Ann Arbor Public Schools

Technology Plan

2013-2015

Exceptional

ANN ARBOR PUBLIC SCHOOLS
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Ann Arbor Public Schools

Technology Plan

2013-2015

District Code: 81010

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URL for AAPS Technology Plan: http://www.aaps.k12.mi.us/techplan

Ann Arbor Public Schools

Technology Plan

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Acknowledgements

The work of the Technology Plan Advisory Committee has formed the foundation of this document and set the vision for technology implementation and integration in the Ann Arbor Public Schools. The Advisory Committee has strong representation from across instructional disciplines and technology. It works to ensure the alignment of technology initiatives with the district's curricular goals and the Strategic Plan.

2013-2015 Technology Plan Advisory Committee

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The Technology Plan Steering Committee is comprised of local business and community leaders who have a shared interest in technology and its direction within the Ann Arbor Public Schools.

2013-2015 Technology Plan Steering Committee

Adam Chiasson
Brandon Black
Julie Janusz
Kevin Spall
Kosta Kontoyiannakis
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Introduction

Context of the 21st Century Student

"Integrating technology throughout a school system is, in itself, significant systemic reform. We have a wealth of evidence attesting to the importance of leadership in implementing and sustaining systemic reform in schools. It is critical, therefore, that we attend seriously to leadership for technology in schools." — Don Knezek, ISTE CEO

Integrating technology into the 21st century classroom has never been more critical nor challenging. According to a Henry J. Kaiser Family Foundation survey, youngsters ages 8-18 use electronic media for **more than seven and a half hours a day.**[1]

As educators, we are aware that this ubiquitous use of technology in our students' lives brings many challenges and opportunities. Some of the challenges include:

- the digital divide, wherein socioeconomic differences impact students' access and skill levels
- cost of equipment and infrastructure
- professional development and accountability that leads to equitable classroom experiences
- the complexity of guiding students to become efficient users of information and ethical digital citizens

However, there are also many important opportunities that support student acquisition of 21st century skills for college and career readiness:

- high levels of student engagement
- increased collaborative work
- the ease of self-paced and individually designed learning
- the opportunity to broaden students' perspectives through global learning

In order to remain relevant in education and continue to attract high caliber students and staff, we recognize the need to move in the direction of one-to -one computing within the next five years. In addition, it is imperative that every educator has basic 21st century competencies, and that every child is monitored and assessed in these skills as well.

By combining technology judiciously with new approaches to education, we can meet these challenges and capitalize on the opportunities. Continuing our practice of using the 2009 Michigan Educational Technology Standards (METS) and the 2006 National Educational Technology Standards (NETS) for Students, developed by The International Society for

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[1] "Generation M2: Media in the Lives of 8- to 18-Year-Olds." The Henry J Kaiser Family Foundation, 01-20-2010. Web. 29 Feb 2012. <http://www.kff.org/entmedia/mh012010pkg.cfm>.

Technology in Education (ISTE), and the standards set by the Common Core, our work will continue to focus on optimizing learning in each of the six standards:

- Creativity and innovation
- Communication and collaboration
- Research and information fluency
- Critical thinking, problem-solving and decision-making
- Digital citizenship
- Technology operations and concepts

Today's educators must provide a learning environment that takes students beyond the walls of their classroom and into a world of endless opportunity. Technology standards promote this classroom transformation by ensuring that digital-age students are empowered to learn, live, and work successfully today and tomorrow.

District Profile

About the District:
The Ann Arbor Public School District serves the City of Ann Arbor and parts of eight surrounding townships covering 125 square miles.

Our Schools:
20 elementary, 1 K-8 open school, 5 middle schools, 3 comprehensive high schools, 3 alternative high schools, 1 pre-school and 1 adult education program.

Our Enrollment:
The total K-12 head count enrollment as of September 2011 is 16,544.

Staff:
The district employs over 3,000 full and part-time staff members. Approximately 81% of our teaching staff holds a master's degree or above.

Our Finances:

FY 11/12 Revised General Fund Budget:	***$ 185.8M***
Direct Services	82.4%
Other Services	
General Administration	1.0%
Business Services	1.2%
Operations & Maintenance	10.4%
Central Services/Other Benefits & Support	3.0%
Community Services	0.3%
Athletics	1.7%

Other Budgets:

Capital Needs	***$ 0.1 million***
Debt	$ ***15.87 million***
Sinking Fund (2002/2005)	$ ***14.90 million***
Food Service	$ ***4.54 million***
Recreation & Community Service	***$ 8.54 million***

Mission / Vision / Goals

Mission

The mission of the Ann Arbor Public Schools, a world-class system of innovative teaching and learning, is to ensure each student realizes his or her aspirations while advancing the common good through a community dynamic distinguished by:

- ✓ Personalized learning that is curiosity driven, student directed, teacher inspired
- ✓ Challenging and provocative curriculum
- ✓ Individualized and group creative expression
- ✓ The nurturing of the human spirit
- ✓ Culturally congruent instruction
- ✓ Forging alliances with families and communities

Strategies

The strategies we employ encompass bold resolutions that dedicate the organization's resources and energies toward the continuous creation of systems to achieve the extraordinary as expressed in the mission and objectives.

- ✓ We will create a complete educational program featuring personalized learning that realizes student aspirations and meets international standards.
- ✓ We will develop and implement a personalized learning plan for each student.
- ✓ We will actualize the potential for excellence in all students through inspiration and support.
- ✓ We will ensure meaningful learning through effective teaching.
- ✓ We will implement a system to ensure continuous development of staff capacity.
- ✓ We will inform and engender trust and support from our constituents to accomplish our mission and objectives.
- ✓ We will create and maintain physical learning environments that enable us to fulfill our mission.
- ✓ We will ensure resources adequate to accomplish our mission and objectives.

Objectives

Our objectives depict an uncompromising commitment to achieve specific, measurable, observable, or demonstrable results that exceed its present capability.

- ✓ 100% of Ann Arbor Public School students will exceed international standards in achievement.
- ✓ Each student progressively achieves his/her personalized educational goals.
- ✓ Students have and demonstrate concern for self and others.
- ✓ Each student is a positive contributor to his/her community.
- ✓ All students are accomplished in their lifelong pursuits.

Beliefs

An expression of fundamental values: ethical code, overriding convictions, inviolable principles, our beliefs shape who we are as a learning community.

We believe that...

- ✓ heritage shapes individual identity;
- ✓ all people have the right to learn without limits;
- ✓ a person's achievement cannot be predetermined;
- ✓ we are strongest when working together;
- ✓ everyone can make a valuable contribution to society;
- ✓ environmental stewardship is our moral obligation;
- ✓ the dignity of each person deserves respect;
- ✓ racism is destructive;
- ✓ communication leads to understanding, understanding fosters relationships, and community is built on those relationships;
- ✓ we first create in ourselves what we seek to create in the world;
- ✓ all people deserve to live in a healthy, safe environment;
- ✓ diversity enriches a community;
- ✓ individual potential deserves fulfillment; and
- ✓ all people have the innate desire for creative expression.

Parameters

Parameters are defined by boundaries within which the organization will accomplish its mission; self-imposed limitations.

- ✓ We will make all decisions and take all actions based strictly on the best interest of the student.
- ✓ We will not tolerate prejudice by anyone.
- ✓ We will not accept ineffective performance.
- ✓ We will not compromise excellence.
- ✓ We will ensure the safety and security of all those in the district.
- ✓ We will not engage in anything that does not support our primary-secondary educational programs.

Vision

Research shows that consistent and sustained integration of technology in an authentic teaching and learning environment improves student achievement. The Ann Arbor Public Schools Technology Plan provides a vision and outline for curricular integration of technology in teaching and learning in the district. This vision will be implemented by building the capacity of our staff to effectively and seamlessly infuse technology resources into instructional practice while providing for equity of access to information and instructional resources, both physical and intellectual, for every student.

Curriculum

Student Achievement & Technology Integration in the Curriculum

Current Initiatives & Technology Integration Map

The Ann Arbor Public Schools 2007-2012 Strategic Plan outlines a number of specific actions including development of a personalized learning plan for each student and the overall adoption of high quality, challenging curriculum. These two areas, among others, are intended to strengthen the educational experience for every student in the district and are tied directly into the use of technology and delivery of curriculum in blended and online forms to support all students. The integration of technology into teaching and learning is accomplished through a number of current initiatives, both curricular and programmatic.

These initiatives include:

- ✓ Online course options
- ✓ Online curriculum tools for students support and credit recovery
- ✓ Technology-based literacy intervention programs such as Read 180 and System 44
- ✓ Technology-based math support programs such as FASTT Math and Fraction Nation
- ✓ PreK-12 Information Literacy and Technology Scope & Sequence (Appendix 2); based on the revised Michigan Educational Technology Standards (Appendices 3-6) and the National Educational Technology Standards (Appendix 7)
- ✓ Software to support the elementary mathematics curriculum, Everyday Mathematics
- ✓ Adaptive, computerized assessments like the Northwest Evaluation Association's Measures of Academic Progress (MAP) and the Scholastic Reading Inventory (SRI), which provide data to drive instruction
- ✓ Ongoing subscriptions for databases that provide research options for students, virtual manipulatives for science and math, and multimedia content supporting the Michigan Learning Standards

The Instructional Technology Map (Appendix 1) gives more detail on initiatives, timelines, and evaluation metrics relating to Ann Arbor Public Schools technology integration.

Digital Citizenship: Ethical Use of Information and Cyber Bullying Prevention

It is a goal of the Ann Arbor Public Schools to nurture and lead our students toward responsible digital citizenship. According to a 2010 Kaiser Foundation Study, children between the ages of 8 and 18 are spending an average of seven and a half hours per day on various electronic devices.[2] We recognize the imperative to teach children how to use information ethically and how to treat others with care and respect, even online.

The following paragraph from the organization iSafe offers a sobering view of the issue today[3]:

Bullying is no longer about the strong picking on the weak in the schoolyard. The physical assault has been replaced by a 24 hour per day, seven days a week online bashing. Savvy students are using Instant Messaging, e-mails, chat rooms and websites they create to humiliate a peer. No longer can parents count on seeing the tell-tale physical signs of bullying—a black eye, bloody lip, torn clothes. But the damage done by cyber bullies is no less real, and can be infinitely more painful.

Cyber Bullying Statistics[4]

- *42% of kids have been bullied while online. 1 in 4 have had it happen more than once.*
- *35% of kids have been threatened online. Nearly 1 in 5 have had it happen more than once.*
- *21% of kids have received mean or threatening e-mail or other messages.*
- *58% of kids admit someone has said mean or hurtful things to them online. More than 4 out of 10 say it has happened more than once.*
- *53% of kids admit having said something mean or hurtful to another person online. More than 1 in 3 have done it more than once.*
- *58% have not told their parents or an adult about something mean or hurtful that happened to them online.*

In extreme situations, cyber bullying has even led some students to commit suicide.

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[2] "If Your Kids Are Awake, They're Probably Online."*New York Times* 01-20-2010. Web. 29 Feb. 2012.

[3] "Cyber Bullying: Statistics and Tips." *iSafe, Inc.*. iSafe, Inc., 2009. Web. 29 Feb 2012. <http://www.isafe.org/channels/sub.php?ch=op&sub_id=media_cyber_bullying>.

[4] "Cyber Bullying: Statistics and Tips." *iSafe, Inc.*. iSafe, Inc., 2009. Web. 29 Feb 2012. <http://www.isafe.org/channels/sub.php?ch=op&sub_id=media_cyber_bullying>.

The goal of educating children to be ethical and efficient digital citizens is more complex than the single issue of cyber bullying suggests. At Ann Arbor Public Schools we define this Digital Citizenship challenge by using themes from The Internet Keep Safe Coalition's (iKeepSafe) as guidelines:

Achieving Digital Security

Throughout all grades, and in all classrooms when appropriate, students will learn about the following issues and hone the attendant skills necessary to learn and work in the digital environment:

- How to save work (e.g. from desktop to district server, to the Google environment)
- The importance of secure passwords and their private nature
- Knowledge of viruses, firewalls, etc.
- The elements and importance of Acceptable Use Policies (AUPs). AUPs are in all enrollment packages, and they are formally reinforced by Media Specialists during Information Literacy and Technology lessons in grades K-5 (See Appendices 9-11).

Maintaining Healthy and Safe Relationships

AAPS will put particular emphasis on this point as we work systematically to prevent and deal with the growing concern of Cyber Bullying. We are committed to work in an effort to prevent these incidents before they happen through the following programs:

- K-5 Curriculum using activities and discussion around this topic delivered by Media Specialists[5]
- Positive Behavior Interventions and Supports (PBIS)
- Cyber Bullying and Cyber Safety curriculum delivered by middle school and high school counselors
- Professional development for administrators
- Professional development for new hires and during mentor/mentee meetings
- Instructional packets created at the district level for teachers that anticipate issues for certain initiatives (e.g., Edmodo)
- Parent information nights will be conducted at the middle school level once per year through partnership with the Washtenaw Area Council for Children

In addition, AAPS will revise the Acceptable Use Policies (AUPs) for each level to include language about cyber bullying, digital citizenship and online safety (See Appendices 9-11).

Protecting Personal Information

Deciding what personal information can and should be shared online has become a challenge for youth and adults alike. While it is necessary to share information for many legitimate

[5] A primary source of lesson plans and additional Internet resources comes from Common Sense Media, http://tinyurl.com/5rg8ev6.

reasons (online purchases, job applications, etc.), privacy and identity theft are major concerns. AAPS students will receive coaching on this subject through:

- Information Literacy and Technology lessons delivered by the K-5 Media Specialists, throughout the elementary years
- Middle School Computer classes
- Online and in-person lessons designed and delivered by middle school and high school staff
- Middle and High School Counseling curriculum

Building a Positive Reputation

Helping our students become aware that pictures and information posted digitally remain accessible indefinitely will be another action point for AAPS educators. This 21st century phenomenon can have huge consequences for our students as their online reputation impacts their ability to apply to colleges and employment opportunities. AAPS students will receive coaching on this subject through:

- Information Literacy and Technology lessons delivered by elementary Media Specialists
- Middle School Computer classes
- Online and in-person lessons designed and delivered by middle school and high school staff
- Middle and High School Counseling curriculum

Practicing Ethical Digital Usage

How do we help students really *learn* in our wired world? To really learn, one does not merely copy the work of others, or use information he or she can't really understand and synthesize. AAPS includes plagiarism as a Code of Conduct violation in its Rights and Responsibilities handbook, but as authors Rebecca Howard and Laura Davies state:

Students don't need threats; students need pedagogy. That pedagogy should both teach source-reading skills and take into consideration our increasingly wired world. And it should communicate that plagiarism is wrong in terms of what society values about schools and learning, not just in terms of arbitrary rules.[6]

With this in mind, AAPS educators will continue to teach students the skills they need in order to synthesize information for use in effective and principled ways. In addition, ethical digital usage is addressed at specific levels throughout a student's AAPS experience:

- Information Literacy and Technology lessons delivered by elementary Media Specialists

[6] Howard, Rebecca Moore, and Laura J. Davies. "Plagiarism in the Internet Age." *Educational Leadership*. 03 2009: 64-67. Web. 29 Feb. 2012. <http://www.ascd.org/publications/educational-leadership/mar09/vol66/num06/Plagiarism-in-the-Internet-Age.aspx>.

- Middle School Capstone Project
- English 9 courses

Educational Technology Standards Alignment

Ann Arbor Public Schools continuously reviews curriculum alignment work to ensure all courses are aligned with Michigan Learning Standards. One component of this review is to integrate technology throughout the content areas. AAPS has developed an extensive Information and Technology Skills Scope and Sequence (See Appendix 2) based on the the Michigan Educational Technology Standards (METS) (See Appendices 3-6) and the National Educational Technology Standards for Students (NETS-s) (See Appendix 7).

This work informs lesson development and projects across the curricular areas. The goal is to incorporate aspects of digital citizenship and technology literacy using new communication and collaboration technologies throughout the content areas.

One example of a current curricular tie-in to the educational technology standards is the middle school Capstone Project for Social Studies and English Language Arts. Students in our middle school programs complete this project as a course requirement. The project incorporates research and evaluation of information literacy skills with group work experience, culminating in the collaborative creation of a digital product; students experience content area growth while concurrently building technological literacy.

Another example of ensuring alignment with Michigan Educational Technology Standards is our elementary media program. Our school media specialists incorporate technology operations, research skills, and multimedia creation throughout the elementary experience for all students in AAPS.

In addition, the District has a strong three-tiered curriculum that provides multiple technology-based interventions to support student learning in the content areas. For instance, Read 180 and System 44 are technology-enhanced reading programs implemented in Grades 3-12. The programs are designed to increase fluency and comprehension in a variety of expanded genres. Pre- and post-assessments are embedded for ongoing monitoring of student progress. The district has used this program at the middle level for seven years and expanded to high school and upper elementary during the last three years after seeing gap-closing progress for students participating in either program.

Over the course of the next three years, AAPS plans to work with teacher leaders and administrators to align our Information and Technology Skills Scope and Sequence with the Common Core State Standards (CCSS) to ensure a seamless fit between technology and curriculum moving forward.

Strategies and Measures for Supporting Student Achievement

On June 15, 2010, the Michigan Department of Education adopted the Common Core State Standards (CCSS). The intent of the CCSS is to produce students who are career and college ready by the time they graduate our school system and include "rigorous content and application of knowledge through high-order skills."[7]

Students are most successful when they **use and apply** the knowledge they are learning and the abilities they are developing to solve **real-world problems** and conduct **relevant investigations**. The four standards of authentic instruction form a foundation from which increased learning and understanding stems. These standards are:

- ✓ **Higher-Order Thinking:** Instruction involves students in manipulating information and ideas by synthesizing, generalizing, explaining or arriving at conclusions that produce new meaning and understandings for them.
- ✓ **Deep Knowledge:** Instruction addresses the central ideas of a topic or discipline with enough thoroughness to explore connections and relationships and to produce relatively complex understanding.
- ✓ **Substantive Conversation:** Students engage in extended conversational exchanges with the teacher and/or peers about subject matter in a way that builds an improved and shared understanding of ideas or topics.
- ✓ **Connections to the World Beyond the Classroom:** Students make connections between substantive knowledge and either public problems or personal experiences.

Technology tools help teachers enhance student learning by providing them with instructional opportunities that move past a superficial understanding to an in-depth application of the knowledge and skills they are learning. In particular, teachers need to move students past the Substitution and Augmentation phases, and into the Modification and Redefinition phases, as defined by Puentedura in his presentation on Metaphors, Models and Flows: Elements for a Cartography of Technology in Learning.[8]

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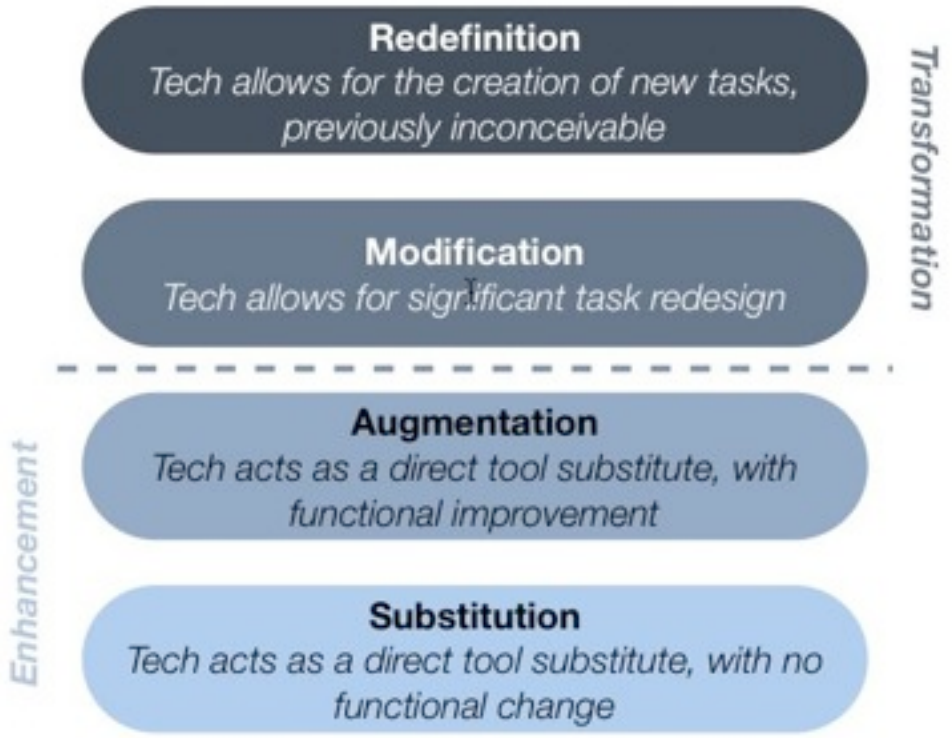
[7] "About the Standards." *Common Core State Standards Initiative: Preparing America's Students for College and Career*. National Governors Association and the Council of Chief State School Officers, 2011. Web. 29 Feb 2012. <http://www.corestandards.org/about-the-standards>.

[8] "Metaphors, Models, and Flows: Elements for a Cartography of Technology In Learning." *Ruben R. Puentedura's Weblog: Ongoing thoughts on education and technology.*. Hippasus, 01-24-2012. Web. 29 Feb 2012. <http://www.hippasus.com/rrpweblog/archives/2011/11/23/MetaphorsModelsFlows.pdf>.



