Device	$479.00
1x Locking Presentation Cart	$313.00
Total Per Room:	**$2,864.00**
Cart (26 CB / Licensing / Cart)	$8,377.00
School	**Current Total/Needed**
Burke	2 (2 / 2)
West	1 (1 / 1)
McCarthy	2 (1 / 2)
Center	3 (2 / 3)
Brown	3 (2 / 3)
Welch	2 (1 / 2)
South	3 (1 / 3)
Carroll	4 (1/ 4)
Total	20

Higgins	
Equipment	**Cost**
1x Chromebook / Student	$300.00
1x Laptop / Teacher	$600.00
1x Interactive Short Throw Projector / Room	$2,599.00
2x PCs + Assorted Admin PCs	NA
1x Tablet / Teacher	$150.00

PVMHS	
Equipment	**Cost**
1x Chromebook / Student	$300.00
1x Laptop / Teacher	$600.00
1x Interactive Short Throw Projector / Room	$2,599.00
7 Labs	

Appendix B: Startup Lease Costs

Elementary Schools			
FY	**Rooms**	**Rooms**	**Cost**
FY 2017	4th & 5th Classrooms	45	$27,720
FY 2018	2nd & 3rd Classrooms 4th & 5th Classrooms Year 2/4	48	$57,338
FY 2019	1st & K Classrooms 4th & 5th Classrooms Year 3/4 2nd & 3rd Classrooms Year 2/4	45	$85,058
FY 2020	Replace Carts 4th & 5th Classrooms Year 4/4 2nd & 3rd Classrooms Year 3/4 1st & K Classrooms Year 2/4	20	$125,683

Higgins	
FY	**Cost**
FY 2017	0
FY 2018	0
FY 2019	0
FY 2020	0

PVMHS		
FY	**Items**	**Cost**
FY 2017	9th Grade Chromebooks + 25% Staff Laptops	$37,500
FY 2018	9th Grade Chromebooks + 25% Staff Laptops FY17 Lease Year 2/4	$75,000
FY 2019	9th Grade Chromebooks + 25% Staff Laptops FY18 Lease Year 2/4 FY17 Lease Year 3/4	$112,500
FY 2020	9th Grade Chromebooks + 25% Staff Laptops FY19 Lease Year 2/4 FY18 Lease Year 3/4 FY17 Lease Year 4/4	$150,000

ISTE Standards

International Society for Technology in Education

ISTE Standards Teachers

Effective teachers model and apply the ISTE Standards for Students (Standards•S) as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. All teachers should meet the following standards and performance indicators.

1. Facilitate and inspire student learning and creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments.

a. Promote, support, and model creative and innovative thinking and inventiveness

b. Engage students in exploring real-world issues and solving authentic problems using digital tools and resources

c. Promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes

d. Model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

2. Design and develop digital age learning experiences and assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the Standards•S.

a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity

b. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress

c. Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources

d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards, and use resulting data to inform learning and teaching

3. Model digital age work and learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

a. Demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations

b. Collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation

c. Communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital age media and formats

d. Model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

4. Promote and model digital citizenship and responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices.

a. Advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources

b. Address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources

c. Promote and model digital etiquette and responsible social interactions related to the use of technology and information

d. Develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital age communication and collaboration tools

5. Engage in professional growth and leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

a. Participate in local and global learning communities to explore creative applications of technology to improve student learning

b. Exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others

c. Evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning

d. Contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community

ISTE Standards

International Society for Technology in Education

ISTE Standards Students

1. Creativity and innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

a. Apply existing knowledge to generate new ideas, products, or processes

b. Create original works as a means of personal or group expression

c. Use models and simulations to explore complex systems and issues

d. Identify trends and forecast possibilities

2. Communication and collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

a. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media

b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats

c. Develop cultural understanding and global awareness by engaging with learners of other cultures

d. Contribute to project teams to produce original works or solve problems

3. Research and information fluency

Students apply digital tools to gather, evaluate, and use information.

a. Plan strategies to guide inquiry

b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media

c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks

d. Process data and report results

4. Critical thinking, problem solving, and decision making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

a. Identify and define authentic problems and significant questions for investigation

b. Plan and manage activities to develop a solution or complete a project

c. Collect and analyze data to identify solutions and/or make informed decisions

d. Use multiple processes and diverse perspectives to explore alternative solutions

5. Digital citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

a. Advocate and practice safe, legal, and responsible use of information and technology

b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity

c. Demonstrate personal responsibility for lifelong learning

d. Exhibit leadership for digital citizenship

6. Technology operations and concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.

a. Understand and use technology systems

b. Select and use applications effectively and productively

c. Troubleshoot systems and applications

d. Transfer current knowledge to learning of new technologies