In our programs we currently rely on a number of traditional measures to evaluate the impact district initiatives have on student achievement and learning outcomes. These include standardized test scores (MEAP/MME), universal screening measures (SRI and NWEA MAP assessments), formative running record literacy assessments, graduation rates, and classroom grades.

The district continues to focus its school culture on that of using student data and reviewing student work to drive instructional decisions. That work continues through the Achievement Team Process and our Comprehensive School Improvement Process. Furthermore, we have begun to establish multiple means of demonstrating student growth through the use of NWEA MAP assessments and plan to use that data in a longitudinal evaluation of student outcomes to evaluate program success.

Supporting ALL Students with Alternative Curriculum Resources

The Ann Arbor Public schools are committed to adapt and select their curriculum so that there are multiple means of representation, multiple means of action and expression, as well as multiple means of engagement. Further details and descriptions can be found at: http://aim.cast.org/learn/historyarchive/backgroundpapers/differentiated_instruction_udl

The district is committed to fulfill mandates of IDEA 2004 so that all students are able to access the curriculum. Assistive Technology Decision Making Process meetings are used to guarantee this commitment. Computer network resources are in place to facilitate writing and reading for

students who are challenged with such. We wish to take advantage of the sounds, images and links involved in multimedia so that our students can show their best work and thinking.

Technology Delivery

Technology Distribution and Refresh

Our 2004 Bond gave us an excellent base level of technology access within the school system. Unfortunately, that base is now out of warranty, outdated and failing.

The Board of Education recently approved a new Technology Bond, which will be voted on in May of 2012. The focus of the Bond is to update existing cabling, expand wireless network capabilities to support mobile devices and a public network, refresh student and teacher computers, and purchase mobile devices for our elementary buildings. If passed, this Bond will be rolled out in three phases over the next 10 years, beginning in the Fall 2012 (See Appendix 15).

Personalizing Learning Through Alternative Programming

Personalized learning provides a student with some degree of choice as to what learning is, and when and how learning takes place. One approach to personalizing learning is through the integration of high quality curriculum materials that support the principles of universal design for learning (UDL). These can provide online and blended learning opportunities that are self-directed and allow acceleration or remediation of content for students across the district.

Through our Choices $A^{2.0}$ program, we allow students to access learning opportunities that are unconstrained by face-to-face classrooms and synchronous contact with the teacher. At the same time, we maintain strong teacher-student relationships by assigning qualified teachers to serve as online facilitators. AAPS has selected tools and courses that make it possible for our teachers to meet students at their academic level and move them forward. Through Choices $A^{2.0}$, students may take courses through Michigan Virtual High School and ALEKS Math, as well as courses developed by AAPS staff in our learning management system, Moodle.

The Ann Arbor Options Program is another unique way for students to gain their high school education. It serves students who are looking to develop their own individualized educational plan. An Options Program student's course load may include Community Resource (CR) courses, dual-enrollment courses at a local university, split-enrollment at other AAPS high schools, independent study and online courses.

A recent addition to the Choices $A^{2.0}$ family, the Options Magnet Evening Program at Ann Arbor Technological High School also provides students with an alternative way to complete their high school education. Students enter the Evening Program through an interview process and have

the ability to take some or all of their courses online through our Education 2020 (E2020) content management system.

In all instances with Choices A$^{2.0}$, technology facilitates greater flexibility and student choice in the learning process.

Instructional Resources

AAPS offers an extensive virtual library of student instructional resources that support curricular needs including:

- ✓ Destiny Library System
- ✓ Discovery Education
- ✓ E2020
- ✓ Edmodo
- ✓ ExpoEd
- ✓ History Alive!
- ✓ Michigan Electronic Library Resources (MEL)
- ✓ NetTrekker
- ✓ AAPS Moodle
- ✓ My Access Writing Program
- ✓ SAS Curriculum Pathways
- ✓ Science Gizmos
- ✓ Teachingbooks.net

The most current listing of student resources can be found on our website here: http://www.aaps.k12.mi.us/ins.forstudents/home.

Mobile Learning

"Mobile learning can take education back out into the home, the workplace and the community. Mobile learning can be spontaneous, portable, personal, situated; it can be informal, unobtrusive, ubiquitous."[9]

The use of mobile learning and communication devices has become an everyday reality in business and learning environments. According to the Netsize Guide, 2008, the use of mobile

[9] Kukulska-Hulme, Agnes, and John Traxler. *Mobile Learning: A Handbook for Educators and Trainers*. New York: Taylor & Francis, Inc., 2005. eBook. pg. 42. <http://books.google.com/books?id=g50i6p7Ox2wC&printsec=frontcover&source=gbs_ge_summary_r&cad=0>

devices involves over 85% of contemporary American society[10]. The Pew Internet and American Life Project reports that text message utilization increased from 41% to 58% of the US population between April of 2006 and July of 2008 and has no doubt increased substantially since then.[11]

In the Ann Arbor Public Schools, portable devices have made learning and communication more desirable and accessible. Educators have found these tools particularly effective in:

- Implementing personalized learning plans
- Providing meaningful learning through effective instruction
- Delivering content and information
- Differentiation of instruction and schema development
- Student writing and peer editing
- Fostering communication and collaboration between students and student/teachers
- Conducting formative and summative assessments
- Providing real time access to performance-based evaluations to gauge learning and self-assessment

Benefits of the mobile devices include:

- Lower initial cost allowing greater access for students
- Longer battery life and increased hands-on time for students
- Access to a diverse, and ever-changing, pool of content specific applications
- Multifunctional cameras for developing digital content

Mobile learning devices enhance the classroom differently than laptops and desktops: they provide an engaging environment that is immediately personal and provides just-in-time learning and differentiated instruction. The possibilities for high level formative assessments are realized in mobile learning; not only can a teacher create and assess student learning, but with mobile devices, students can begin to take ownership of their learning process as well.

In the short term, it is imperative for the district to provide for appropriate bandwidth and connectivity to support the use of personal devices. We believe this is true for the following reasons:

- Print textbooks have become an endangered species. We believe they will not be widely available within 5 years and that they will be replaced by digital readers or currently unknown tools.

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[10] Brown, Judy, David Metcalf, and Ria Christian. "Mobile Learning Update." *Eliot Masie's Learning Consortium Perspectives*. The Maisie Center, 2008. Web. 29 Feb 2012. <http://masieweb.com/p7/MobileLearningUpdate.pdf>.

[11] "Mobile Access to Data and Information." *Pew Internet*. Pew Internet & American Life Project, 2008. Web. 29 Feb 2012. <http://www.pewinternet.org/~/media/Files/Reports/2008/PIP_Mobile.Data.Access.pdf.pdf>.

- Most students, at the secondary level, currently own personal and powerful computing tools. They use them for social interaction and to collaborate around learning and homework. We need to explore the use of personal devices in the school environment as we look for affordable solutions to the problem of integrating current tools and literacies that students use on a daily basis.

- Since students use these tools on a daily basis, schools have the responsibility to teach functional and appropriate use of them. When students learn how to use these tools currently, most are learning without intentional guidance from home or school.
- Access to mobile learning tools can be differentiated by socio-economic status. Children who do not have access to mobile learning tools in their home environment will need to learn and practice use of them in the school environment if we are to assure their social and economic futures with respect to college and career readiness.

Digital Textbooks

The Ann Arbor Public Schools recognizes that textbooks are quickly moving from print to digital format. Publishing companies are competing to provide materials that are interactive and engaging to students beyond the traditional print versions of days past. In fact, Apple, Inc. and three major textbook publishers have recently announced cooperative licensing agreements and Apple has a released free textbook authoring software for the iPad. The migration from book to digital text resources is occurring faster than most have predicted.

We embrace the move toward digital textbooks, but move forward with caution: we want to ensure that all of our students continue to have equitable access to classroom resources; and we want to choose a product that is reasonable in price, solid in technical support, and provides an experience for our students that connects them to the curriculum in ways a print resource cannot. Thus, digital textbooks are an arena we will explore over the life of this Plan, to ensure the best fit for all.

Parental Communications and Community Relations

Ann Arbor Public Schools recognizes that good communication with our constituents is a vital part of our success. The district Strategic Plan specifically addresses improving our communications by:

- Enhancing our district and school websites
- Implementing exemplary two-way communication between the district and families

In the Fall of 2008, AAPS implemented new baseline standards for our schools' websites. These standards establish the minimum amounts of content that every site should have, how often they should be updated, and include a requirement for each site to offer ways in which they can gather feedback from families through surveys, "questions of the month", etc. (See Appendix 11).

The district currently uses a variety of media to communicate with our parents and community:

- The District website is continually updated by the various departments responsible for the content.
- Every school has a website that is kept up-to-date by a building staff member who is compensated as the school webmaster.
- AAPS Board policies and regulations, meeting schedules and minutes are all posted on the district website.
- District and building publications (Technology Plan, Annual Reports, Strategic Plan and updates, Bond Project updates, calendars) are printed and distributed to homes, as well as posted on our websites.
- Schools communicate using SchoolMessenger, the district's notification platform, to send digital communications out to parents.
- Schools have daily, weekly or monthly announcements or newsletters that they print and distribute and post electronically to their website.
- Teachers and other staff have the capability of creating their own classroom website using various web-publishing options (GVC.Sitemaker, the district's web content management system; Moodle, the district's online learning management system; Google Sites; Blogger; Edmodo) to communicate with parents and post assignments and other course materials for students.
- The district's student information system, PowerSchool, allows students and parents to log in and view up-to-date attendance and grading information.
- The district has a license for Zoomerang which is used extensively to gather input and feedback from parents and the community on a wide range of topics, including the world language program, human sexuality instruction, home technology access, etc.

Since 2009, the AAPS has been working to improve and expand communication with staff and families. As part of this initiative, a committee was formed in the Spring of 2009 to develop a plan of action aimed at responding to the closure of the local daily newspaper. This committee, made up of staff and parents, recommended the launch of a bi-weekly AAPS News online publication; AAPSNews was launched in 2010. After a short hiatus, AAPSNews resumed in

January 2012 as not only a bi-weekly online news publication but with frequent story feeds and the addition of social media. Twitter and Facebook are now activated to push AAPS information out to our local, regional and worldwide communities.

In 2010, the district also began using SchoolMessenger, a phone and email service that draws student data from Powerschool to allow for fast communication with staff and families. SchoolMessenger has proven itself time and again for communications ranging from emergency situations, school closing notices and general information to share with families. AAPS families have come to expect the SchoolMessenger service to deliver timely emails and phone messages pertaining to their students and schools. In addition, the AAPS has provided SchoolMessenger training and access to PTO representatives from each school in order to supply them with the most up-to-date student information for their communications (See Appendix 12).

Furthermore, the district implemented Google Apps for Teachers in the winter of 2010, which integrates email, calendaring and document sharing within a single environment. The suite also includes robust email list services, and will allow for the easy creation and maintenance of email lists for our schools, PTOs, clubs, and other organizations.

Collaboration

Adult Literacy

At Ann Arbor Technological High School, we have adult educational programs that make use of the district's rich technology resources. This is an existing program for GEDs and other services.

Community Partnerships

Ann Arbor Public Schools has established relationships with community partners such as the Ann Arbor District Library and multiple community centers to increase access for our school community to computers, instructional resources, and Internet services. For example, through the Ann Arbor District Library (AADL) our families may access research databases, online homework help and other resources. Beginning Fall 2012, parents will also have access to AADL community outreach classes for specific software programs like PowerSchool, facilitated by AAPS teachers.

In addition, the Ann Arbor Public Schools has recently joined with Comcast to become an Internet Essentials Partner in an effort to inform our school communities about fast, affordable home Internet services available to families who receive free- and reduced-lunch. We strive to have as many of our families have home Internet access as possible.

We also plan to begin a partnership with the Washtenaw Area Council for Children so that we can inform students and community members about safe online behaviors and how to be a responsible digital citizen.

Professional Development

"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn."[12]

Cognitive scientists and educators agree that we are undergoing a profound shift in the ways that information is acquired as we move from book literacy to digital literacy.[13] Basic teacher skills must include the ability to move across multiple platforms and contexts and the ability to understand which technologies are appropriate for specific tasks. Teachers must possess a stance of inquiry and flexibility toward emerging technologies, as well as have a basic knowledge of digital citizenship and Cyber Safety.

It will also be important for teachers to understand evolving tools for assessment of learning as well as changing aspects of instructional design. Harnessing the power of online learning, as well as having an awareness of its limitations, are areas in which new understandings are emerging from a growing body of research.

A global understanding of these profound changes should be included in teacher learning and professional development. State guidelines and professional organizations recognize that effective professional development is embedded in teacher practice, differentiated to the needs of the learner and conducted within professional learning communities.

As a district, we must build professional development models to address these needs and provide a differentiated and collaborative system. We currently lack a Technology Continuum of Proficiency; we have not yet defined a threshold of minimum technical competency for our staff. An important function of our professional development system and this Technology Plan will be to create a continuum of these essential skills over the next three years, as well as provide the ability to measure proficiency and growth along the continuum for each member of our learning community.

Professional Development Outline

Specific features of our professional development plan will include technology-related classes combined with differentiated instruction based on our Technology Continuum of Proficiency, as outlined below:

- ✓ **Embedded Instruction Workshops** – as detailed below.
- ✓ **Workshops** - Regular technology face-to-face workshops.
- ✓ **Excursions:** School Visits, Work Place Visits, Conferences, etc.

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[12] Alvin Toffler.

[13] Cope, Bill, and Mary Kalantzis. *Multiliteracies: Literacy Learning and the Design of Social Futures*. New York: Routledge, 2005. eBook.

- ✓ **Online Learning** – The district web site provides professional development links that leads teachers to exceptional PD options such as MI Learnport and internal PD offerings.
- ✓ **New Teacher Orientation** - All new hires will be expected to have a thorough basic understanding of technology and curriculum integration of technology as reflected in teacher job descriptions and described in the Technology Continuum of Proficiency. During new teacher orientation time is provided to present the Ann Arbor technology approach to new staff members.
- ✓ **Staff Technology Survey** – A tool to determine current technology usage and proficiency for staff members and to identify desired professional development topics.

Embedded Instruction Workshops

- ✓ **Digital Literacy:** Design and implementation of a district course on digital literacy for all instructional staff. The outcomes of this course will also be embedded in the district's mentoring program.
- ✓ **Digital Citizenship:** Design and implementation of a district course in digital citizenship and safety and an inclusion of this content in building PBIS planning.

Continuum Development

- ✓ **Proficiency Levels:** Identify core software and program proficiencies for all instructional staff and multiple opportunities for learning.
- ✓ **Rubric Creation:** The creation of rubrics that outline a continuum of knowledge and proficiency related to global understanding, proficiency with specific tools and programs, application to level and subject area, and daily use of 21st century skills in everyday instruction.
- ✓ **Content-specific Learning:** Identify subject and level specific digital learning opportunities for job-embedded growth.

Additional Professional Development & Training Topics for 2013-2015

Instructional Technology-Based Topics:

- ✓ AAPS Online Resources
- ✓ AAPS Software
- ✓ Accessibility Features of Technology Systems
- ✓ Apple OSX Productivity Features
- ✓ Content-Specific Resources, e.g. Science Gizmos, ALEKS, etc.
- ✓ Edmodo
- ✓ Google Apps for Students and Teachers
- ✓ iLife
- ✓ iWork

Research and Pedagogy Topics:

- ✓ Online Teaching and Learning
- ✓ Implementing 21st Century Skills in the Classroom
- ✓ ACOT2 and Challenge-Based Learning
- ✓ NETS-S, NETS-T, NETS-C, NETS-A
- ✓ METS-S, METS-T
- ✓ Information Literacy

Newly Adopted Technology-Based Curriculum Interventions and Other Initiatives

In addition to these global shifts in understanding and practice, AAPS must provide opportunities for training with specific software programs and tools. These will be expanded or rolled out over a three-year time frame. See the Instructional Technology Map (Appendix 1) for a comprehensive list of all AAPS technology initiatives, including Assistive Technology offerings.

- ✓ Initial – Staff is being introduced to new material and beginning to use it in classroom; typically one year
- ✓ Implementation – The majority of targeted staff use the material on a regular basis in classroom; typically two years
- ✓ Maintenance – New staff are trained and all staff receive support to maintain use of material in classroom; yearly on an ongoing basis

Program	2012-13	2013-14	2014-15
Achievement Team Database	Implementation	Implementation	Maintenance
Data Director	Initial	Implementation	Implementation
Edmodo	Initial	Implementation	Implementation
Excent Tera	Implementation	Maintenance	Maintenance
Google Apps for Students	Initial	Initial	Implementation
Google Apps for Teachers	Implementation	Maintenance	Maintenance
iPad Carts	Initial	Implementation	Implementation
iPod Touch	Implementation	Maintenance	Maintenance
Moodle	Implementation	Maintenance	Maintenance
NWEA MAP Assessment	Implementation	Implementation	Maintenance
Stages	Initial	Implementation	Maintenance

Supporting Resources

The following materials are available online:

- ✓ District policies
- ✓ Manuals and instructions
- ✓ Online learning resources
- ✓ Internet Safety resources
- ✓ Informational school and district websites
- ✓ Instructional software information
- ✓ Online subscription services
- ✓ District Help Desk information
- ✓ FAQ documents

Other resources include Washtenaw Intermediate School District support, higher education involvement, and community connections.

Hardware, Technical Support and Software

Infrastructure Needs, Technology Specs, and Design

The District's 2004 Bond provided $20 million for technology purchases, including new computers for every school, LCD projectors for every classroom, and wireless networking throughout every school and in the administrative offices.

Pending passage of the 2012 Technology Bond (Appendix 15), the district is planning a "tech refresh" to replace all teacher and administrator laptops, student desktops and student laptops (with a service range from 4 to 11 years) throughout the District.

Current Status / Future Needs / Interoperability Plan

Item	Status	Future Needs
	Network Infrastructure	
WAN	36 locations connected together into a Wide Area Network. Fiber connectivity extends to all schools in the district.	• Complete Network Operations Center (NOC) • Integrate all existing and future network services to NOC
LAN	Every school and the administrative building has 100 megabit Fast Ethernet (category 5e) wiring to every room and classroom. All wiring closets within the district are connected via gigabit fiber optics. All classrooms and offices are on a fast switch (connecting to the fiber optic closets.	• Provide gigabit service to wired computers • Replace existing 100 megabit switches with Gigabit switches, connecting to 10 Gigabit service • All new and or existing/construction to utilize Cat 5E or Cat 6 Ethernet cabling standard
Wireless	Every building has 802.11g wireless connectivity in place.	• Ensure all buildings have ubiquitous wireless coverage from existing spot coverage • Migrate to 802.11n or latest protocol wireless connectivity and increase capability to accommodate increase in wireless device needs. • Upgrade wired infrastructure to accommodate faster wireless
	Video/Data	
Data Storage	Installation of new Storage Area Network (X/SAN) with data synchronization to provide raw capabilities of 100terabytes	• Evaluate usage and quota enforcement to determine data storage growth patterns • Utilize modular drive units to add storage capacity
MediaCast	System currently providing 18 channels of live, on-demand video content and approximately 800 gigabytes of digital media to Skyline High School. System replaces multiple copies of the same video, reducing media costs. Media cast eliminates the need for television sets in classrooms equipped with projectors.	• Increase storage capacity • Increase usage pool to include entire district through additional license purchases

Computers and Peripherals		
Laptops	Every administrator and teacher has their own MacBook computer, loaded with the district software load specific to their building level Laptop carts are available in every building; numbers are based on student population.	• Every student has access to a wireless computing device (iPod Touch or similar) for information browsing • Increase pool of laptops or alternative devices (e.g. iTouch/iPads) • Introduce a media creation backpack with laptop, cameras and other media collection/production devices
Desktops	Desktop computers are available in classrooms, media centers, and in computer labs.	• Replace all CRT-based computers with Energy efficient LCD or OLED screens • Phase out of CRT-based computers may reduce carbon footprint and reduce energy consumption • Increase replacement of CRT-based devices in all areas for physical stability and durability
Printers	Network B/W and color laser printers are available in every building	• Concerted effort to minimize the use of printed materials; encourage the use of digital media • Eliminate classroom printers across district and replace with network-centric “smart” printing solutions.
Projectors	Every classroom has a ceiling- or cart-mounted projector, which can be connected to their laptop or to the co-axial cable connection in their classroom.	• Migrate to High Definition projection in the classroom using Energy Star certified projectors
Sound Field	Every classroom has a sound field system installed; teachers may use a pendant microphone with the system, or can connect their laptop to the system for presentation purposes.	• Continue integration with digital media projects

Cameras	Digital still and video cameras were purchased for every school as a part of the 2004 Bond and have been sporadically updated since then.	• Flash memory-based HD camcorder needed as district standard.
Handhelds		• District will continue to evaluate the use of small portable devices (iPod Touch, iPads and related devices) in the classroom; will evaluate at that time what infrastructure improvements may be needed to facilitate successful usage.
Software		
Administrative/Teacher load	All teachers have the standard teacher software load installed on their laptop; some special-area teachers may have additional titles installed. See Appendices for complete software list.	• District is reviewing current software usage to determine what is viable in an arena of updated operating systems and transition to portable devices. Increased use of open-source software and "cloud" based software is being actively considered.
Student load	Building-level specific software loads are installed on student computers. See Appendices for complete software list.	
Data Management Systems		
Horizon (food service)	Food service system in use since 2007-08 and upgraded in 2010	Continue
Versatrans	Ongoing stable transportation system transferred via District consolidation to the local ISD in 2010.	Continue
CIMS	Ongoing financial, payroll and HR	Evaluate transition to a SAAS model with increased integration.
Follett: Destiny	2008-09 implementation of new library management system district wide and textbook management system at high schools	Continue to update Destiny to latest version. Evaluate transition to eBooks as an alternative/collateral implementation.
Filemaker	Various student information, program management, and reporting systems	Continue utilization to provide for District needs. Currently at version 11.

Technical Support

AAPS's technical support structure is evolving to support the needs of the ever-increasing instructional technology demands. This structure maintains a goal of 95% network uptime and strives to minimize interruptions through troubleshooting, proactive testing and constant data collection.

At the center of the support structure is the Help Desk. Through the use of an online tracking system, e-mail and live telephone help, ITD staff are able to respond quickly and efficiently to issues with the network, desktops, laptops, handhelds and digital media equipment.

The ITD staff has evolved to a region/District-based support team. Reporting data from the Web Help Desk system and Apple's DepotWorks repair ticketing databases will be evaluated to target assistance where needed. Support staff remain stationed in various District buildings to increase deployment efficiency. However, any support person may be dispatched to any point of need throughout the District depending on expertise and availability.

The ITD staff continue to utilize the project-based support program pioneered by the PowerSchool and Teacher Tech Refresh rollouts. This allows the ITD team to respond to major projects with teams of experts to accomplish the tasks based on their backgrounds, talents and skills. Utilizing this approach instead of a "stove-pipe" specialty approach allows for more rapid deployment of technology without consuming all resources.

ITD will conduct regular technical training to staff on an as-needed basis to deepen their knowledge of systems.

Increasing Access

The Ann Arbor Public schools are committed to ensure all students are able to access technology resources and rich learning opportunities. In order to facilitate increased access, the district has taken a number of steps:

- √ Our Assistive Technology Decision Making Process ensures students with special needs have access to technology equipment
- √ We have taken steps to understand student access across the district through survey tools for students and families.
- √ Computer network resources are in place to facilitate writing and reading for students with challenges.
- √ Our mobile learning devices will support English Language learners, special needs students as well as general access to mobile learning.

Funding and Budget

Budget and Timetable

Department	Type	Services	Cost 12/13	Cost 13/14	Cost 14/15	Notes
Finance	Software	AS400	$11,000	$11,000	$11,000	
Finance	Software	CIMS - CMT Smart Data	$20,000	$20,000	$20,000	Varies month to month
Finance	Software	HR-Finance Mgmt	$29,000	$29,000	$29,000	
			$60,000	**$60,000**	**$60,000**	
HR	Software	AppliTrack	$2,700.00	$2,700.00	$2,700.00	
HR	Software	Subfinder	$2,700.00	$2,700.00	$2,700.00	
			$5,400	**$5,400**	**$5,400**	
Instruction	Online	ALEKS	$4,200.00	$4,200.00	$4,200.00	
Instruction	Software	Creative Suite 5 Premium	$69,320.00	$0.00	$0.00	Must upgrade to Lion-compatible version if Bond passes.
Instruction	Online	Discovery Education	$19,965.00	$19,965.00	$19,965.00	
Instruction	Online	E2020	$110,000.00	$110,000.00	$110,000.00	
Instruction	Software	Everyday Math Games	$63,000.00	$0.00	$0.00	Must upgrade to Lion-compatible version if Bond passes.
Instruction	Software	FitnessGrams - Support	$3,200.00	$3,200.00	$3,200.00	
Instruction	Software	Geometer's Sketchpad	$10,000.00	$0.00	$0.00	Must upgrade to Lion-compatible version if Bond passes.
Instruction	Software	Inspiration/ Kidspiration	$75,000.00	$0	$0.00	Must upgrade to Lion-compatible version if Bond passes.
Instruction	Online	KALPA	$8,000	$8,000	$8,000	
Instruction	Software	KidPix	$34,100.00	$0.00	$0.00	Must upgrade to Lion-compatible version if Bond passes.
Instruction	Software	NWEA	$100,000.00	$100,000	$100,000	
Instruction	Software	PixWriter	$5,214.00	$0.00	$0.00	Must upgrade to Lion-compatible version if Bond passes.
Instruction	Online	PowerSchool	$76,599.00	$76,599.00	$76,599.00	
Instruction	Online	Reading A-Z	$20,000	$20,000	$20,000	

Instruction	Online	Rosetta Stone	$8,900.00	$8,900.00	$8,900.00	Must upgrade to Lion-compatible version if Bond passes. Subscription now moves to annual fee.
Instruction	Software	Scholastic - Support	$50,650.00	$50,650.00	$50,650.00	
			$658,148.00	**$401,514.00**	**$401,514.00**	Cost if Bond passes.
			$392,614.00	**$401,514.00**	**$401,514.00**	Cost if Bond does not pass.
ITD/Facilities	Service	Apple - Xsan	$16,000.00	$16,000.00	$16,000.00	Top level support for the Xsan
ITD/Facilities		Apple - Xsan AMP	$20,000.00	$20,000.00	$20,000.00	36 Month
ITD/Facilities	Hardware	Cisco	$20,490.00	$20,490.00	$20,490.00	
ITD/Facilities	Software	CyberSoft - POS	$13,000.00	$13,000.00	$13,000.00	
ITD/Facilities	Hardware	Fiber Link - Infrastructure	$35,000.00	$35,000.00	$35,000.00	Fiber connection runs and support
ITD/Facilities	Software	Filemaker	$45,000.00	$45,000.00	$45,000.00	
ITD/Facilities	Software	Follett - Destiny	$56,768.20	$56,768.20	$56,768.20	
ITD/Facilities	Service	Google Apps	$27,500.00	$27,5000.00	$27,500.00	
ITD/Facilities	Service	GVC SiteMaker	$22,000.00	$22,000.00	$22,000.00	Bandwidth and hosting charges - gentle rise
ITD/Facilities	Software	Kronos	$11,000	$11,000	$11,000	
ITD/Facilities	Service	Miss Dig	$12,300.00	$12,300.00	$12,300.00	Variable by month ($300 membership)
ITD/Facilities	Hardware	Repair - Bell and Apple	$36,000.00	$36,000.00	$36,000.00	Is going up on July 1, 2008
ITD/Facilities	Hardware	Repair - OOW, Needed equip.	$75,000.00	$100,000.00	$100,000.00	Batteries and everything - is rising
ITD/Facilities	Hardware	HANS	$100,000.00	$100,000.00	$100,000.00	Now AAPS
ITD/Facilities	Hardware	Servers - EVA3000 SAN	$34,000.00	$34,000.00	$34,000.00	Dyntek Service
ITD/Facilities	Hardware	Servers - Novell	$7,600.00	$7,600.00	$7,600.00	Bldgs and here (maintenance)
ITD/Facilities	Software	SSL Certificates	$2,000.00	$2,000.00	$2,000.00	
ITD/Facilities	Software	Symantic (Norton)	$4,300.00	$4,300.00	$4,300.00	Anti virus for PC's
ITD/Facilities	Service	Vendor (Sentinel) Support	$82,000.00	$82,000.00	$82,000.00	Data and infrastructure
ITD/Facilities	Software	Web Help Desk	$3,000.00	$3,000.00	$3,000.00	
ITD/Facilities	Service	Pole charges	$7,400.00	$7,400.00	$7,400.00	
			$630,358.2	**$655,358.2**	**$655,358.2**	
			$1,353,906.20	**$1,122,272.20**	**$1,122,272.20**	Cost if Bond passes.
			$1,088,372.20	**$1,122,272.20**	**$1,122,272.20**	Cost if Bond does not pass.

Coordination of Resources

AAPS recognizes the importance of coordination with multiple agencies and resources. This allows our district to leverage economies of scale, share expertise and experience regionally, and increase our capability to offer a rich technology environment that supports teaching, learning, and collaboration. We collaborate with our local ISD, Washtenaw Intermediate School District (WISD), local community organizations, and external support organizations, such as the Ann Arbor Educational Foundation.

We have worked with WISD for adoption of our student information system, PowerSchool; special education data management system, Excent Tera; various multimedia instructional resources, such as Discovery Education; Moodle hosting; and consortium pricing for online courses from Michigan Virtual High School. We plan to continue this partnership and other partnership opportunities as available.

Outside of the schools, students who do not have reliable access to computers and online learning resources are at a disadvantage. Digital divide and equity of access become more important as online learning tools become more ubiquitous. Ann Arbor Public Schools has approached community partners such as libraries, community centers, and businesses for access to a computing environment and Internet services. Through the Ann Arbor District Library and Community Centers, such as Peace Neighborhood Center, our students and families can access online educational resources throughout the community.

In addition, Comcast has recently created a low-cost home Internet option available to families who qualify for free- and reduced lunch. The Ann Arbor Public Schools has joined with Comcast to become an Internet Essentials Partner in an effort to inform our school community about these Internet services. We strive to have as many of our families have home Internet access as possible. We will continue to seek out partnerships to increase access across our community.

Monitoring and Evaluation

Evaluation

In order to evaluate the implementation of the Technology Plan, the AAPS Technology Plan Advisory Committee will meet at least once per year to compile and review anecdotal and measurable data. We will use this data to adjust resources so that we may continue to work toward maximizing educational technology use with respect to the district's Strategic Plan. To formalize the evaluation process, AAPS will complete a Technology Plan Evaluation Rubric (Appendix 16) to ensure meaningful gains can be assessed from year to year.

In addition to the formal rubric, surveys will be utilized to assess the perception and use of technology integration in the AAPS with different stakeholders such as students, parents and

staff. Summaries of the findings will be shared across the district and used for future revisions of the technology plan.

Board of Education Technology & Acceptable Use Policies

The following active AAPS Board of Education Policies are explained and supplemented using the Acceptable Use Guideline Agreements (see Appendices 8-10).

6150 - Technology Integration

Adopted: June 18, 2003
Effective: July 1, 2003
Reviewed/No Change: June 18, 2008

The Superintendent and staff shall implement curriculum enabling every student and teacher in the Ann Arbor Public Schools to be proficient at selecting and using the appropriate technology to solve everyday problems, investigate the world around them, and communicate using a variety of media.

The Superintendent shall ensure that:

- Technology is applied as a means to improve student achievement;
- Technology is appropriately integrated into teaching and learning;
- Equitable access to technology resources is provided for all students; and
- Staff is adequately trained and subsequently evaluated on their use of technology in delivering the instructional program.

The Superintendent shall develop and maintain a district-wide technology plan consistent with this policy, which shall be updated and reviewed with the board annually.

6150.R.01 - Technology Integration

Issue Date: 7/1/05
Effective Date: 7/1/05
Approved by: Deputy Superintendent-Instruction

1. Purpose
   1.1. To provide technology curriculum, resources, and training for all students and teachers
   1.2. To support the integration of technology into the curriculum and enhance student achievement

2. Organizational Units Affected
   2.1. All teachers, students
   2.2. Central administrative staff
   2.3. Information Technology Department
   2.4. Instructional Council

2.5. Instructional Services
2.6. Office of Professional Growth and Development

3. Definitions
   3.1. Title I: Title 1 is a component of the federal law, the Reauthorized Elementary and Secondary Education Act (2002), more commonly known as the No Child Left Behind Act. Title 1 provides funding support to underachieving students.
   3.2. Instructional Council: comprised of all district administrators
   3.3. ISTE: International Society for Technology in Education
   3.4. ITD: Information Technology Department

4. Background Information
   4.1. Cross-Reference: District Student Achievement Action Plan; District Instructional Technology Plan; Curriculum Standards; bond requirements; annual/long-term budget

5. Procedures
   5.1. Instructional Services shall develop the district-wide technology plan and support its implementation throughout the district.
      5.1.1. The District Technology Plan shall provide guidance for buildings to develop their school-based technology plans, which can be incorporated into their school improvement and/or Title I plans.
      5.1.2. In addition to budget, allocation of resources, training, current use and access, this plan should include ways in which technology will be integrated to enhance student achievement.
   5.2. Instructional Services shall monitor the District Technology Plan and shall provide training and support to ensure its successful implementation.
      5.2.1. Support and oversight should include: budget development; professional development offerings; ITD staff assignments; and ongoing monitoring of equipment, software, and services.
   5.3. Instructional Services shall continue to collaborate with the ITD on the development of all district technology-related plans, standards, training, and curriculum.
      5.3.1. These shall be developed in keeping with State of Michigan and federal standards.
      5.3.2. These shall be disseminated through Instructional Council; district and school based professional development; school-based technology teams; etc.

6. Work Instructions, Templates, & Samples
   6.1. Acceptable Use Guidelines of Computing Environment for staff and students (Form 6150.R.01.A)
   6.2. District Grade Level Curriculum Standards/Outcomes
      6.2.1. ISTE National Standards for Technology
   6.3. District Web Server guidelines
   6.4. School-based technology plan development template
   6.5. Staff, student, parent/guardian survey template
   6.6. Technology Use Agreement for staff and students (Form 6150.R.01.B & C)

7. Training & Feedback
   7.1. Professional development for ITD staff, media specialists, and teachers shall be conducted by the Office of Professional Growth and Development and shall include:
      7.1.1. review of curriculum standards/outcomes
      7.1.2. specific strategies for integrating technology into the curriculum
      7.1.3. using technology for assessment, research, communicating, problem solving, career planning, developing student projects, etc.
   7.2. Multiple opportunities to share innovative ideas and strategies for using technology to teach specific skills, integrate curriculum outcomes, and solve common problems will be developed by Instructional Services in conjunction with the Office of Professional Growth and Development.
   7.3. Instructional Services shall develop ongoing opportunities to solicit feedback from schools on resources, current level of services, and emerging needs to ensure support needed for optimal technology integration.

8. Implementation, Compliance & Assessment
   8.1. Annual review of district and school-based achievement plans by Instructional Services
   8.2. Annual review of district and school based technology plans conducted by Instructional Services
   8.3. Oversight of spending related to maintaining and upgrading equipment and technology resources/services to ensure equal access for all, including:
      8.3.1. oversight of use and effectiveness of assistive technology
      8.3.2. staff, student, and parent/guardian input regarding access to technology resources, training, and support gathered by the schools and Instructional Services
      8.3.3. frequent classroom observations and effective staff evaluation process by principals and Instructional Services to determine strengths and areas needing improvement
   8.4. Professional Development Plan to meet diverse needs of staff

6150.R.01 - Acceptable Use of Technology

Issue Date: 7/1/05
Effective Date: 7/1/05
Approved by: Deputy Superintendent-Instruction

1. Purpose
   1.1. To provide guidelines for approved use of district technology

2. Organizational Units Affected
   2.1. All staff
   2.2. All students

3. Definitions
   3.1. AAPS: Ann Arbor Public Schools

3.2. Digital content: images, text, pictures, photos, presentations, music, videos, emails and other materials stored in a computer, on the Internet, or on removable electronic media
3.3. Employee: an employee of the Ann Arbor Public Schools
3.4. ITD: Information Technology Department
3.5. Technology: hardware, software, Internet or intranet access and data storage provided by AAPS

4. Background Information
   4.1. The purpose of district-provided technology is to facilitate communications in support of research and education. To remain eligible as users, employees' and students' use must be in support of and consistent with the educational objectives of the AAPS. Access is a privilege, not a right, and entails responsible use.
   4.2. The AAPS district makes no warranties of any kind, neither expressed nor implied, for the technology it is providing. The district will not be responsible for any damages users suffer, including—but not limited to—loss of data resulting from delays or interruptions in service. The district will not be responsible for the accuracy, nature or quality of information stored on district diskettes, hard drives, or servers, nor for the accuracy, nature, or quality of information gathered through district-provided technology. The district will not be responsible for personal property used to access district computers or networks or for district-provided technology. The district will not be responsible for unauthorized financial obligations resulting from district-provided access to the Internet.
   4.3. This policy and all its provisions are subordinate to local, State, and federal statutes.
   4.4. Users should not expect that files stored on school-based computers will always be private. Electronic messages and files stored on school-based computers may be treated like school lockers. Administrators and faculty may review files and messages to maintain system integrity and ensure that users are acting responsibly.

5. Procedures
   5.1. Students utilizing district-provided technology must first have the permission of and must be supervised by AAPS professional staff. Students utilizing school-provided technology are responsible for good behavior online just as they are in a classroom or other area of the school. The same general rules for behavior and communications apply to AAPS employees.
   5.2. The following policies relating to AAPS district-provided technology shall apply in all cases.
   5.3. Access, upload, download, and/or distribution of inappropriate material – Users will not use the district system to access material that is profane or obscene (pornography), that advocates illegal or dangerous acts, or that advocates violence or discrimination towards other people (hate literature). For students, a special exception may be made if the purpose is to conduct research and access is approved by both the teacher and the parent. District employees may access the above material only in the context of legitimate research.
      5.3.1. If a user inadvertently accesses such information, he or she should immediately disclose the inadvertent access to a faculty member or a supervisor. This will

protect users against an allegation that they have intentionally violated the Acceptable Use Policy.

5.4. Personal Security – Students will not post personal contact information about themselves or other people. Personal contact information includes last name, address, telephone number(s), school address, work address, etc.

5.4.1. Student users will not agree to meet with someone they have met online without their parent's approval and participation.

5.4.2. Student users will promptly disclose to their teacher or other school employee any message or email they receive that is inappropriate or makes them feel uncomfortable.

5.5. Illegal Activities – Users will not attempt to gain unauthorized access to the district system or to any other computer system through the district system, or go beyond their authorized access. This includes attempting to log in through another person's account or access another person's files, materials, and/or information for any reason without permission, even if only for the purposes of "browsing."

5.5.1. Users will not make deliberate attempts to disrupt the computer system performance or destroy data by spreading computer viruses or by any other means.

5.5.2. Users will not use the district system to engage in any other illegal act, such as arranging for a drug sale or the purchase of alcohol, engaging in criminal gang activity, threatening the safety of person, etc.

5.5.3. Users will not use the district system to knowingly violate any local, State or federal statute.

5.6. Inappropriate Language and Behavior – Restrictions against inappropriate language and behavior apply to public messages, private messages, digital content and material posted on Web pages.

5.6.1. Users will not use obscene, profane, lewd, vulgar, rude, inflammatory, threatening, abusive, sexually explicit or disrespectful language, music lyrics, images or photographs.

5.6.2. Users will not post information that, if acted upon, could cause damage or a danger of disruption.

5.6.3. Users will not engage in personal attacks, including prejudicial or discriminatory remarks and/or attacks.

5.6.4. Users will not harass another person. Harassment is persistently acting in a manner that distresses or annoys another person. If a user is told by an individual to stop sending him or her messages, the user must immediately stop such behavior.

5.6.5. Users will not knowingly or recklessly post false or defamatory information about a person or organization.

5.6.6. Users will not vandalize, damage or disable the information or property of another individual or organization.

5.6.7. Users will not repost a message that was sent to them privately without permission of the person who sent them the message.

5.6.8. Users will not post private information about another person. Personal contact information includes last name, address, telephone number(s), school address, work address, etc.

5.6.9. Users will not post chain letters or engage in “spamming.” Spamming is sending an annoying, unsolicited or unnecessary message to a large number of people.

5.7. System Security – Users are responsible for the use of their individual account and shall take all reasonable precautions to prevent others from being able to use their account. Under no conditions should a user provide his or her password to another person.

5.7.1. Users will immediately notify the system administrator if they have identified a possible security problem. Users shall not go looking for security problems because this may be construed as an illegal attempt to gain access.

5.7.2. Users should avoid the inadvertent spread of computer viruses by following ITD virus protection procedures for downloading material.

5.8. Plagiarism and Copyright Infringement – Users will not plagiarize works that they find on the Internet. Plagiarism is taking the ideas or writings of others and presenting them as if they were original to the user.

5.8.1. Users will respect the rights of copyright owners. Copyright infringement occurs when an individual inappropriately reproduces a work that is protected by a copyright. If a work contains language that specifies acceptable use of that work, the user should follow the expressed requirements. If the user is unsure whether a work can be used, he or she should request permission from the copyright owner.

5.8.2. Users will respect the rights of copyright holders for music, photographs and other digital content.

5.8.2.1. Specifically, copyrighted music shall not be downloaded and shared.

5.9. Respecting Resource Limits – Users will use the system only for educational and professional or career development activities and limited, high-quality, personal research.

5.9.1. Users will not download large files unless absolutely necessary. If necessary, users will download the file at a time when the system is not being heavily used and immediately remove the file from the system computer to their personal computer or diskette.

5.9.2. Users will check their email frequently and delete unwanted messages promptly.

5.10. Any violation of district policy and rules may result in loss of district-provided technology. Additional disciplinary action may be determined at the building level in keeping with existing procedures and practices regarding inappropriate language or behavior. When and where applicable, law enforcement agencies may be involved.

5.11. The ITD, as mandated by AAPS policy and the 2000 Children's Internet Protection Act, shall, to the best of its technical capabilities, block and/or filter access to sites and/or material that is deemed obscene, pornographic or harmful to minors.

5.12. The ITD shall maintain a record of all sites and/or material deemed inappropriate for access from school-supplied computers.

6. Work Instructions, Templates, & Samples

6.1. AAPS Acceptable Use Forms (6150.R.01.A, B & C)

7. Training & Feedback

8. Implementation, Compliance & Assessment

8.1. Parents of students in the AAPS district shall be provided with the following information:

8.1.1. The AAPS district is pleased to offer its students access to the Internet. This computer technology allows students and staff to access and use resources from distant computers, communicate and collaborate with other individuals and groups around the world to significantly expand their available information base.

8.1.2. Families should be aware that some material accessible via the Internet may contain language and/or items that are illegal, defamatory, inaccurate, and/or potentially offensive to some people. In addition, it is possible to purchase certain goods and services via the Internet, which could result in unwanted financial obligations for which a student's parent or guardian would be liable.

8.1.3. While the district's intent is to make technology available in order to further educational goals and objectives, students may find ways to access other materials as well. Even should the district institute technical methods or systems to regulate students' technology, those methods could not guarantee compliance with the district's acceptable use policy. That notwithstanding, the district believes that the benefits to students of access to the Internet exceed any disadvantages. Ultimately, however, parents and guardians of minors are responsible for setting and conveying the standards that their children should follow when using media and information sources. Toward that end, the AAPS district makes the district's complete Internet policy and procedures available on request for review by all parents, guardians, and other members of the community, and provides parents and guardians the option of requesting for their minor children alternative activities not requiring Internet use.

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Ann Arbor Public Schools

Technology Plan

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Appendix 1:

Instructional Technology Map

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Function	Technology Initiative or Activity	Description	Strategic Plan Strategy/ Result	Michigan Educational Technology Standard	PD Objective (What will staff know and be able to do?)	Tech Support Implications	Evaluation Metrics	Locations	Timeline	Technology Contact	Instructional Contact
Communication/ Administration	**Databases for specific programmatic needs: Community Resource program, Testing Out, Planetarium scheduling, Headstart, Attendance Area by Street, etc.**	Ongoing support for administrative uses of Filemaker and other district supported databases	8.4	n/a	Various, depending on program	Requires system administrator		All schools	Ongoing	John VanRiper, Julie Walstra	Various
Communication/ Administration	**Destiny**	Library management system	8.4	PK-2.RI.2, 3-5.RI.1, 3-5.RI.2, 3-5.CT.3, 6-8.RI.1, 6-8.DC.1, 6-8.TC.3, 6-8.TC.4, 9-12.RI.3	Teachers and students will be able to find materials to support curricular and literacy needs	Requires system administrator	Usage statistics	All schools	Ongoing	Michelle Hart, Linda Keebler	Ann O'Keefe
Communication/ Administration	**Google Apps for Teachers**	Google suite of tools includes Docs, Gmail and Calendar	3.4, 6.2, 8.4	n/a	Teachers will be able to use Google Apps to communicate with staff, students and families	Techs can do software support	Usage statistics	All schools	Ongoing	John VanRiper	Anne Reader
Communication/ Administration	**PowerSchool**	New student information system and grade book that will facilitate sharing of student progress information between home and school, move to one district standard for electronic grade book	3.4, 6.2, 8.4	n/a	Administrators and secretarial staff will use for scheduling, student student data, and reporting; teachers will take attendance, and secondary will use the online gradebook; student and parent logins will be available	Direct support techs will be able to troubleshoot connectivity, Help Desk will handle account fixes, central staff will handle administration and support instruction with reporting requirements	Usage statistics	All schools	Ongoing	Sally McAlinden, Julie Walstra	Anne Reader
Communication/ Administration	**School Messenger**	Mail list and notification system for communication with outside groups, parent email lists, etc.	3.4, 6.2, 8.4	n/a	Administrators and PTOs will be able to use this software to communicate with parents, community, and teachers.	Requires system administrator	Usage statistics	All schools	Ongoing	Ali Vandoren	Liz Margolis
Communication/ Administration	**SiteMaker**	Web authoring software, new school website standards	3.4, 6.2, 8.4	n/a	Webmaster is required to provide PD for teachers on class webpages	Techs can do software support; webmaster will help with teacher support	School website evaluation metrics	All schools	Ongoing	Ali Vandoren	Building webmasters
Communication/ Administration	**STAGES**	Comprehensive online tool for staff evaluation and growth	4.4, 6.1	n/a	Teachers and administrators will be familiar with software and how to use it to complete evaluations	Techs have increasing familiarity with software	Usage statistics	All schools	Initial rollout in Fall 2012	Julie Walstra	Alesia Flye, Cynthia Ryan
Communication/ Administration	**Textbook Management System: Destiny**	New textbook system at Pioneer, Huron, Skyline and Community	8.4	n/a	Book depository staff will manage book depository system	Requires system administrator		HS	Ongoing	Michelle Hart	Anne Reader
Counseling	**Educational Development Plans and Career Exploration**	all MS and HS students have a plan informing course selection and post HS planning	1.1, 8.4	6-8.TC.7, 9-12.TC.3, 9-12.TC.9	Counselors are able to use two software tools with students to complete EDP's and career exploration	Make sure SW is up to date with current career info	Number of students with complete plans	MS HS	Ongoing	Julie Walstra	Joyce Hunter, Counselors
CTE/Tech Ed, Business Ed, Health and Medicine & Graphics	**Creative Suite**	Review needs for HS Art and graphics, CTE Marketing classes	8.4	6-8.TC.7, 9-12.TC.3, 9-12.TC.9	Teachers will be familiar with software and how to use it in the classroom	High school techs need familiarity, new versions running on older systems	Teacher assessment of usefulness	HS	Upgrade in the event the bond passes?	HS Techs	Anne Reader, Joyce Hunter, Art and Business Ed Teachers
CTE/Tech Ed, Business Ed, Health and Medicine & Graphics	**Tech Ed Software**	Review needs for Drafting, 3D modeling and conceptual design software to support tech ed curriculum	8.4	6-8.TC.7, 9-12.TC.3, 9-12.TC.9	Teachers will be familiar with software and how to use it in the classroom	High school techs need familiarity, new versions running on older systems	Teacher assessment of usefulness	HS	Upgrade in the event the bond passes?	Jim Leach, Carrie Tobin, Mike Morris, Ed Cline	Anne Reader, Joyce Hunter, Tech Ed Teachers
Elementary: Literacy	**ReadAbout**	Technology based supplementary reading materials for elementary	3.5, 8.4	n/a	Teachers will be able to use ReadAbout with students and review data	Need support from Xserve admin; each building needs SAM maintenance and data management	Usage statistics	Pattengill and Dicken	Ongoing	Elijah Newton	Chuck Hatt
Elementary: Literacy	**Reading A to Z**	Resource for leveled readers that support the balanced literacy curriculum	8.4	n/a	Teachers will know how to access database of readings and make them available to students	Account maintenance	Usage statistics	ES	Ongoing	Julie Walstra, Help Desk	Anne Reader, Chuck Hatt
Elementary: Math	**FASTT Math**	Supports elementary math program	8.4	n/a	Teachers will be able to use FastMath with students and review data	Need support from Xserve admin; each building needs FastMath maintenance and data management	MEAP, Report card, Timed tests	ES MS	Ongoing	Elijah Newton	Anne Reader, Rose Marie Callahan, Angela Newing
Elementary: Reporting	**Database Report Cards**	Review timeline for converting to PowerSchool	8.4	n/a	New staff are trained to use report card	Developed and maintained in-house	Exploration of updating and linking with Powerschool	ES	Annual updates	John VanRiper	Dawn Linden

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K-12: Information and Technology Skills: HW	**Cameras**	Make cameras available for a variety of instructional purposes	8.4	3-5.CI.1, 3-5-2.CC.3, 6-8.CI.2, 6-8.DC.5, 9-12.CI.3, 9-12.CC.3	Teachers use cameras as a tool to enhance instruction	TA's and TS's are familiar with cameras	Usage statistics	All schools	Ongoing	Carlos Soto	Anne Reader, Media Specialists
K-12: Information and Technology Skills: HW	**Document Cameras**	Use of document cameras for instruction needs such as sharing books, dissections, replacement technology for overheads	8.4	3-5.CI.1, 3-5-2.CC.3, 6-8.CI.2, 6-8.DC.5, 9-12.CI.3, 9-12.CC.3	Teachers use cameras as a tool to enhance instruction	TA's and TS's are familiar with cameras	Usage statistics	All schools	Ongoing	Carlos Soto	Anne Reader
K-12: Information and Technology Skills: HW	**iPad Carts**	iPad syncing carts with 15 mobile devices and 1 management laptop per building	8.4	C/T 9-12.9	Teachers use iPads as a tool to enhance instruction	TA's and TS's are familiar with iPads	Teacher assessment of usefulness	ES	Initial rollout in Fall 2012, if Bond passes	Gloria Traturyk	Anne Reader
K-12: Information and Technology Skills: HW	**iPod Touch**	800 handheld devices to be integrated into instruction	8.4	C/T 9-12.9	Teachers use iTouches as a tool to enhance instruction	TA's and TS's are familiar with iTouches	Teacher assessment of usefulness	All schools	Ongoing	Gloria Traturyk	Anne Reader
K-12: Information and Technology Skills: HW	**Projectors**	Projection technology available in every classroom	8.4	n/a	All teachers know how to use projector for a variety of instructional purposes	Minimal	Usage statistics	All schools	Ongoing	Carlos Soto	Anne Reader
K-12: Information and Technology Skills: HW	**Sound Field**	Sound dispersal available in every classroom	8.4	n/a	All teachers know how to use sound field for a variety of instructional purposes	replace batteries, trouble shoot bad mics/cords	Usage statistics	All schools	Ongoing	Carlos Soto	Anne Reader
K-12: Information and Technology Skills: HW	**Student Calculators**	Make calculators available to support math curriculum	8.4	C/T 6-8.8	Teachers need to know the process for checking out calculators and be able to track student use	none	Usage statistics	MS HS	Ongoing	n/a	Angela Newing
K-12: Information and Technology Skills: SW	**Curriculum Alignment**	Technology and Information Skills curriculum will be reviewed and aligned with achievement objectives and METS standards	8.4	all METS	Teachers will understand curriculum and its relationship to both the strategic plan and educational technology standards	NA	Technology integrated into curriculum	All schools	Ongoing	n/a	Dawn Linden, Joyce Hunter, Anne Reader
K-12: Information and Technology Skills: SW	**Edmodo**	Edmodo provides a safe and easy way for classrooms to collaborate and do school work online using the power of social media	3.5, 8.4	PK-2.CC.2, 3-5.CC1, 6-8.CC.19-12.CC.2, 9-12.CC.4	Teachers will be able to use Edmodo with students and classes to support teaching and learning	Techs have increasing familiarity with software	Usage statistics	All schools	Expand program 12-13	n/a	Anne Reader, Joanna Johnson
K-12: Information and Technology Skills: SW	**Google Apps for Students**	Google suite of tools includes Docs, Gmail and Calendar	2.1	PK-2.CC.2, 3-5.CC1, 6-8.CC.19-12.CC.2, 9-12.CC.4	Teachers will be able to use Google Apps with students and classes to support teaching and learning	Techs can do software support	Usage statistics	Pilot sites	Initial rollout in Fall 2012, if Bond passes	John VanRiper	Anne Reader
K-12: Information and Technology Skills: SW	**Multimedia offerings: iLife (iTunes, iPhoto, iMovie, iDVD, Garageband), MediaBlender, ComicLife, Audacity, Others**	Podcasting and video broadcasting; student produced work; performance assessment	8.4	PK-2.CC.2, 3-5.CI.1, 3-5.CI.2, 3-5-2.CC.3, 6-8.CI.2, 6-8.DC.5, 9-12.CI.3, 9-12.CC.3	Teachers will see examples of how multimedia translates into enhanced instruction	Techs have increasing familiarity with software	Usage statistics	All schools	Ongoing	All	Anne Reader
K-12: Information and Technology Skills: SW	**NWEA MAP Assessment**	Adaptive, computerized assessments in math and reading that are nationally normed	2.3	n/a	Teachers will be familiar with software and how to use it in the classroom	Large investment of tech resources required for initial and ongoing setup of computers and labs, as well as ongoing tech support during testing windows	RIT Scores	K-5 buildings, Ann Arbor Open at Mack and Scarlett Middle School	Expand program 12-13	Gloria Traturyk	Anne Reader
K-12: Information and Technology Skills: SW	**Productivity offerings: Inspiration, Word processing, spreadsheets, presentation software**	Productivity software available to every student and staff member	8.4	PK-2.CC.1, 6-8.CI.3, 6-8.CT.1, 6-8.CT.2, 9-12.CI.1	Teachers will be familiar with software and how to use it in the classroom	Techs have increasing familiarity with software	Usage statistics, MEAP writing scores	All schools	Ongoing	All	Anne Reader
K-12: Information and Technology Skills: SW	**Subscription Services: AADL Partnership, Explore Learning, etc.**	Instructional subscription information centralized, made accessible for teaching and learning through online virtual library, Explore Map subscription program	3.5, 8.4	PK-2.RI.2, 3-5.RI.1, 3-5.RI.2, 3-5.CT.3, 6-8.RI.1, 6-8.DC.1, 6-8.TC.3, 6-8.TC.4, 9-12.RI.3	Teachers will know how to access database of readings and make them available to students	Need URL + access codes	Teacher assessment of usefulness	All schools	Ongoing	Julie Walstra, Help Desk	Media Specialists
K-12: Information and Technology Skills: SW	**Streaming Video**	Subscription services and Mediacast video on demand	3.5, 8.4	n/a	Teachers will know how to access streaming video and use it to support instruction	Need URL + access codes	Usage statistics	All schools	Expand program 12-13	Carlos Soto	Media Specialists

Instructional Technology Map
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K-12: Achievement Team Database	**Database Achievement Reporting**	Database for staff to track student progress and behavior	2.3	n/a	Teachers will know how to access database and add entries for the purpose of informating Achievement Team meeting conversations	Techs can do software support	Usage statistics	All schools	Ongoing	John VanRiper	Anne Reader
K-12: Data	**Data Director**	Online data and assessment management tool	2.3	n/a	Teachers will be able to manipulate a combination of formative and summative assessment data to provide meaningful analysis of their student's strengths and learning needs	Techs have increasing familiarity with software	Usage statistics	All schools	Initial rollout in Fall 2012	Julie Walstra	Anne Reader, Jane Landefeld
K-12: ESL	**Rosetta stone, Online Instruction options**	English as a second language, language learning software	1.4, 3.5, 4.1, 8.4	n/a	ESL teachers will be familiar with software and how to use it in the classroom	Techs have increasing familiarity with software	Usage statistics	ESL Schools	Ongoing	Gloria Traturyk	Mary-Margaret Cornish
K-12: Literacy	**READ 180 & System 44**	General Ed and Special Ed Reading Intervention programs	4.4, 8.4	n/a	Teachers will be able to use Read 180 and System 44 with students and review data	Need support from Xserve admin; each building needs SAM maintenance and data management	SRI data, Longitudinal study of impact	All schools	Ongoing	Elijah Newton	Anne Reader, Chuck Hatt
K-12: Literacy	**Scholastic Reading Inventory (SRI)**	Reading Assessment	4.4, 8.4	n/a	Teachers will be able to use SRI with students and review data	Need support from Xserve admin; each building needs SAM maintenance and data management	Look at relationship between SRI data and our Report cards, MEAP, and NWEA	All schools	Ongoing	Elijah Newton	Chuck Hatt
Music	**Sibelius**	Music notation software	8.4	n/a	Teachers will be familiar with software and how to use it in the classroom	Techs support installation and initial registration of the software, as well as ongoing technical problems	Usage statistics	Music Teachers, High School Music Students	Ongoing	Gloria Traturyk	Robin Bailey
Music	**Elementary Vocal Music software: Orchestral Instruments; World Instruments; MIDIsaurus**	Elementary music program resources	8.4	n/a	Elementary vocal music instructors will be able to incorporate the CD's into instruction	Techs have increasing familiarity with software	Teacher assessment of usefulness	ES	Ongoing	Gloria Traturyk	Robin Bailey
Professional Development	**Kalpa**	Database for staff to track professional development, registration system for AAPS offered workshops	8.4	n/a	Staff will know how to register and track PD	Registration of new users	Reporting capabilities for PD as required, usefulness for registration system	All schools	Ongoing	Help Desk	Jane Landefeld
Professional Development	**Technical Development**	Building capacity for technical support and use of technology tools across the disctrict	8.4	n/a	Technical staff will receive as-needed training and provide support across the district	Technical staff training	Tech assessment of usefulness	ITD	Ongoing	John VanRiper	Anne Reader
Professional Development	**Online PD Options: MI Learnport**	PD offerings for various MI curriculum and technology topics offered through MI Learnport	8.4	n/a	Staff will know how to register and track PD	Need URL + login information	Usage statistics	All schools	Ongoing	Help Desk	Anne Reader
Secondary Science	**Science Gizmos, Science Probes + software**	Online, animated science "text"	3.5, 8.4	PK-2.CC.2, 3-5.CC1, 6-8.CC.19-12.CC.2, 9-12.CC.4	Teachers will see examples of how multimedia translates into enhanced instruction	Need passwords and user names; Techs have increasing familiarity with software	Usage statistics	MS HS	Ongoing	Help Desk	Anne Reader, Amy Deller
Secondary: Online Learning	**Moodle**	Learning management system	3.5, 8.4	PK-2.CC.2, 3-5.CC1, 6-8.CC.19-12.CC.2, 9-12.CC.4	Teachers will be able to use Moodle with students and classes to support teaching and learning	WISD partnership	Review of Moodle courses, teacher and student feedback	MS HS	Ongoing	Ali Vandoren/ WISD	Anne Reader
Secondary: Online Learning	**E2020, MVU, Aleks, PowerSpeak, other course subscriptions**	Online courses and curriculum for credit recovery, enrichment, online options, simulations and supplementary materials in the classroom	3.5, 8.4	PK-2.CC.2, 3-5.CC1, 6-8.CC.19-12.CC.2, 9-12.CC.4	Ongoing PD needed in online teaching and learning, specific training on each tool, by level, new teachers, etc.	Student and teacher account maintenance, connectivity, network traffic	Student achievement data	MS HS	Ongoing	Julie Walstra	Anne Reader
SISS	**AT: Enhanced classroom standard (hw/sw), Enhanced teacher software load**	Annual review of technology based supports available across SISS and general education classrooms including principles of UDL, Annual review of additional sw needed by SISS teachers	1.2, 8.4	n/a	All staff will have a base level of knowledge of how AT can assist various students; SISS teachers will have expertise in their area	TA's and TS's need to be familiar with new hw/sw; depending on what is in use in their school	Access to curriculum; IEP goals	SISS classrooms; All schools	Ongoing	Jeff Flynn	Jeff Flynn
SISS	**Excent Tera**	IEP's are kept in electronic form; staff are reminded of deadlines; reports are easily provided to insure compliance with timelines and goals, Implement new system selected by WISD 09-10	8.4	n/a	SISS staff will use software for IEPs and compliance monitoring	Techs have increasing familiarity with software	Usage statistics	All schools	Ongoing	Julie Walstra	Bill Harris
SISS	**Networked technology support software**	Annual review of technology- based supports available across SISS and general education classrooms including principles of UDL	1.2, 8.4	n/a	All staff will have a base level of knowledge of how AT can assist various students; SISS teachers will have expertise in their area	Server installs, connectivity, account maintenance		SISS	Ongoing	Jeff Flynn	Jeff Flynn

Ann Arbor Public Schools

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Appendix 2:

Information and Technology Skills Scope and Sequence

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Grades PreK-2
AAPS Technology and Information Skills
Scope and Sequence

Grades PK through 2 (ages 4-8) – Michigan Technology Standards and Expectations (prior to the completion of Grade 2)	PK	K	1	2	Suggested Activities	Responsibliity for Instruction & Assessment	Notes
Creativity and Innovation - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes.							
1. Students use a variety of digital tools (e.g., word processors, drawing tools, simulations, presentation software, graphical organizers) to learn, create, and convey original ideas or illustrate concepts.		X	X	X	Write (keyboard) and digitally illustrate an original piece: e.g Calkins small moment, How-To books or number stories in EDM. Lifecycles Unit another possibility.	Teacher/Media Specialist collaboration	Possible use of applications such as KidPix, Kidspiration, iPhoto, etc. Book productions (A to Z)/Class projects related to curriculum
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.							
1. Students work together when using digital tools (e.g., word processor, drawing, presentation software) to convey ideas or illustrate simple concepts relating to a specified project.			X	X	Teacher models and assesses student ability to work collaboratively across a spectrum of learning activities including the use of software tools	Teacher	Kid Pix slide show/ Kidspiration project / Production of a class book/use of images/
2. Students use a variety of developmentally appropriate digital tools (e.g., word processors, paint programs) to com- municate ideas to classmates, families, and others.		X	X	X	Joint project where students create individual modules to create a whole project using digital tools, i.e., EDM math computer games. Using interactive writing, students compose text in response to a class activity such as a field trip. Interactive writing text is converted to a presentation using shared composition skills and converted into a project to take home.	Teacher/Media Specialist collaboration	Presentation software - Kidpix. Key is to embed with projects and /or lessons already being presented
Research and Information Fluency - Students apply digital tools to gather, evaluate, and use information.							
1. Students interact with Internet based resources.			X	X	Teachers and Media Specialists model use of browsers to guide interactive web-searches connected to SS and Science units and other areas of class inquiry.	Both Teacher & Media Specialist	Destiny, WebQuest, MEL, District, School & Media Center Websites
2. Students use digital resources (e.g., dictionaries, encyclopedias, graphs, graphical organizers) to locate and interpret information relating to a specific curricular topic, with assistance from teachers, school library media specialists, par- ents, or student partners.				X	As related to specific curricula. Examples include Social Studies Alive Power Points and overheads, Online read-alouds, etc.	Both Teacher & Media Specialist	Introduce use of digital resources as needed.

Grades PreK-2
AAPS Technology and Information Skills
Scope and Sequence

Grades PK through 2 (ages 4-8) – Michigan Technology Standards and Expectations (prior to the completion of Grade 2)	PK	K	1	2	Suggested Activities	Responsibliity for Instruction & Assessment	Notes
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.							
1. Students explain ways that technology can be used to solve problems (e.g., cell phones, traffic lights, GPS units).				X	Already included in SS and Science units for K-2 grades.	Teacher	
2. Students use digital resources (e.g., dictionaries, encyclopedias, search engines, web sites) to solve developmentally appropriate problems, with assistance from teachers, parents, school media specialists, or student partners.		X	X	X	For example, research around informational writing in Calkins units connected to Science curriculum.	Teacher	
Digital Citizenship - Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.							
1. Students describe appropriate and inappropriate uses of technology (e.g., computers, Internet, e-mail, cell phones) and describe consequences of inappropriate uses.			X	X	Annual review of district computer usage policy.	Both Teacher & Media Specialist	Every fall, every media specialist, lab teacher and classroom teacher should review the district policy. Respect for individual work/ server space/privacy issues.
2. Students know the Michigan Cyber Safety Initiative's three rules (Keep Safe, Keep Away, Keep Telling).		X	X	X	Information Literacy & Technology curriculum	Media Specialist	
3. Students identify personal information that should not be shared on the Internet (e.g. name, address, phone).		X	X	X	Information Literacy & Technology curriculum	Media Specialist	
4. Students know to inform a trusted adult if he/she receives or views an online communication which makes him/her feel uncomfortable, or if someone whom he/she doesn't know is trying to communicate with him/her or asking for personal information.			X	X	Information Literacy & Technology curriculum	Media Specialist	

Grades PreK-2
AAPS Technology and Information Skills
Scope and Sequence

Grades PK through 2 (ages 4-8) – Michigan Technology Standards and Expectations (prior to the completion of Grade 2)	PK	K	1	2	Suggested Activities	Responsibliity for Instruction & Assessment	Notes
Technology Operations and Concepts - Students demonstrate a sound understanding of technology concepts, systems, and operations.							
1. Students discuss advantages and disadvantages of using technology.		X	X	X	Information Literacy & Technology curriculum	Media Specialist	
2. Students are able to use basic menu commands to perform common operations (e.g., open, close, save, print).				X	Information Literacy & Technology curriculum	Media Specialist	
3. Students recognize and name the major hardware components in a computer system (e.g., computer, monitor, key- board, mouse, printer).			X	X	Information Literacy & Technology curriculum	Media Specialist	
4. Students discuss the basic care for computer hardware and various media types (e.g., CDs, DVDs).		X	X	X	Information Literacy & Technology curriculum	Media Specialist	
5. Students use developmentally appropriate and accurate terminology when talking about technology.			X	X	Information Literacy & Technology curriculum	Media Specialist	
6. Students understand that technology is a tool to help him/her complete a task, and is a source of information, learn- ing, and entertainment.			X	X	Information Literacy & Technology curriculum	Media Specialist	
7. Students demonstrate the ability to navigate in virtual environments (e.g., electronic books, games, simulation soft- ware, web sites).			X	X	Information Literacy & Technology curriculum	Media Specialist	

Grades 3-5
AAPS Technology and Information Skills
Scope and Sequence

Grades Three through Five (ages 8-11) – Michigan Technology Standards and Expectations (prior to the completion of Grade 5)	3	4	5	Suggested Activities	Responsibliity for Instruction & Assessment	Notes
Creativity and Innovation - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes.						
1. Students produce a media-rich digital project aligned to state curriculum standards (e.g., fable, folk tale, mystery, tall tale, historical fiction).	X	X		Students will create a digital project using elements such as pictures, text, sound, video: Social Studies and Science GLCE's and activities, ie. planets, rocks and minerals. Feature Article genre study.	Teacher/Media Specialist collaboration	
2. Students use a variety of technology tools and applications to demonstrate his/her creativity by creating or modifying works of art, music, movies, or presentations.	X	X	X	Potential projects: Kidpix illustrations, ComicLife stories, MediaBlender, Finale and Garage Band	Teacher/Media Specialist collaboration	
3. Students participate in discussions about technologies (past, present, and future) to understand these technologies are the result of human creativity.		X		Information Literacy & Technology curriculum /Mistakes that Worked/Weslandia/ Science Fiction Genre Study	Teacher/Media Specialist collaboration	
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.						
1. Students use digital communication tools (e.g., e-mail, wikis, blogs, IM, chat rooms, videoconferencing, Moodle, Blackboard) and online resources for group learning projects.		X		Students will experience a digital conversation about a school project/topic with peers: e.g.Moodle discussions, Moodle chat rooms, blogs, Destiny book reviews, Classroom digital penpals - Social studies community responsibility conversation, readers response online discussion (Include appropriate	Teacher (and/or potential collaborative projects with Media Specialists)	
2. Students identify how different software applications may be used to share similar information, based on the intended audience (e.g., presentations for classmates, newsletters for parents).	X	X	X	Information Literacy & Technology curriculum; Classroom projects.	Teacher (and/or potential collaborative projects with Media Specialists)	
3. Students use a variety of media and formats to create and edit products (e.g., presentations, newsletters, bro- chures, web pages) to communicate information and ideas to various audiences.	X	X	X	Student authoring of class newsletters, feature article and poetry genre studies, etc. Brochures in Social Studies, 5th grade genre study report	Teacher (and/or potential collaborative projects with Media Specialists)	

Grades 3-5
AAPS Technology and Information Skills
Scope and Sequence

Grades Three through Five (ages 8-11) – Michigan Technology Standards and Expectations (prior to the completion of Grade 5)	3	4	5	Suggested Activities	Responsibliity for Instruction & Assessment	Notes
Research and Information Fluency - Students apply digital tools to gather, evaluate, and use information.						
1. Students identify search strategies for locating information with support from teachers or library media specialists.	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
2. Students use digital tools to find, organize, analyze, synthesize, and evaluate information.	X	X	X	Destiny, Information literacy and technology classes, "Why Google Isn't Enough"	Media Specialist	
3. Students understand and discuss that web sites and digital resources may contain inaccurate or biased information.	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
4. Students understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched.	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
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.						
1. Students use digital resources to access information that can assist in making informed decisions about everyday matters (e.g., which movie to see, which product to purchase).	X	X	X	Assessing information using digital tools eg: Estimation in math, compare and contrast activities, graphing.	Teacher	
2. Students use information and communication technology tools (e.g., calculators, probes, videos, DVDs, educational software) to collect, organize, and evaluate information to assist with solving problems.	X	X	X	EDM curriculum, Neighborhood Map Machine, Webquests	Teacher	
3. Students use digital resources to identify and investigate a state, national, or global issue (e.g., global warming, econ- omy, environment).	X	X	X	Michigan reports (digitally created product) in Social Studies	Teacher (and/or potential collaborative projects with Media Specialists)	

Grades 3-5
AAPS Technology and Information Skills
Scope and Sequence

Grades Three through Five (ages 8-11) – Michigan Technology Standards and Expectations (prior to the completion of Grade 5)	3	4	5	Suggested Activities	Responsibliity for Instruction & Assessment	Notes
Digital Citizenship - Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.						
1. Students discuss scenarios involving acceptable and unacceptable uses of technology (e.g., file-sharing, social net- working, text messaging, cyber bullying, plagiarism).	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
2. Students recognize issues involving ethical use of information (e.g., copyright adherence, source citation).	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
3. Students describe precautions surrounding personal safety that should be taken when online.	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
4. Students identify the types of personal information that should not be given out on the Internet (name, address, phone number, picture, school name).	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
Technology Operations and Concepts - Students demonstrate a sound understanding of technology concepts, systems, and operations.						
1. Students use basic input and output devices (e.g., printers, scanners, digital cameras, video recorders, projectors).	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
2. Students describe ways technology has changed life at school and at home.	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
3. Students understand and discuss how assistive technologies can benefit all individuals.	X	X	X	Information Literacy & Technology curriculum	Media Specialist	
4. Students know how to exchange files with other students using technology (e.g., network file sharing, flash drives).	X	X		Information Literacy & Technology curriculum	Media Specialist	

Grades 6-8
AAPS Technology and Information Skills
Scope and Sequence

Grades Six through Eight (ages 11-14) – Michigan Technology Standards and Expectations (prior to the completion of Grade 8)	6	7	8	Department	Activities	Assessment
Creativity and Innovation - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes.						
1. Students apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to en- hance communication with an audience and to support creativity.	X	X	X	Language Arts/Science/Social Studies/Health	Science Projects, Country Presentations, Brochures	
2. Students create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience.	X	X	X	Language Arts/Science/Math/Social Studies/ with Media Specialist Collaboration where possible	Existing presentations and research skills integrated into unit	
3. Students illustrate a content-related concept using a model, simulation, or concept-mapping software.	X	X	X	Language Arts/Science/Math/Social Studies/ with Media Specialist Collaboration where possible	Inspiration PreWriting Tools, Social Studies Brochure Assignments	
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.						
1. Students use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences.	X	X	X	Language Arts/Social Studies/ with Media Specialist Collaboration where possible	Online reading response, Destiny Book Reviews, Online Social Studies discussions, Moodle	
2. Students use collaborative digital tools to explore common curriculum content with learners from other cultures.	X			6th grade Exploratory: Information Literacy & Technology / Social Studies / World Language / with Media Specialist Collaboration when possible		
3. Students identify effective uses of technology to support communication with peers, family, or school personnel.	X	X	X	Across all curricular areas	PowerSchool, Server space, Moodle	

Grades 6-8
AAPS Technology and Information Skills
Scope and Sequence

Grades Six through Eight (ages 11-14) – Michigan Technology Standards and Expectations (prior to the completion of Grade 8)	6	7	8	Department	Activities	Assessment
Research and Information Fluency - Students apply digital tools to gather, evaluate, and use information.						
1. Student use a variety of digital resources to locate information.	X	X	X	Language Arts/Social Studies/Science/Health with Media Specialist Collaboration when possible	Report Writing Genre Study and Capstone Project/ Student-created Presentations/ Non-planet report/Element report/	
2. Students evaluate information from online information resources for accuracy and bias.	X	X	X	Language Arts/Social Studies/Science/Health with Media Specialist Collaboration when possible	Report Writing Genre Study and Capstone Project/	
3. Students understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched.	X	X	X	Language Arts/Social Studies/Science/Health with Media Specialist Collaboration when possible	Report Writing Genre Study and Capstone Project/	
4. Students identify types of web sites based on their domain names (e.g., edu, com, org, gov, net).	X	X	X	Language Arts/Social Studies/Science/Health with Media Specialist Collaboration when possible	Report Writing Genre Study and Capstone Project/	
5. Students employ data-collection technologies (e.g., probes, handheld devices, GPS units, geographic mapping systems) to gather, view, and analyze the results for a content-related problem.	X	X	X	Language Arts/Social Studies/Science/Health with Media Specialist Collaboration when possible	Report Writing Genre Study and Capstone Project/	
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.						
1. Students use databases or spreadsheets to make predictions, develop strategies, and evaluate decisions to assist with solving a problem.		X	X	Math /Science/ Social Studies	Graphing calculators/Country comparisons	
2. Students evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program).	X	X	X	Math/Social Studies	Report Writing Genre Study and Capstone Project	
3. Students gather data, examine patterns, and apply information for decision making using available digital resources.			X	Science / Social Studies	Research projects / Experiments/ Weather research	
4. Students describe strategies for solving routine hardware and software problems.	X			6th grade exploratory: information Literacy & Technology /with Media Specialist Collaboration when possible	Needs constant reinforcement as needed for any project across the curriculum.	

Grades 6-8
AAPS Technology and Information Skills
Scope and Sequence

Grades Six through Eight (ages 11-14) – Michigan Technology Standards and Expectations (prior to the completion of Grade 8)	6	7	8	Department	Activities	Assessment
Digital Citizenship - Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.						
1. Students provide accurate citations when referencing information sources.	X	X	X	Language Arts and Social Studies	Report Writing Genre Study and Capstone Project / Provide constant reinforcement as needed for any project across the curriculum.	
2. Students discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, viruses, file-sharing).	X	X	X	Language Arts and Social Studies	Report Writing Genre Study and Capstone Project / Provide constant reinforcement as needed for any project across the curriculum.	
3. Students discuss the consequences related to unethical use of information and communication technologies.	X	X	X	Language Arts and Social Studies	Report Writing Genre Study and Capstone Project / Provide constant reinforcement as needed for any project across the curriculum.	
4. Students discuss possible societal impact of technology in the future and reflect on the importance of technology in the past.		X		Language Arts and Social Studies	Country reports / Genre studies	
5. Students create media-rich presentations on the appropriate and ethical use of digital tools and resources.	X	X	X	Language Arts and Social Studies	Report Writing Genre Study and Capstone Project / Provide constant reinforcement as needed for any project across the curriculum.	
6. Students discuss the long term ramifications (digital footprint) of participating in questionable online activities (e.g., posting photos of risqué poses or underage drinking, making threats to others).	X	X	X	Counselors	Internet Safety curriculum	
7. Students describe the potential risks and dangers associated with online communications.	X	X	X	Counselors	Internet Safety curriculum	

Grades 6-8
AAPS Technology and Information Skills
Scope and Sequence

Grades Six through Eight (ages 11-14) – Michigan Technology Standards and Expectations (prior to the completion of Grade 8)	6	7	8	Department	Activities	Assessment
Technology Operations and Concepts - Students demonstrate a sound understanding of technology concepts, systems, and operations.						
1. Students identify file formats for a variety of applications (e.g., doc, xls, pdf, txt, jpg, mp3).	X			6th grade exploratory: information Literacy & Technology /	Converting documents into proper formats	
2. Students use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials.	X	X	X	Language Arts / Social Studies / Information Literacy & Technology	MyAccess, Report Writing Genre Study, Media Center Units of Study	
3. Students perform queries on existing databases.	X	X	X	Language Arts / Social Studies / Information Literacy & Technology	Report Writing Genre Study and Capstone Project	
4. Students know how to create and use various functions available in a database (e.g., filtering, sorting, charts).		X	X	Math /Science/ Social Studies	Graphing calculators/Country comparisons	
5. Students identify a variety of information storage devices (e.g., CDs, DVDs, flash drives, SD cards) and provide ration- ales for using a certain device for a specific purpose.	X			6th grade exploratory: information Literacy & Technology /		
6. Students use accurate technology terminology.	X			6th grade exploratory: information Literacy & Technology /		
7. Students use technology to identify and explore various occupations or careers, especially those related to science, technology, engineering, and mathematics.		X	X	Counselors	Career Pathways	
8. Students discuss possible uses of technology to support personal pursuits and lifelong learning.		X	X	Counselors/Language Arts/Information Literacy & Technology /with Media Specialist Collaboration when possible	Career Pathways	
9. Students understand and discuss how assistive technologies can benefit all individuals.	X			6th grade exploratory: information Literacy & Technology /		
10. Students discuss security issues related to e-commerce.	X	X	X	6th grade exploratory: information Literacy & Technology / Counselors	Internet Safety curriculum	

Grades 9-12
AAPS Technology and Information Skills
Scope and Sequence

Grades Nine through Twelve (ages 14-18) – Michigan Technology Standards and Expectations (prior to the completion of Grade 12)	**9**	**10**	**11**	**12**	**Activities/Assessment**	**Department Responsible**	**AAPS Resources**
Creativity and Innovation - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes.							
1. Students apply advanced software features (e.g. built-in thesaurus, templates, styles) to redesign the appearance of word processing documents, spreadsheets, and presentations.					Research papers, presentations	All	Microsoft Office, Google Docs, Open Office, iWork
2. Students create a web page (e.g., Dreamweaver, iGoogle, Kompozer).							Microsoft Office, Google Docs, Open Office, iWork, Audacity, Inspiration, iLife
3. Students use a variety of media and formats to design, develop, publish, and present projects (e.g., newsletters, web sites, presentations, photo galleries).					Social Studies virtual museum	Social Studies, Language Arts	
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.							
1. Students identify various collaboration technologies and describe their use (e.g., desktop conferencing, webinar, listserv, blog, wiki).							Google Docs, Moodle, Blogger, WikiSpaces, Skype
2. Students use available technologies (e.g., desktop conferencing, e-mail, videoconferencing, instant messaging) to communicate with others on a class assignment or project.							Google Docs, Moodle, Blogger, WikiSpaces, Skype
3. Students collaborate in content-related projects that integrate a variety of media (e.g., print, audio, video, graphic, simulations, and models).							Microsoft Office, Google Docs, Open Office, iWork, Audacity, Inspiration, iLife
4. Students plan and implement a collaborative project using telecommunications tools (e.g., ePals, discussion boards, online groups, interactive web sites, videoconferencing).							Google Docs, Moodle, Blogger, WikiSpaces, Skype
5. Students describe the potential risks and dangers associated with online communications.						All	
6. Students use technology tools for managing and communicating personal information (e.g., finances, contact informa- tion, schedules, purchases, correspondence).					College applications, Submitting assignments online, Peer editing through document sharing, Blogging	All	Google Docs, Moodle, Email, Chat, Social Networks, Edmodo, PowerSchool

Grades 9-12
AAPS Technology and Information Skills
Scope and Sequence

Grades Nine through Twelve (ages 14-18) – Michigan Technology Standards and Expectations (prior to the completion of Grade 12)	9	10	11	12	Activities/Assessment	Department Responsible	AAPS Resources
Research and Information Fluency - Students apply digital tools to gather, evaluate, and use information.							
1. Students develop a plan to gather information using various research strategies (e.g., interviews, questionnaires, experiments, online surveys).					Research skills	Media Specialists, Social Studies, English, Science	
2. Students identify, evaluate, and select appropriate online sources to answer content related questions.					Research skills	Media Specialists, Social Studies, English, Science	
3. Students demonstrate the ability to use library and online databases for accessing information (e.g., MEL, Proquest, Infosource, United Streaming).					Research skills	Media Specialists, Social Studies, English, Science	
4. Students distinguish between fact, opinion, point of view, and inference.					Research skills	Media Specialists, Social Studies, English, Science	
5. Students evaluate information found in selected online sources on the basis of accuracy and validity.					Research skills	Media Specialists, Social Studies, English, Science	
6. Students evaluate resources for stereotyping, prejudice, and misrepresentation.					Research skills	Media Specialists, Social Studies, English, Science	
7. Students understand that using information from a single internet source might result in the reporting of erroneous facts and that multiple sources must always be researched.					Research skills	Media Specialists, Social Studies, English, Science	
8. Students research examples of inappropriate use of technologies and participate in related classroom activities (e.g., debates, reports, mock trials, presentations).					Research skills	Media Specialists, Social Studies, English, Science	

Grades 9-12
AAPS Technology and Information Skills
Scope and Sequence

Grades Nine through Twelve (ages 14-18) – Michigan Technology Standards and Expectations (prior to the completion of Grade 12)	9	10	11	12	Activities/Assessment	Department Responsible	AAPS Resources
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.							
1. Students use digital resources (e.g., educational software, simulations, models) for problem solving and independent learning.							
2. Students analyze the capabilities and limitations of digital resources and evaluate their potential to address personal, social, lifelong learning, and career needs.					EDPS, MOIS		
3. Students devise a research question or hypothesis using information and communication technology resources, analyze the findings to make a decision based on the findings, and report the results.					Research Projects	Media Specialists, Social Studies, English, Science	
Digital Citizenship - Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.							
1. Students identify legal and ethical issues related to the use of information and communication technologies (e.g., properly selecting and citing resources).							
2. Students discuss possible long-range effects of unethical uses of technology (e.g., virus spreading, file pirating, hacking) on cultures and society.							
3. Students discuss and demonstrate proper netiquette in online communications.							
4. Students identify ways that individuals can protect their technology systems from unethical or unscrupulous users.							
5. Students create appropriate citations for resources when presenting research findings.					Research Projects	Media Specialists, Social Studies, English, Science	
6. Students discuss and adhere to fair use policies and copyright guidelines.					Research Projects	Media Specialists, Social Studies, English, Science	

Grades 9-12
AAPS Technology and Information Skills
Scope and Sequence

Grades Nine through Twelve (ages 14-18) – Michigan Technology Standards and Expectations (prior to the completion of Grade 12)	9	10	11	12	Activities/Assessment	Department Responsible	AAPS Resources
Technology Operations and Concepts - Students demonstrate a sound understanding of technology concepts, systems, and operations.							
1. Students complete at least one online credit, or non-credit, course or online learning experience.							MVHS classes, Online Math, E2020, EDP, Blended Online Government, Math: HippoCampus
2. Students use an online tutorial and discuss the benefits and disadvantages of this method of learning.						Media Specialists, Technology and Information skills	www.analyze.math, HippoCampus, www.purplemath.com, E2020, Brainfuse, Software help menus and tutorials
3. Students explore career opportunities, especially those related to science, technology, engineering, and mathematics and identify their related technology skill requirements.					EDPs	Counselors, CTE	
4. Students describe uses of various existing or emerging technology resources (e.g., podcasting, webcasting, videoconferencing, online file sharing, global positioning software).					Math (calculator use)		Microsoft Office, Google Docs, Open Office, iWork, Audacity, Inspiration, iLife, Examview
5. Students identify an example of an assistive technology and describe its potential purpose and use.					Kurzweil, Inspiration, Powerpoint, Timeliner, Text to Speech, Audio books	All	
6. Students participate in a virtual environment as a strategy to build 21st century learning skills.							MVHS classes, Online Math, E2020, EDP, Blended Online Government, Math: HippoCampus
7. Students assess and solve hardware and software problems by using online help or other user documentation.							
8. Students explain the differences between freeware, shareware, open source, and commercial software.							
9. Students participate in experiences associated with technology-related careers.					College applications, EDPs		Email, Saving to server, Sending attachments
10. Students identify common graphic, audio, and video file formats (e.g., jpeg, gif, bmp, mpeg, wav, wmv, mp3, avi, pdf).							
11. Students understand and discuss how assistive technologies can benefit all individuals.					Kurzweil, Inspiration, Powerpoint, Timeliner, Text to Speech, Audio books	All	
12. Students demonstrate how to import/export text, graphics, or audio files.							
13. Students proofread and edit a document using an application's spelling and grammar checking functions.					Research papers, presentations	All	Open Office, Neo Office, Google Docs, iWork suite

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 3:

Michigan Educational Technology Standards (METS)

PK-2

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Approved by the State Board of Education - October 2009

2009 Michigan Educational Technology Standards for Students

Grades PK-2

A goal of No Child Left Behind is that schools will "*assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.*"

The Michigan Educational Technology Standards for Students (METS-S) are aligned with the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS-S) and the Framework for 21st Century Learning. The Michigan standards are intended to provide educators with a specific set of learning expectations that can be used to drive educational technology literacy assessments.

These standards are best delivered by authentic instruction and assessment with direct curricular ties and it is intended that these Standards will be integrated into all content areas. The preparation of our students to the successful in the 21st Century is the responsibility of all educators.

Technology Literacy

Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century.

Universal Design for Learning (UDL)

CAST (the Center for Applied Special Technology) offers three principles to guide UDL: provide multiple means of representation; provide multiple means of expression; and provide multiple means of engagement. CAST asserts that "These UDL Guidelines will assist curriculum developers (these may include teachers, publishers, and others) in designing flexible curricula that reduce barriers to learning and provide robust learning supports to meet the needs of all learners." Educational technologies can be valuable resources for educators in addressing the UDL guidelines. For additional information on UDL, visit the CAST website: www.cast.org.

For additional information and resources relating to the 2009 METS-S, please visit: http://www.techplan.org/METS

PK-2.CI. Creativity and Innovation—By the end of grade 2 each student will:

PK-2.CI.1. use a variety of digital tools (e.g., word processors, drawing tools, simulations, presentation software, graphical organizers) to learn, create, and convey original ideas or illustrate concepts

PK-2.CC. Communication and Collaboration—By the end of grade 2 each student will:

PK-2.CC.1. work together when using digital tools (e.g., word processor, drawing, presentation software) to convey ideas or illustrate simple concepts relating to a specified project

PK-2.CC.2. use a variety of developmentally appropriate digital tools (e.g., word processors, paint programs) to communicate ideas to classmates, families, and others

PK-2.RI. Research and Information Literacy—By the end of grade 2 each student will:

PK-2.RI.1. interact with Internet based resources

PK-2.RI.2. use digital resources (e.g., dictionaries, encyclopedias, graphs, graphical organizers) to locate and interpret information relating to a specific curricular topic, with assistance from teachers, school library media specialists, parents, or student partners

PK-2.CT. Critical Thinking, Problem Solving, and Decision Making —By the end of grade 2 each student will:

PK-2.CT.1. explain ways that technology can be used to solve problems (e.g., cell phones, traffic lights, GPS units)

PK-2.CT.2. use digital resources (e.g., dictionaries, encyclopedias, search engines, web sites) to solve developmentally appropriate problems, with assistance from teachers, parents, school media specialists, or student partners

PK-2.DC. Digital Citizenship—By the end of grade 2 each student will:

PK-2.DC.1. describe appropriate and inappropriate uses of technology (e.g., computers, Internet, e-mail, cell phones) and describe consequences of inappropriate uses

PK-2.DC.2. know the Michigan Cyber Safety Initiative's three rules (Keep Safe, Keep Away, Keep Telling)

PK-2.DC.3. identify personal information that should not be shared on the Internet (e.g. name, address, phone)

PK-2.DC.4. know to inform a trusted adult if he/she receives or views an online communication which makes him/her feel uncomfortable, or if someone whom he/she doesn't know is trying to communicate with him/her or asking for personal information

PK-2.TC. Technology Operations and Concepts—By the end of grade 2 each student will:

PK-2.TC.1. discuss advantages and disadvantages of using technology

PK-2.TC.2. be able to use basic menu commands to perform common operations (e.g., open, close, save, print)

PK-2.TC.3. recognize and name the major hardware components in a computer system (e.g., computer, monitor, keyboard, mouse, printer)

PK-2.TC.4. discuss the basic care for computer hardware and various media types (e.g., CDs, DVDs)

PK-2.TC.5. use developmentally appropriate and accurate terminology when talking about technology

PK-2.TC.6. understand that technology is a tool to help him/her complete a task, and is a source of information, learning, and entertainment

PK-2.TC.7. demonstrate the ability to navigate in virtual environments (e.g., electronic books, games, simulation software, web sites)

Approved by the Michigan State Board of Education—October 2009

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 4:

Michigan Educational Technology Standards (METS)

3-5

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2009 Michigan Educational Technology Standards for Students

Grades 3-5

A goal of No Child Left Behind is that schools will "*assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.*"

The Michigan Educational Technology Standards for Students (METS-S) are aligned with the International Society for Technology in Education's (ISTE) National Educational Technology Standards for Students (NETS-S) and the Framework for 21st Century Learning. The Michigan standards are intended to provide educators with a specific set of learning expectations that can be used to drive educational technology literacy assessments.

These standards are best delivered by authentic instruction and assessment with direct curricular ties and it is intended that these Standards will be integrated into all content areas. The preparation of our students to the successful in the 21st Century is the responsibility of all educators.

Technology Literacy

Technology literacy is the ability to responsibly use appropriate technology to communicate, solve problems, and access, manage, integrate, evaluate, and create information to improve learning in all subject areas and to acquire lifelong knowledge and skills in the 21st century.

Universal Design for Learning (UDL)

CAST (the Center for Applied Special Technology) offers three principles to guide UDL: provide multiple means of representation; provide multiple means of expression; and provide multiple means of engagement. CAST asserts that "These UDL Guidelines will assist curriculum developers (these may include teachers, publishers, and others) in designing flexible curricula that reduce barriers to learning and provide robust learning supports to meet the needs of all learners." Educational technologies can be valuable resources for educators in addressing the UDL guidelines. For additional information on UDL, visit the CAST website: www.cast.org.

For additional information and resources relating to the 2009 METS-S, please visit: http://www.techplan.org/METS

3-5.CI. Creativity and Innovation—By the end of grade 5 each student will:

3-5.CI.1. produce a media-rich digital project aligned to state curriculum standards (e.g., fable, folk tale, mystery, tall tale, historical fiction)

3-5.CI.2. use a variety of technology tools and applications to demonstrate his/her creativity by creating or modifying works of art, music, movies, or presentations

3-5.CI.3. participate in discussions about technologies (past, present, and future) to understand these technologies are the result of human creativity

3-5.CC. Communication and Collaboration—By the end of grade 5 each student will:

3-5.CC.1. use digital communication tools (e.g., e-mail, wikis, blogs, IM, chat rooms, videoconferencing, Moodle, Blackboard) and online resources for group learning projects

3-5-2.CC.2. identify how different software applications may be used to share similar information, based on the intended audience (e.g., presentations for classmates, newsletters for parents)

3-5-2.CC.3. use a variety of media and formats to create and edit products (e.g., presentations, newsletters, brochures, web pages) to communicate information and ideas to various audiences

3-5.RI. Research and Information Literacy—By the end of grade 5 each student will:

3-5.RI.1. identify search strategies for locating information with support from teachers or library media specialists

3-5.RI.2. use digital tools to find, organize, analyze, synthesize, and evaluate information

3-5.RI.3. understand and discuss that web sites and digital resources may contain inaccurate or biased information

3-5.RI.4. understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched

3-5.CT. Critical Thinking, Problem Solving, and Decision Making —By the end of grade 5 each student will:

3-5.CT.1. use digital resources to access information that can assist in making informed decisions about everyday matters (e.g., which movie to see, which product to purchase)

3-5.CT.2. use information and communication technology tools (e.g., calculators, probes, videos, DVDs, educational software) to collect, organize, and evaluate information to assist with solving problems

3-5.CT.3. use digital resources to identify and investigate a state, national, or global issue (e.g., global warming, economy, environment)

3-5.DC. Digital Citizenship—By the end of grade 5 each student will:

3-5.DC.1. discuss scenarios involving acceptable and unacceptable uses of technology (e.g., file-sharing, social networking, text messaging, cyber bullying, plagiarism)

3-5.DC.2. recognize issues involving ethical use of information (e.g., copyright adherence, source citation)

3-5.DC.3. describe precautions surrounding personal safety that should be taken when online

3-5.DC.4. identify the types of personal information that should not be given out on the Internet (name, address, phone number, picture, school name)

3-5.TC. Technology Operations and Concepts—By the end of grade 5 each student will:

3-5.TC.1. use basic input and output devices (e.g., printers, scanners, digital cameras, video recorders, projectors)

3-5.TC.2. describe ways technology has changed life at school and at home

3-5.TC.3. understand and discuss how assistive technologies can benefit all individuals

3-5.TC.4. demonstrate proper care in the use of computer hardware, software, peripherals, and storage media

3-5.TC.5. know how to exchange files with other students using technology (e.g., network file sharing, flash drives)

Approved by the Michigan State Board of Education—October 2009

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 5:

Michigan Educational Technology Standards (METS)

6-8

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Approved by the State Board of Education - October 2009

2009 Michigan Educational Technology Standards for Students

Grades 6-8

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Technology Literacy

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Universal Design for Learning (UDL)

CAST (the Center for Applied Special Technology) offers three principles to guide UDL: provide multiple means of representation; provide multiple means of expression; and provide multiple means of engagement. CAST asserts that "These UDL Guidelines will assist curriculum developers (these may include teachers, publishers, and others) in designing flexible curricula that reduce barriers to learning and provide robust learning supports to meet the needs of all learners." Educational technologies can be valuable resources for educators in addressing the UDL guidelines. For additional information on UDL, visit the CAST website: www.cast.org.

6-8.CI. Creativity and Innovation—By the end of grade 8 each student will:

6-8.CI.1. apply common software features (e.g., spellchecker, thesaurus, formulas, charts, graphics, sounds) to enhance communication with an audience and to support creativity

6-8.CI.2. create an original project (e.g., presentation, web page, newsletter, information brochure) using a variety of media (e.g., animations, graphs, charts, audio, graphics, video) to present content information to an audience

6-8.CI.3. illustrate a content-related concept using a model, simulation, or concept-mapping software

6-8.CC. Communication and Collaboration—By the end of grade 8 each student will:

6-8.CC.1. use digital resources (e.g., discussion groups, blogs, podcasts, videoconferences, Moodle, Blackboard) to collaborate with peers, experts, and other audiences

6-8.CC.2. use collaborative digital tools to explore common curriculum content with learners from other cultures

6-8.CC.3. identify effective uses of technology to support communication with peers, family, or school personnel

6-8.RI. Research and Information Literacy—By the end of grade 8 each student will:

6-8.RI.1. use a variety of digital resources to locate information

6-8.RI.2. evaluate information from online information resources for accuracy and bias

6-8.RI.3. understand that using information from a single Internet source might result in the reporting of erroneous facts and that multiple sources should always be researched

6-8.RI.4. identify types of web sites based on their domain names (e.g., edu, com, org, gov, net)

6-8.RI.5. employ data-collection technologies (e.g., probes, handheld devices, GPS units, geographic mapping systems) to gather, view, and analyze the results for a content-related problem

6-8.CT. Critical Thinking, Problem Solving, and Decision Making —By the end of grade 8 each student will:

6-8.CT.1. use databases or spreadsheets to make predictions, develop strategies, and evaluate decisions to assist with solving a problem

6-8.CT.2. evaluate available digital resources and select the most appropriate application to accomplish a specific task (e, g., word processor, table, outline, spreadsheet, presentation program)

6-8.CT.3. gather data, examine patterns, and apply information for decision making using available digital resources

6-8.CT.4. describe strategies for solving routine hardware and software problems

6-8.DC. Digital Citizenship—By the end of grade 8 each student will:

6-8.DC.1. provide accurate citations when referencing information sources

6-8.DC.2. discuss issues related to acceptable and responsible use of technology (e.g., privacy, security, copyright, plagiarism, viruses, file-sharing)

6-8.DC.3. discuss the consequences related to unethical use of information and communication technologies

6-8.DC.4. discuss possible societal impact of technology in the future and reflect on the importance of technology in the past

6-8.DC.5. create media-rich presentations on the appropriate and ethical use of digital tools and resources

6-8.DC.6. discuss the long term ramifications (digital footprint) of participating in questionable online activities (e.g., posting photos of risqué poses or underage drinking, making threats to others)

6-8.DC.7. describe the potential risks and dangers associated with online communications

6-8.TC. Technology Operations and Concepts—By the end of grade 8 each student will:

6-8.TC.1. identify file formats for a variety of applications (e.g., doc, xls, pdf, txt, jpg, mp3)

6-8.TC.2. use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of technology-produced materials

6-8.TC.3. perform queries on existing databases

6-8.TC.4. know how to create and use various functions available in a database (e.g., filtering, sorting, charts)

6-8.TC.5. identify a variety of information storage devices (e.g., CDs, DVDs, flash drives, SD cards) and provide rationales for using a certain device for a specific purpose

6-8.TC.6. use accurate technology terminology

6-8.TC.7. use technology to identify and explore various occupations or careers, especially those related to science, technology, engineering, and mathematics

6-8.TC.8. discuss possible uses of technology to support personal pursuits and lifelong learning

6-8.TC.9. understand and discuss how assistive technologies can benefit all individuals

6-8.TC.10. discuss security issues related to e-commerce

For additional information and resources relating to the 2009 METS-S, please visit: http://www.techplan.org/METS

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Appendix 6:

Michigan Educational Technology Standards (METS) 9-12

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Approved by the State Board of Education - October 2009

2009 Michigan Educational Technology Standards for Students

Grades 9-12

A goal of No Child Left Behind is that schools will "*assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability.*"

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9-12.CI. Creativity and Innovation—By the end of grade 12 each student will:

9-12.CI.1. apply advanced software features (e.g. built-in thesaurus, templates, styles) to redesign the appearance of word processing documents, spreadsheets, and presentations

9-12.CI.2. create a web page (e.g., Dreamweaver, iGoogle, Kompozer)

9-12.CI.3. use a variety of media and formats to design, develop, publish, and present projects (e.g., newsletters, web sites, presentations, photo galleries)

9-12.CC. Communication and Collaboration—By the end of grade 12 each student will:

9-12.CC.1. identify various collaboration technologies and describe their use (e.g., desktop conferencing, webinar, listserv, blog, wiki)

9-12.CC.2. use available technologies (e.g., desktop conferencing, e-mail, videoconferencing, instant messaging) to communicate with others on a class assignment or project

9-12.CC.3. collaborate in content-related projects that integrate a variety of media (e.g., print, audio, video, graphic, simulations, and models)

9-12.CC.4. plan and implement a collaborative project using telecommunications tools (e.g., ePals, discussion boards, online groups, interactive web sites, videoconferencing)

9-12.CC.5. describe the potential risks and dangers associated with online communications

9-12.CC.6. use technology tools for managing and communicating personal information (e.g., finances, contact information, schedules, purchases, correspondence)

9-12.RI. Research and Information Literacy—By the end of grade 12 each student will:

9-12.RI.1. develop a plan to gather information using various research strategies (e.g., interviews, questionnaires, experiments, online surveys)

9-12.RI.2. identify, evaluate, and select appropriate online sources to answer content related questions

9-12.RI.3. demonstrate the ability to use library and online databases for accessing information (e.g., MEL, Proquest, Infosource, United Streaming)

9-12.RI.4. distinguish between fact, opinion, point of view, and inference

9-12.RI.5 evaluate information found in selected online sources on the basis of accuracy and validity

9-12.RI.6. evaluate resources for stereotyping, prejudice, and misrepresentation

9-12.RI.7. understand that using information from a single internet source might result in the reporting of erroneous facts and that multiple sources must always be researched

9-12.RI.8. research examples of inappropriate use of technologies and participate in related classroom activities (e.g., debates, reports, mock trials, presentations)

9-12.CT. Critical Thinking, Problem Solving, and Decision Making —By the end of grade 12 each student will:

9-12.CT.1. use digital resources (e.g., educational software, simulations, models) for problem solving and independent learning

9-12.CT.2. analyze the capabilities and limitations of digital resources and evaluate their potential to address personal, social, lifelong learning, and career needs

9-12.CT.3. devise a research question or hypothesis using information and communication technology resources, analyze the findings to make a decision based on the findings, and report the results

9-12.DC. Digital Citizenship—By the end of grade 12 each student will:

9-12.DC.1. identify legal and ethical issues related to the use of information and communication technologies (e.g., properly selecting and citing resources)

9-12.DC.2. discuss possible long-range effects of unethical uses of technology (e.g., virus spreading, file pirating, hacking) on cultures and society

9-12.DC.3. discuss and demonstrate proper netiquette in online communications

9-12.DC.4. identify ways that individuals can protect their technology systems from unethical or unscrupulous users

9-12.DC.5. create appropriate citations for resources when presenting research findings

9-12.DC.6. discuss and adhere to fair use policies and copyright guidelines

9-12.TC. Technology Operations and Concepts—By the end of grade 12 each student will:

9-12.TC.1. complete at least one online credit, or non-credit, course or online learning experience

9-12.TC.2. use an online tutorial and discuss the benefits and disadvantages of this method of learning

9-12.TC.3. explore career opportunities, especially those related to science, technology, engineering, and mathematics and identify their related technology skill requirements

9-12.TC.4. describe uses of various existing or emerging technology resources (e.g., podcasting, webcasting, videoconferencing, , online file sharing, global positioning software)

9-12.TC.5. identify an example of an assistive technology and describe its potential purpose and use

9-12.TC.6. participate in a virtual environment as a strategy to build 21st century learning skills

9-12.TC.7. assess and solve hardware and software problems by using online help or other user documentation

9-12.TC.8. explain the differences between freeware, shareware, open source, and commercial software

9-12.TC.9. participate in experiences associated with technology-related careers

9-12.TC.10. identify common graphic, audio, and video file formats (e.g., jpeg, gif, bmp, mpeg, wav, wmv, mp3, avi, pdf)

9-12.TC.11. understand and discuss how assistive technologies can benefit all individuals

9-12.TC.12. demonstrate how to import/export text, graphics, or audio files

9-12.TC.13. proofread and edit a document using an application's spelling and grammar checking functions

For additional information and resources relating to the 2009 METS-S, please visit: http://www.techplan.org/METS

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Appendix 7:

National Educational Technology Standards (NETS) Students

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iste nets·s
ADVANCING DIGITAL AGE LEARNING

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

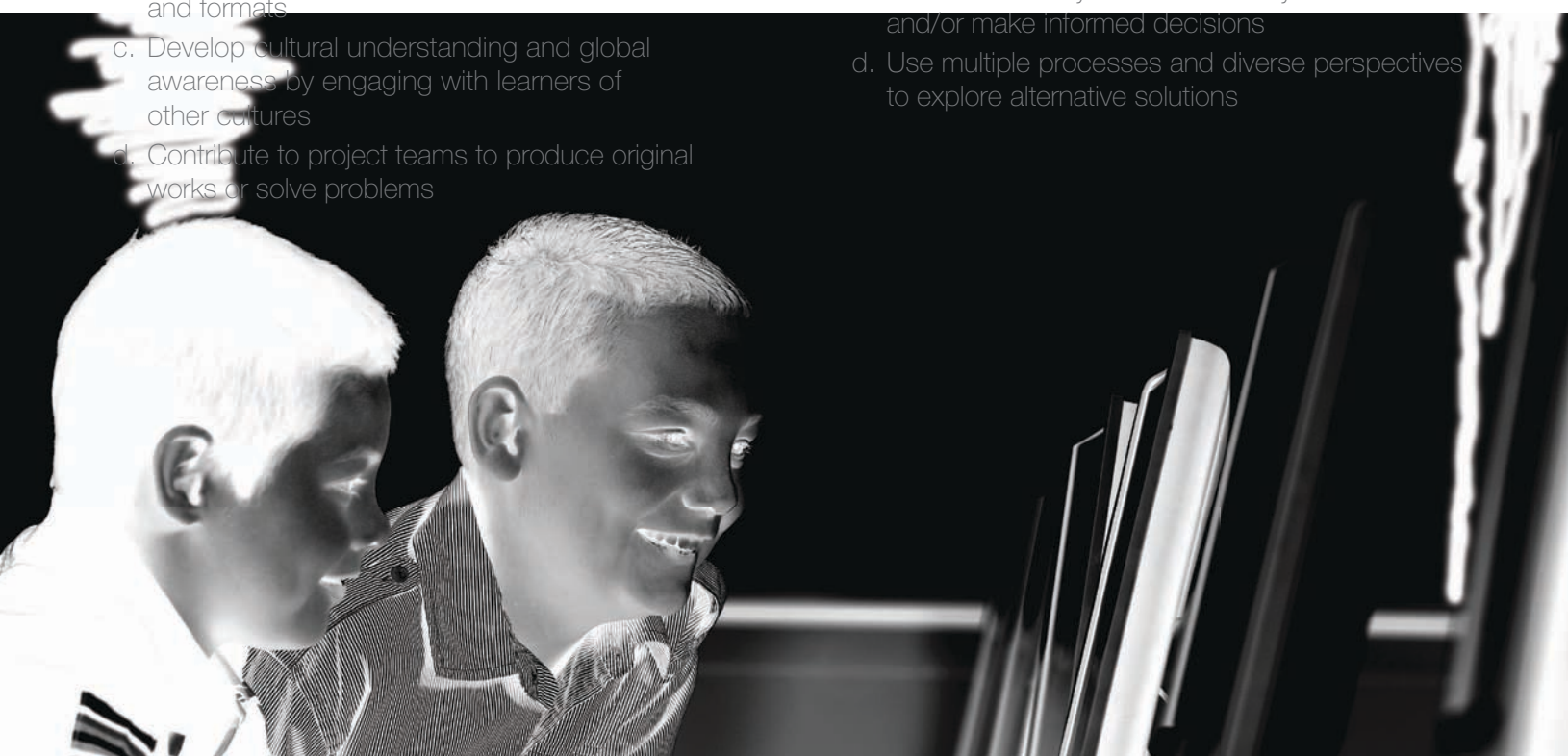
Students apply digital tools to gather, evaluate, and use information.

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

Ann Arbor Public Schools

Technology Plan

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Appendix 8:

Guidelines for Acceptable Use of Technology (AUP)

Elementary

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COMPUTER USE GUIDELINES for ELEMENTARY SCHOOL STUDENTS

I will use the computer for school work and to learn.

When using school computers, I will be a good digital citizen:
*use good manners.
* use appropriate language
* not look at or use anyone else's work without permission.

I will be careful with all hardware and software that I use.

I will keep my passwords private.

I will share the computer and the network.

If I do not know how to use any or part of the computer system, I will ask for help.

I will not share personal information about myself or anyone else on the Internet. This includes address, phone number, work or photograph, etc.

I understand that anyone can read the messages I send and that my work on the computer is not private.

I will not write bad words on the computer.

I will not use anything from the computer or Internet or send anything over the Internet that belongs to someone else without their permission.

I will only use the Internet for appropriate learning activities.

Please cut and return to your school the 3x5 Computer Use Agreement card to the right. Thank you.

I understand these rules and promise to follow them. If I do not follow these rules I know that I may have my computer privileges restricted or taken away.

I have discussed these rules with my child and my child agrees to follow them.

COMPUTER USE AGREEMENT

_____
Name of Student (Please Print)

_____
Signature of Student

_____
Signature of Parent(s)

RETURN TO SCHOOL

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Appendix 9:

Guidelines for Acceptable Use of Technology (AUP)

Middle School

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COMPUTER USE GUIDELINES for MIDDLE SCHOOL STUDENTS

I will use the computer for school work and to learn.

When using school computers, I will be a good digital citizen:
*use good manners.
* use appropriate language
* never tell anyone my home address or phone number.
* never post my picture on the Internet without permission of my parent(s) and teacher.
* not look at or use anyone else's work without permission.

I will show respect for all hardware and software that I use.

I will not install "pirated software" or knowingly use disks with viruses on any equipment.

I will use only appropriate language when writing on the computer.

I will limit my use of the Internet to only appropriate learning activities.

I will not share personal information about myself or anyone else on the Internet. This includes name, address, phone number, photograph, etc.

I understand that anyone can read the messages I send from the computer and that work stored on the computer is not private.

I understand that from time to time the computer or Internet connection may not be working when I plan to use it.

I will share the computer and the network.

I will keep my passwords private.

I will not run a business using school resources.

I will not use anything from the computer or Internet or send anything over the Internet that belongs to someone else without their permission.

If I do not know how to use any or part of the computer system, I will ask for help.

Please cut and return to your school the Computer Use Agreement card to the right. Thank you.

I understand these rules and promise to follow them. If I do not follow these rules I know that I may have my computer privileges restricted or taken away.

I have discussed these rules with my child and my child agrees to follow them.

COMPUTER USE AGREEMENT

_____
Name of Student (Please Print)

_____
Signature of Student

_____
Signature of Parent(s)

RETURN TO SCHOOL

Ann Arbor Public Schools

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Appendix 10:

Guidelines for Acceptable Use of Technology (AUP)

High School and Staff

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ACCEPTABLE USE GUIDELINES FOR STAFF AND STUDENTS

Digital Citizenship

It is a goal of AAPS to develop good Digital Citizens that can make decisions and operate technology with appropriate and responsible use. At all time, while using district technology resources, students and staff shall demonstrate appropriate and responsible use in the themes of Digital Citizenship.

For Example:

A Good Digital Citizen:	**A Good Digital Citizen DOES NOT:**
• uses technology resources for learning • uses good netiquette • respects privacy, their own and others • respects copyright and other laws • protects themselves from technological dangers such as identity theft and other predators • is a life-long learner • keeps passwords private	• use profanity in electronic communications • share obscene/pornographic materials electronically • use technology or network resources in an illegal or unethical manner • hack into others information • download illegal music • plagiarize • create or distribute worms or viruses • hamper the operations of the AAPS network • cyberbully

References:
http://www.digitalcitizenship.net/Nine_Elements.html

Expectations and Responsibilities

Staff	**Students**
• AAPS staff are expected to be familiar with the school policies concerning student technology use. • All staff who utilize school technology for instructional purposes with students have a professional responsibility to help students develop information literacy skills. • School personnel have a responsibility to protect and respect the confidentiality of all electronically stored student, parent, and staff information according to federal and state laws.	• Students are encouraged to use technology equipment under adult supervision to further learning opportunities. • Students shall not provide their name, address or photograph to people or companies on the Internet and Web without permission of parent(s) and a teacher.
• Do not install any software on District computers without permission from the District technology support staff. • Keep your passwords secret, change passwords if asked, and respect the privacy of others' passwords. • E-mail messages are not secure or private. Confidential information should not be sent via e-mail. District e-mail is subject to FOIA (Freedom of Information Act) requests. • Licenses are purchased for the rights to use most software. Don't make a copy of district software for use on other computers. • Treat district technology equipment with care.	

- Participate in training to learn how to properly use technology equipment.
- Connect your own computer to the network only with permission of a district technical support person.
- Do not run a personal business using school resources.

Technology Equipment & Computer Files

- District computers in public areas are for the use of all AAPS users. Some computers may be restricted to certain user groups.
- Computer files are personal property. Get the owner's permission before opening, moving, deleting or duplicating the computer files of others. Do not attempt to "hack" or otherwise alter programs or files that you do not own.
- Staff have the right to view any data that is stored electronically by students on a district workstation or fileserver.
- District fileservers and workstations are subject to FOIA requests.
- Back up school-related or professional files to the district internal storage server.
- Individuals are responsible for backing up personal files on a personal storage device.
- Files could disappear accidentally, and the district is not responsible.
- Privacy of files is not guaranteed.
- Storage limits are determined by the district and are subject to change.

Copyrighted Information

- Copyright is a form of protection provided by the laws of the United States (title 17, *U. S. Code*) to the authors of "original works of authorship," including literary, dramatic, musical, artistic, and certain other intellectual works. This protection is available to both published and unpublished works. The district shall adhere to the provisions of U.S. Copyright Law including fair use.
- Refer to http://copyright.gov/

CIPA Compliance

- In compliance with the Children's Internet Protection Act (CIPA) and Michigan PA212, AAPS will filter Internet access that protects children from child pornography, obscene materials or materials harmful to minors, and adults from child pornography and obscene materials at schools and libraries**.**
- Refer to : http://www.fcc.gov/cgb/consumerfacts/cipa.html

Consequences of Inappropriate Use of Technology Equipment

- Violations of the AAPS AUP, including all guidelines referred to above, may result in restrictions, suspension or revocation of electronic use privileges by the Director of Technology or designee.
- Users violating any of these privileges and responsibilities may face additional disciplinary action as appropriate.
- Appeals may be made according to the Rules and Regulations of the AAPS.

RETURN TO SCHOOL OFFICE

Please cut and return to your school the Computer Use Agreement card to the right. Thank you.

In return for the privilege of using the resources of the AAPS Computing Environment, I agree to abide by the *Rules and Regulations for Use of the AAPS Computer Environment.* I understand that failure to follow these rules can result in having my privileges restricted or taken away.

COMPUTER USE AGREEMENT

Staff Name (Please Print)	Email Username
Date	Birth Month/Day (to distinguish duplicate names)
School/Building	Signature

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Appendix 11:

Web Standards Guidelines

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School Web Site Development

In the Fall of 2002, a new AAPS web-development tool, GVC.SiteMaker, was made available to buildings, departments and staff. The SiteMaker system, a web-based site development and management tool, offers many features, including:

- Easy creation and management of web sites without requiring knowledge of HTML
- Powerful built-in features such as file-uploading, ability to share configuration rights with other individuals, easy-to-setup password-protected pages, and the ability to create a searchable database in one's site.
- Hierarchical administrative privileges, making it easy for schools/departments to manage user accounts for individuals developing sites associated with their unit.

In the Fall of 2004, the AAPS Communications Department began working with buildings to help them to migrate (at a minimum) the top level of their sites to the SiteMaker system; this change:

- Established a minimum level of consistency, in content and style, across all building web sites
- Enables maintenance of the building web site to be shared by multiple users
- Simplifies the transitioning between building webmasters when it occurs

All building sites completed their migration to SiteMaker in September of 2006.

Following are guidelines that the Ann Arbor Public Schools have put together to guide building web coordinators, webmasters, teacher, parents, and volunteers on the school web committee in the creation of web pages that will be posted on the district web server or on the SiteMaker system. If you have a question that is not answered by this document, please email Ali Van Doren, District Webmaster (vandoren@aaps.k12.mi.us) and she will be happy to attend to your needs.

Ann Arbor Public Schools
School Web Site Guidelines

1. Account Creation

The Ann Arbor Public Schools offers two environments in which one can develop a web site: the district web server and the SiteMaker system. All staff members, departments, school teams, clubs and organizations are eligible to have a web account. Parents & community members may also have user accounts if they will be developing web pages for the school/department/team, etc. The district web server is Linux-based, running PHP and MySQL. The SiteMaker system is a WebObjects-based web application housed off-site for the district. The top level of all building sites are hosted on the SiteMaker system; departments, teachers, and other staff have a choice as to where their site resides, on SiteMaker or on the district web server. Each SiteMaker site starts out with 3mb of space for images and files; more space can be secured when needed.

A. To maintain a building site on the SiteMaker system, a **building** must**:**

- appoint a building Web Coordinator (**must** be a building staff member) who will act as the official liaison for the building web site; this person is the only person who can request user accounts for the building on the district web server.
- create a Web Committee (can be the building Tech Committee) which will oversee the growth and direction of the building web site
- keep a signed Web Developer User Agreement card on file in the office for **every** user that has an account to make changes to the school web site
- agree that the school site will be regularly maintained and in compliance with district policies, regulations, guidelines
- agree to alert either the Unit Manager (if available) or the District Webmaster (vandoren@aaps.k12.mi.us) if any account holders leave the building so that user account can be disabled.
- The building also has the option of identifying a SiteMaker Unit Manager who can be trained and will have the authority to create additional SiteMaker sites in the building's unit on the SiteMaker system; this is not a requirement – schools may rely on the District Webmaster (vandoren@aaps.k12.mi.us) to create additional sites for the building.

B. To secure a SiteMaker site, an **individual** must:

- sign a Web Developer User Agreement card and turn it in to the school's office if one is not already on file
- agree to maintain the site regularly and in compliance with district policies, regulations, and guidelines.
- contact the building's Web Coordinator or Unit Manager, if one is in place, to request a user account
- agree **NOT** to share your user account password with anyone else; sharing passwords will result in the deactivation of the user account.

C. To secure an account on the district web server, an **individual** must:

- sign a Web Developer User Agreement card and turn it in to the school's office (if one is not already on file)
- agree to maintain the site regularly and in compliance with district policies, regulations, and guidelines.
- contact the building's Web Coordinator to request a user account
- agree **NOT** to share your user account password with anyone else; sharing passwords will result in the deactivation of the user account.

2. Responsibility

- Each building is responsible for their own development and maintenance of web pages. It is up to the building to decide who will have access to publishing pages on the school site and who will not. We recommend that individuals within the building have their own user account so they can post and maintain their own pages, but the building web committee makes the ultimate decision.
- As building leader, the principal is ultimately responsible for the content on the school web page.

3. Required Information

- To maintain a level of consistency across district sites, the top level of all school sites will use their building SiteMaker template that is based on the AAPS district style.
- Schools can work with the District Webmaster to further customize their template with images for the banner.
- The School SiteMaker templates include the following information:
  - A link to the district web site (http://www.a2schools.org/)
  - Contact information for the building (phone, address)
  - A page title (which displays at the top of the browser window) formatted: "Ann Arbor Public Schools: Welcome to [Name of school]"
- It is recommended that buildings provide an email address for the building; a building-specific email address, if one does not exist already, may be requested through the District Webmaster.
- Pages that are time-sensitive (calendars, etc) must be updated on a regular basis, and should include a "Last updated" date on the page.
- Each page within the site should include a link to the previous level in the hierarchy, and it is preferred that a link to the building home page is included on each page as well (this can be accomplished by working with the District Webmaster to include such a link in the school's style template).

4. Content Guidelines

- The district web server should be used for educational purposes only. The school web site should be used to:
  - provide building information for parents, students, staff, and community members, as well as serve as a resource for prospective families
  - promote school activities and events
  - offer educational resources for staff and parents for use with students

- District websites may contain links only to appropriate instructional sites on the Web or other AAPS websites. All other links must be pre-approved by the building web committee.
- External links should serve the purposes listed above, and should be labeled with the following disclaimer: "Clicking on the following link will take you outside of the Ann Arbor Public School web site; AAPS is not responsible for content on external sites"; the alternative is to mark off-site links in some way (e.g. >) and to include a note: "Sites marked with > are outside of the Ann Arbor Public School web site; AAPS is not responsible for content on external sites".
- Teachers may post classroom sites on the server, if their building web committee has decided that option is available, and their sites should serve the purposes listed above.
- Follow all copyright laws

  Copyrighted Information Owned By Others: Many books, pictures, and electronic files are the property of their creators (the material is "copyrighted") and can be used only with permission or by paying a fee. In some cases copyrighted material may be used for educational purposes covered by the "fair use" guidelines. Do not copy and include copyrighted materials in the computer files you create, except as permitted by the "fair use" guidelines. These guidelines can be found in every media center in the district.
- Web accounts are the property of the district and should not be used as a forum to express personal opinions, etc.

5. Student Information

Student photos and work may appear on district pages so long as the following stipulations are followed to maintain the privacy and safety of our students:

- Parental permission: Each Fall, the school offices will send the District Permission to Publish form to all children's homes; parents wishing to deny permission to publish their student's work/photo/etc. on the web site will sign the form and return it to the school office.
- It is the responsibility of site creators to verify that permission to publish has not been denied by the parents of a student.
- Group photos of 3 or more students are encouraged
- Student Names:
  - K-8: First names ONLY are allowed on K-8 web sites, and they may never accompany photos of students
  - 9-12: First name and last name are allowed on high school sites, but they may not accompany photos. In the case of a team photo, names may accompany the photo but should not correspond to the order in the picture (instead, put names in alphabetical order, and do not include any uniform numbers in the listing.)
- When deciding to use any photos of students on the site, please use your best judgment; one must remember that a school web site is a **global** medium, and we cannot control who can or cannot access our pages, nor how they might use the information they find on those pages. Keep these factors in mind when deciding whether to use a photo of students on the site.

District Web Developer User Agreement

By signing this card, I acknowledge that I have read and agree to follow the Ann Arbor Public Schools Web Site Guidelines. I understand if I do not adhere to these guidelines, the District has the right to disable my user account and access to the server.

Name

Signature

Date

School site you'll be working on

Email address

RETURN THIS CARD TO THE BUILDING SECRETARY

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 12:

PTO Usage of School Messenger System

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ANN ARBOR PUBLIC SCHOOLS

www.a2schools.org

ANN ARBOR PUBLIC SCHOOLS

Ann Arbor Public Schools **Fall 2011**
PTO Usage of Schoolmessenger System

In an attempt to allow the best communication possible with district families, we are proposing that the PTOs have access to the Schoolmessenger email system.

Each school PTO will be asked to set up a distinct PTO email address. We suggest a free gmail account (ex."AllenPTO@gmail.com"). A unique access code will be issued to one PTO member for the Schoolmessenger system. We will code the access to only allow email messages to be sent out, no phone messages.

Guidelines for Usage
We will monitor the usage of the PTO accounts. If the guidelines are not followed we will discuss this first with the PTO and then if this is not corrected the PTO access will be blocked.

- Please be sensitive to overuse of the system.
- Monthly emails are suggested.
- PTOs and schools must work together on the timing of the use of Schoolmessenger. We do not want an excessive amount of emails going to families.
- PTOs can attach a pdf file, such as a newsletter, to the email. This will allow for the distribution of a paperless newsletter while keeping the email copy shorter.
- Make sure any families who are identified as not having email (the offices will know this) receive a hard copy of the communication you send via Schoolmessenger.
- Consider placing a link in the email to the PTO website.
- PTOs will have access to school-wide family emails as well as each grade level.
- All communications to families via the Schoolmessenger system must be approved by the school administrator prior to the message being sent.
- All return messages will go directly to the unique PTO email account so the PTOs can track these returns.

Following these guidelines will allow better access to families creating better communication and family involvement in school activities and business.

- Each PTO will be given one access code assigned to one person.
- **Please email the name and contact of the PTO representative to Liz Margolis.**
- A training session will be held on the Schoolmessenger system.

If you have any questions please contact Liz Margolis, Margolis@aaps.k12.mi.us or 994-2236.

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 13:

Technology Loan Agreement

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ANN ARBOR PUBLIC SCHOOLS

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Ann Arbor Public Schools Equipment Loan Agreement

Contract Between Ann Arbor Public Schools and Employee for Use of Technology Equipment. Contract Number:

Purpose:

This document outlines an agreement regarding the use and distribution of district technology equipment. All district employees and users of Ann Arbor Public School technology equipment assigned technology equipment share in these responsibilities.

Staff being assigned a laptop or other technology equipment shall sign this form as a record of the assignment and acknowledgement of the responsibility for caring for the equipment properly for the duration of the loan. The staff member signing also acknowledges instruction in use and care of technology equipment.

Equipment Guidelines

-- Proper care and security of the technology equipment is the responsibility of the person to whom it is assigned for the duration of the assignment.

-- Technology equipment will be assigned to a staff during the period of employment with the District. At the end of employment with the District, technology equipment must be returned to the IT Director or his/her designee.

-- In the event of long term absence or leaves of absence, technology equipment may be required to be returned to the IT Director or his/her designee.

-- District technology equipment is intended as a resource for educational purposes in the course of a staff member's responsibilities to the District.

-- The District is not obligated to purchase additional software or peripherals beyond the identified standard for the District.

-- Throughout the assignment of the equipment, it may be required to be returned for short periods to IT staff for servicing and/or upgrading.

-- All maintenance on the technology equipment will be performed through the IT Department.

-- In the case of technology equipment failures, submit a ticket through the helpdesk process. An IT staff member will work with the staff member to facilitate repair of the unit.

-- If technology equipment failure is a result of abuse or neglect, the staff member to whom the computer is assigned may be assessed the cost for the repair or replacement of the equipment. Costs for equipment repairs or replacement required due to normal daily use will be covered by the District.

-- Loaner equipment for use during the time of repair may be available to the staff member.

-- Theft or loss of the equipment must be reported to the appropriate building administrator. An incident report must be generated. In the case of theft, a police report must be filed within 24 hours.

Employee Name:	**Location:**	**Phone:**
Address:	**City:**	**Zip:**

Hardware	**Manufacturer**	**Model of computer**	**Asset Tag**	**Serial Number**

Loan Comments:	**Date Returned**	**Working?**

Sign below to verify receipt of equipment and understanding of these guidelines:

Employee Signature Date

District Signature Date

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 14:
Software List

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ANN ARBOR PUBLIC SCHOOLS
www.a2schools.org

Snow Leopard Image Fall 2011 Contents
Item in RED are not compatible with Lion OSX 10.7

OS
Snow Leopard 10.6.8

Applications folder
Address Book
Adobe Reader
Adobe AIR
App Store
ArtRage 2.6 Starter Edition
Audacity
Automator
blender 2.49b
Calculator
Chess
Comic Life 1.5.5
Dashboard
Dictionary
DVD Player
Fetch
Filemaker Pro 11.0.3
Firefox
Flip4Mac (video player)
Font Book
Front Row
GarageBand
Gimp 2.6.11
Google Chrome
Google Earth
Google SketchUp
Grapher
GraphicConverter 7
iCal
iChat
iDVD
iLife '11
Image Capture
iMovie
Inspiration 7.6
iPhoto
iSync
iTunes
iWeb
iWork
  Keynote
  Numbers
  Pages
Kidspiration 2.1b
Kurzweil 3000 v 4.5
Mail
Microsoft Office 2004
  EXCEL
  PowerPoint
  WORD
NeoOffice
OpenOffice.org 3.3.0
Perian (video player)
Photo Booth
Preview
QuickTime Player
RealPlayer
Safari
MIT Scratch (similar to Logo)
SeaMonkey
Silverlight plugin
Stickies
System Preferences
TextEdit
Time Machine
TimeLiner 5.1.3
tn5250 2.3 (Lion compatible)
Type to Learn (keyboarding)
Tux Paint
VLC (VideoLAN video player)
Visual Thesaurus (installed on teacher machines only)

Level-specific Software

Elementary
Kid Pix Deluxe 3
Media Blender
Neighborhood Map Machine
The Graph Club
Everyday Math Games

Middle & High School
Geometer's Sketchpad
TinkerPlots (MS only)
LoggerPro (Vernier scientific sensors)
Datastudio (PASCO scientific sensors)
Examview (Lion compatible version not yet available)
DataLink (bubble-sheet scanners)

Creative Suite

Utilities Folder
Activity Monitor
AirPort Utility
AppleScript
Audio MIDI Setup
Bluetooth File Exchange
Boot Camp Assistant
ColorSync Utility
Console
DigitalColor Meter
Disk Utility
Exposé 1.1
Grab
Java
Keychain Access
Migration Assistant
Network Utility
Podcast Capture
Spaces 1.1
StuffIt Expander
System Profiler
Terminal
VoiceOver Utility

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 15:

2012 Technology Bond Proposal

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ANN ARBOR PUBLIC SCHOOLS
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WHY IS ANN ARBOR PUBLIC SCHOOLS PURSUING THIS BOND?

Support Distric Strategic Goals To:

- Build a culture of creativity, innovation, and communication that directly supports the "triangle of success" - family, student and teacher.
- Build on, and replace, aging technology, equipment and infrastructure to support teaching methods that embrace the skills necessary for our students to compete in a global world.
- Ensure our schools and community will continue to be in high demand.
- Create 21st Century learning environments that meet the needs of our students.
- Help keep general fund dollars in the classroom by using bond proceeds for technology, equipment and related infrastructure.

Instructional Capacity/Student Access

- Building wide wireless access
- Provide mobile computing devices for classrooms
- Continue to provide 24 hour access to "PowerSchool" services
- Expanded access to student portfolios

District Operational Capacity

- Building wide wireless access
- Provide mobile computing devices for classrooms
- Upgrade district infrastructure to support increased data flow
- Speed: A bigger "pipe" to push more data faster to schools

INVESTMENT BREAKDOWN

Home Market Value	Cost Per Day*	Cost Per Month*	Cost Per Year*
$100,000	$0.07	$2.10	$26
$200,000	$0.14	$4.25	$51
$300,000	$0.21	$6.30	$77

*Estimate

PLEASE VOTE!

May 8, 2012

Polls Open 7 am – 8 pm

Register to Vote by
April 9, 2012

Absentee Ballot Applications
Available March 24

Registration forms are available in your school's office, city clerk's office or on-line at

https://webapps.sos.state.mi.us/mivote/

For More Information

Please contact
our Communications Department
at 734-994-2236, or
visit the district website at

www.a2schools.org

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ANN ARBOR PUBLIC SCHOOLS

May 8, 2012
Technology Bond

A2 21st Century Learning
ANN ARBOR PUBLIC SCHOOLS

21st Century Learning

WHAT IS ON THE MAY 8, 2012 BALLOT?

On May 8, 2012 voters in the Ann Arbor Public Schools will be asked to consider a bond issue to replace aging district technology and provide technology to support its strategic plan for 21st Century Learning. The program supports the plan for the next 10 years by issuing the bonds through three separate series.

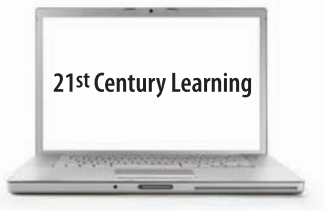
Series 1:	$27,275,000 beginning in 2012
Series 2:	$10,570,000 beginning in 2015
Series 3:	$8,010,000 beginning in 2018
Total:	$45,855,000

HOW WAS THIS PROGRAM DEVELOPED?

A Citizens and Staff Committee was formed in Fall 2011, comprised of community members, parents, teachers, board representatives, and administrative staff. This committee was charged with reviewing the Ann Arbor Public Schools Strategic Plan and Technology Plan to evaluate the impacts of achieveing the goals in the Technology Plan with current district equipment installed 6+ years ago and the requirements to further implement both of the Plans going forward.

A technical assessment of the technology infrastructure was conducted by architects and engineers at all district buildings to outline the needs at each facility.

The Board determined to finance the capital elements of the next phase of the Technology Plan and approved the Bond Program to be put on the May 8, 2012 ballot.



DISTRICT-WIDE IMPROVEMENTS FOR ALL SCHOOLS

- Expanded wireless infrastructure to support increasing student devices and public Wi-Fi access.
- Increase network infrastructure speed to support emerging curricular needs.
- Expand network video system to district-wide use.
- Replace centralized servers.
- Cooling and electrical for district data center.
- Human Resource and Financial software to improve efficiency.

ANN ARBOR PUBLIC SCHOOLS STRATEGIC PLAN

1. We will create a complete educational program featuring personalized learning that realizes student aspirations and meets international standards.
2. We will develop and implement a personalized learning plan for each student.
3. We will actualize the potential for excellence in all students through inspiration and support.
4. We will ensure meaningful learning through effective instruction.
5. We will enhance the district's professional learning system in order to provide relevant learning experiences and support for all staff in order to continually improve academic and social achievement for all students.
6. We will engage and inform our constituents to engender trust and support to accomplish our mission and objectives.
7. We will create and maintain physical learning environments that enable us to fulfill our mission.
8. We will ensure resources are adequate to accomplish our mission and vision.

2012 TECHNOLOGY BOND PLAN

HARDWARE	CYCLE	PURCHASED	EXISTING NUMBER	TYPE	CYCLE TOTAL:	
Student School Computers	3yr	2005/2006	1,900		$19,496,500.00	AAPS
	3yr	2005/2006	628			
	3yr	2006	32			
	3yr	2006	175			
	3yr	2008	161			
			2,896	DESKTOPS		
	3yr	2008	2,556			
	3yr	2010	818			
			3,374	LAPTOPS		
Teacher/Admin Computers	3yr	2009	**1,700**	LAPTOPS	$5,479,000.00	AAPS
	3yr	2008/2009	**172**	DESKTOPS		
	TOTAL UNITS PURCHASED		**8,142**		**Area Subtotal:**	**$24,975,500.00**
District Switch Replacement	5yr	2005/6			$1,965,500.00	PM
District Server Replacement/Upgrade	5yr	2005/6			$1,000,000.00	PM
					Area Subtotal:	**$2,965,500.00**
Administrative Software	10yr	1998, 2005			$500,000.00	AAPS
Student Intervention Support Services	10yr	2005/6			$242,500.00	AAPS/PM
Career Tech and Ed	10yr	2005/6			$490,000.00	AAPS/PM
MediaCast	10yr	2006/7			$300,000.00	AAPS
Classroom Technologies	10yr	2005/6			$4,697,500.00	AAPS/PM
					Area Subtotal:	**$6,230,000.00**
INFRASTRUCTURE						
10 Gig Backbone (Elementary)	10yr	2005/6			$848,000.00	PM
Server Rooms/Wiring Closets	10yr	1995/96			$3,471,000.00	PM
Wireless	10yr	2005/6			$3,423,000.00	PM
					Area Subtotal:	**$7,742,000.00**
					SubTotal All Areas:	**$41,913,000.00**
					Contingency:	**$1,911,700.00**
					Proj Management:	**$1,200,000.00**
					Soft Costs (Bond Issuance, Permits, General Conditions, Engineers, etc)	**$830,300.00**
					GRAND TOTAL:	**$45,855,000.00**

Updated: January 30, 2012

Ann Arbor Public Schools

Technology Plan

2013-2015

Appendix 16:

Technology Plan Evaluation

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ANN ARBOR PUBLIC SCHOOLS
www.a2schools.org

2013-2015 Technology Plan Evaluation

Please fill this out on an annual basis to determine if we are meeting the goals of the Technology Plan.
Your username (**reader@aaps.k12.mi.us**) will be recorded when you submit this form. Not **reader**? Sign out
* Required

Curriculum: Digital Citizenship

To what degree has the district meaningfully integrated the following Digital Citizenship skills in the elementary classroom? *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS use of Digital Citizenship is a model for other districts)
Achieving Digital Securty (Saving & sharing work, Secure passwords, knowledge of viruses, Acceptable Use policy)	○	○	○	○
Maintaining Healthy and Safe Relationships (PBIS, Cyber Safety, Professional Development, Parental Information)	○	○	○	○
Protecting Personal Information (Information Literacy, Direct Instruction, Online Presence)	○	○	○	○
Building a Positive Reputation (Online Presence, P21 Skills, Counseling Curriculum)	○	○	○	○
Practicing Ethical Digital Usage (Cyber Safety, Netiquette, MS Capstone Project, English 9)	○	○	○	○

To what degree has the district meaningfully integrated the following Digital Citizenship skills in the middle school classroom? *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS use of Digital Citizenship is a model for other districts)
Achieving Digital Securty (Saving & sharing work, Secure passwords, knowledge of viruses, Acceptable Use policy)	○	○	○	○
Maintaining Healthy and Safe Relationships (PBIS, Cyber Safety, Professional Development, Parental Information)	○	○	○	○
Protecting Personal Information (Information Literacy, Direct Instruction, Online Presence)	○	○	○	○
Building a Positive Reputation (Online Presence, P21 Skills, Counseling Curriculum)	○	○	○	○
Practicing Ethical Digital Usage (Cyber Safety, Netiquette, MS Capstone Project, English 9)	○	○	○	○

To what degree has the district meaningfully integrated the following Digital Citizenship skills in the high school classroom? *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS use of Digital Citizenship is a model for other districts)
Achieving Digital Securty (Saving & sharing work, Secure passwords, knowledge of viruses,	○	○	○	○

Acceptable Use policy)				
Maintaining Healthy and Safe Relationships (PBIS, Cyber Safety, Professional Development, Parental Information)	○	○	○	○
Protecting Personal Information (Information Literacy, Direct Instruction, Online Presence)	○	○	○	○
Building a Positive Reputation (Online Presence, P21 Skills, Counseling Curriculum)	○	○	○	○
Practicing Ethical Digital Usage (Cyber Safety, Netiquette, MS Capstone Project, English 9)	○	○	○	○

What data are you using to support the ratings for Digital Citizenship above? *

Student self-assessment surveys, District/Building-level training events for parents and/or staff. etc.

What progress has the district made toward achieving the goal(s) outlined in the Digital Citizenship section? *

What are focus areas of improvement for the Digital Citizenship section of the Plan? *

Please provide specific examples of how Digital Citizenship is being implemented in classrooms across the district. *

Provide at least 2 examples per level (elem, middle, high)

Curriculum: Educational Technology Standards Alignment

To what degree has the district meaningfully integrated the Educational Technology Standards Alignment into the elementary classroom? *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS integration of Educational Technology Standards is a model for other districts)
Completed a crosswalk and added a column in curriculum maps to indicate where technology standards are aligned	○	○	○	○
Created sample grade level assignments for each curricular area that act as a model lesson for proper alignment to standards	○	○	○	○
Created and agreed upon grade level activities that incorporate technology into a curricular project that all students will experience (e.g. middle school Capstone project)	○	○	○	○
Offered coaching/training sessions for teachers as they integrate technology tools into the classroom	○	○	○	○

All teachers at the elementary level understand how the technology standards integrate

and align with the curricular standards. *

- ○ Yes
- ○ No

To what degree has the district meaningfully integrated the Educational Technology Standards Alignment into the middle school classroom? *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS integration of Educational Technology Standards is a model for other districts)
Completed a crosswalk and added a column in curriculum maps to indicate where technology standards are aligned	○	○	○	○
Created sample grade level assignments for each curricular area that act as a model lesson for proper alignment to standards	○	○	○	○
Created and agreed upon grade level activities that incorporate technology into a curricular project that all students will experience (e.g. middle school Capstone project)	○	○	○	○
Offered coaching/training sessions for teachers as they integrate technology tools into the classroom	○	○	○	○

All teachers at the middle school level understand how the technology standards integrate and align with the curricular standards. *

- ○ Yes
- ○ No

To what degree has the district meaningfully integrated the Educational Technology Standards Alignment into the high school classroom? *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS integration of Educational Technology Standards is a model for other districts)
Completed a crosswalk and added a column in curriculum maps to indicate where technology standards are aligned	○	○	○	○
Created sample grade level assignments for each curricular area that act as a model lesson for proper alignment to standards	○	○	○	○
Created and agreed upon grade level activities that incorporate technology into a curricular project that all students will experience (e.g. middle school Capstone project)	○	○	○	○
Offered coaching/training sessions for teachers as they integrate technology tools into the classroom	○	○	○	○

All teachers at the high school level understand how the technology standards integrate and align with the curricular standards. *

- ○ Yes
- ○ No

What advocacy work is being done to ensure ALL teachers understand how the technology standards integrate and align with the curricular standards. *

What are focus areas of improvement for the Educational Technology Standards Alignment section of the Plan? *

Curriculum: Personalized Learning Through Alternative Programming

To what degree has the AAPS implemented Personalized Learning Through Alternative Programming? *

- ○ Not implemented at all (Required components are not addressed at all)
- ○ Implemented somewhat (Required components are only partially addressed)
- ○ Fully implemented (Required components are addressed)
- ○ Exemplary implementation (AAPS implementation of Personalized Learning Through Alternative Programming is a model for other districts)

What data are you using to support the ratings for Personalized Learning Through Alternative Programming above? *

Student usage statistics, building-level enrollments, student success (e.g. grades, standardized test scores, graduation rates, etc.)

What progress has the district made toward achieving the goal(s) outlined in the Personalized Learning Through Alternative Programming section? *

What are focus areas of improvement for the Personalized Learning Through Alternative Programming section of the Plan? *

Curriculum: Mobile Learning

To what degree have teachers at the elementary level meaningfully integrated portable devices and software into the classroom for the following purposes: *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS integration of portable devices and software is a model for other districts)
Implementing personalized learning plans	○	○	○	○
Providing meaningful learning through effective instruction	○	○	○	○
Delivering content and instruction	○	○	○	○
Differentiating instruction	○	○	○	○
Student writing and peer editing	○	○	○	○
Fostering commmunication and collaboration between students and students/teachers	○	○	○	○
Conducting formative and summative assessments	○	○	○	○
Providing real-time access to performance-based evaluations to gauge learning and self-assessment	○	○	○	○

To what degree have teachers at the middle school level meaningfully integrated portable

devices and software into the classroom for the following purposes: *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS integration of portable devices and software is a model for other districts)
Implementing personalized learning plans	○	○	○	○
Providing meaningful learning through effective instruction	○	○	○	○
Delivering content and instruction	○	○	○	○
Differentiating instruction	○	○	○	○
Student writing and peer editing	○	○	○	○
Fostering commmunication and collaboration between students and students/teachers	○	○	○	○
Conducting formative and summative assessments	○	○	○	○
Providing real-time access to performance-based evaluations to gauge learning and self-assessment	○	○	○	○

To what degree have teachers at the high school level meaningfully integrated portable devices and software into the classroom for the following purposes: *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS integration of portable devices and software is a model for other districts)
Implementing personalized learning plans	○	○	○	○

Providing meaningful learning through effective instruction				
Delivering content and instruction				
Differentiating instruction				
Student writing and peer editing				
Fostering commmunication and collaboration between students and students/teachers				
Conducting formative and summative assessments				
Providing real-time access to performance-based evaluations to gauge learning and self-assessment				

What data are you using to support the ratings for Mobile Learning above? *

Teacher and student surveys, bandwidth requirements, help desk support, etc.

What progress has the district made toward achieving the goal(s) outlined in the Mobile Learning section? *

What are focus areas of improvement for the Mobile Learning section of the Plan? *

Please provide specific examples of how Mobile Learning is being implemented in classrooms across the district. *

Provide at least 2 examples per level (elem, middle, high)

Curriculum: Digital Textbooks

To what degree has the AAPS implemented Digital Textbooks? *

- ○ Not implemented at all (Required components are not addressed at all)
- ○ Implemented somewhat (Required components are only partially addressed)
- ○ Fully implemented (Required components are addressed)
- ○ Exemplary implementation (AAPS implementation of Digital Textbooks is a model for other districts)

What data are you using to support the ratings for Digital Textbooks above? *

Bandwidth requirements, help desk support, etc.

What progress has the district made toward achieving the goal(s) outlined in the Digital Textbooks section? *

What are focus areas of improvement for the Digital Textbooks section of the Plan? *

Professional Development

To what degree has the AAPS provided meaningful professional development in the following areas: *

	Not integrated at all (Required components are not addressed at all)	Integrated somewhat (Required components are only partially addressed)	Fully integrated (Required components are addressed)	Exemplary integration (AAPS integration of Professional Development is a model for other districts)
Embedded instruction workshops on Digital Literacy	○	○	○	○
Embedded instruction workshops on Digital Citizenship	○	○	○	○
AAPS Online Resources	○	○	○	○
AAPS Software	○	○	○	○
Accessibility Features of Technology Systems	○	○	○	○
Apple OSX Productivity Features	○	○	○	○
Content-specific resources, e.g. Science Gizmos, ALEKS, etc.	○	○	○	○
Edmodo	○	○	○	○
Google Apps for Students	○	○	○	○
Google Apps for Teachers	○	○	○	○
iLife suite	○	○	○	○
iWork suite	○	○	○	○
Online Teaching and Learning	○	○	○	○
Implementing 21st Century Skills in the Classroom	○	○	○	○
ACOT2 and Challenge-Based Learning	○	○	○	○
NETS-S, NETS-T, NETS-C, NETS-A	○	○	○	○
Data Director	○	○	○	○
Excent Tera	○	○	○	○
Moodle	○	○	○	○
NWEA MAP Assessment	○	○	○	○
STAGES	○	○	○	○

To what degree has the AAPS progressed in the following areas: *

	Not integrated	Integrated	Fully	Exemplary integration

	at all (Required components are not addressed at all)	somewhat (Required components are only partially addressed)	integrated (Required components are addressed)	(AAPS integration of Professional Development is a model for other districts)
Proficiency Levels (Identify core software and program proficiencies for all instructional staff and multiple opportunities for learning)	○	○	○	○
Rubric Creation (Creation of rubrics that outline a continuum of knowledge and proficiency with specific tools and programs)	○	○	○	○
Content-Specific Learning (Identify level and subject specific digital learning and multiple opportunities for job-embedded learning)	○	○	○	○

What data are you using to support the ratings for Professional Development above? *

Usage statistics, course offerings, sign-in sheets, etc.

What progress has the district made toward achieving the goal(s) outlined in the Professional Development section? *

What are focus areas of improvement for the Professional Development section of the Plan? *

Technical Support

To what degree has the AAPS been successful with its Technical Support? *

- ○ Not successful at all (Required components are not addressed at all)
- ○ Somewhat successful (Required components are only partially addressed)
- ○ Fully successful (Required components are addressed)
- ○ Exemplary implementation (AAPS implementation of Technical Support is a model for other districts)

What data are you using to support the ratings for Technical Support above? *

Staff surveys, usage statistics, etc.

What progress has the district made toward achieving the goal(s) outlined in the Technical Support section? *

What are focus areas of improvement for the Technical Support section of the Plan? *

Overall Plan Evaluation

Overall, to what degree has the AAPS been successful in implementing the 2013-2015 Technology Plan? *

- ○ Not successful at all (Required components are not addressed at all)

- ○ Somewhat successful (Required components are only partially addressed)
- ○ Fully successful (Required components are addressed)
- ○ Exemplary implementation (AAPS implementation of Technical Support is a model for other districts)

What are the areas of the Technology Plan that need to be at the forefront of focus over the next year? *

Choose all that apply.

- ☐ Curriculum: Digital Citizenship
- ☐ Curriculum: Educational Technology Standards Alignment
- ☐ Curriculum: Personalized Learning Through Alternative Programming
- ☐ Curriculum: Mobile Learning
- ☐ Curriculum: Digital Textbooks
- ☐ Professional Development
- ☐ Technical Support

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