



Ark Community Charter School

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TECHNOLOGY PLAN

July, 2011- June, 2014

E-rate Entity # 226985

1.0 Executive Summary

Ark Community Charter School strives for student excellence by providing a technology infrastructure, technology-based information resources, and technology tools that are required in an ever-changing world.

The Ark Community Charter School (ACCS) Technology Plan was reviewed and revised by the ACCS Technology Committee during the spring of 2011. The Committee used NCLB, New York State Education Department, and Framework for 21st Century Learning guidelines when reviewing and making revisions to the plan.

TECHNOLOGY COMMITTEE MEMBERS

<u>Member</u>	<u>Title</u>
Mary Theresa Streck, Ed.D.	Executive Director / Principal
Petra Hahn	Director of Administration
TBA	Director for Curriculum and Instruction
Nina Baldwin	Curriculum Coordinator
Kirsten Wojtowicz	Teacher – Grade 6
Mark Kamauff	Teacher – Grade 5
John Schmidt	Technology Network Specialist

2.0 Mission Statement

The Ark Community Charter School's continuing mission is to create within the city of Troy a community that fosters the academic, social and spiritual growth of our members in an environment that is both supportive and challenging. In this community everyone is celebrated, respected, and heard; all are intellectually engaged, socially concerned, ethically responsible, and culturally open-minded.

3.0 Technology Vision

The vision of the Ark Community Charter School is to strive for student excellence by providing a technology infrastructure, technology-based information resources, and technology tools that will be required in an ever-changing world. The realization of a strong technology plan will afford our students the opportunity to be competitive in an information-based society driven by technology. Technology allows learning to meet the pace and scope of the information age. The Ark Community Charter School continues to provide opportunities for students, staff and community members to increase their knowledge of technology and facilitate its application in school, at home, and in the workplace.

4.0 Technology and the Engaged Learner

One of the main goals of using technology as a tool for learning is to promote engaged learning. Engaged learners take responsibility for their own learning. Engaged learners are energized by learning and show strategic and collaborative tendencies. Engaged learning challenges teams of students to employ information technologies to investigate authentic problems that parallel curriculum questions and topics. Furthermore, we use technology to show students how to solve problems and make decisions. *Technology is not an end in itself. It is merely the highway that takes you where you want to go.* In summary, the rationale for using technology in school is that it allows us to transform the process of teaching and learning because technology:

- Motivates and empowers students through active, engaged learning
- Creates information producers, not just consumers
- Creates more authentic learning experiences where students are involved with other students and adult professionals in real-world projects and activities.
- Prepares students to be productive members of the 21st century global society.
- Enables discovery through simulations and exploration
- Creates learning experiences beyond the four walls of the classroom.
- Provides multimedia, interactive learning environments for students who most benefit from hands-on learning.

- Supports Information technologies that generate data to guide curriculum and instruction
- Facilitates the use of new strategies for delivery of instruction

5.0 Goals and objectives

Goal #1

Technology will be used for teaching and learning throughout the school.

Goal #2

All students will be instructed in information literacy skills in order to:

- Enhance their ability to acquire, interpret, and use information
- Achieve proficiency on the New York State Learning Standards
- Conduct research across academic areas
- Foster creativity and higher level thinking skills

Goal #3

Increase the use of technology for communication.

- Create and maintain technology partnerships with community organizations, professional groups and businesses
- Use technology to inform and gather input via e-mail, school website, etc.
- Make use of new technologies to extend learning and communication beyond the classroom.

Goal #4

Continue to expand the availability of technology learning resources.

Goal #5

ACCS Staff will expand the use of technology to make data driven decisions regarding:

- Student Performance
- Curriculum and Instruction
- Attendance
- Code of Conduct

Technology will allow all staff to access data, make correlations, and ultimately make decisions that will benefit our students.

6.0 Curriculum Integration

The Ark Community Charter School recognizes that a standards-based curriculum is integral to the success of all student achievement. Technology standards across the nation, including New York State's, have emphasized the content and performance skills which students must have to be successful in the 21st century. The Ark Community Charter School has as its core mission the intent to exceed all standards set by the State of New York. In particular, ACCS has focused on the seamless integration of technology to teach all core subject areas.

At ACCS, technology education is not an end in itself; it is a means to support learning in all core subject areas of the New York State Learning Standards and the Common Core Learning Standards. ACCS teachers, technology trainers and consultants work together to develop an integrated curriculum that uses technology to support learning in all core subject

areas. Integration of technology in the curriculum is a continual process that changes according to curricular goals and as new technologies emerge. ACCS finds that the use of hands-on technology enhances student motivation and interest.

6.1 Curriculum Integration -- Needs Assessment

Discussions, observations, surveys and performance standards have found that the use of technology at ACCS has transformed the teaching and learning process. By using technology, students are found to be more motivated, empowered, and engaged learners. Technology is an integral part of the curriculum, enhancing learning in all core subject areas. ACCS teachers have integrated technology in some of the following practices:

The value of an integrated technology curriculum is invaluable and is dependent on the continued support of the whole technology plan: training to ensure staff know-how to use technologies, staff development to support implementation of technology into the core curriculum, the support and maintenance of computers and technology, the purchase of emerging new technologies, and the assessment of progress, goals and needs.

6.2 Curriculum integration -- Goals and Strategies

The Ark Community Charter School continues an on-going curricular review process, and seeks out the specific software and software tools that will assist us in achieving our instruction goals. Each of our curricular development cycles includes an extensive staff development component. Staff development will be expanded to include training in technology tools for every staff member. Technology cannot be separated from the total curriculum or instructional process, but is envisioned as an integral part of it—a vehicle for changing and improving teaching and learning. Technology continues to be a major tool in developing, teaching and evaluating every aspect of the instructional program.

6.3 Curriculum integration – standards and skills

See Appendix A

7.0 Staffing and Training -- Needs Assessment

ACCS receives Title IID funding of which at least 25% is spent on professional development.

All stakeholders involved with ACCS are continuously collaborating on all initiatives including technology integration. The support structure for the Ark Community Charter School must evolve as the needs of the school community changes. The requirements for support and maintenance of the system are critical to long-term success. If teachers cannot depend on the infrastructure components for their teaching, they will not make the technology an integral part of their teaching strategies.

7.1 Staffing and Training -- Goals and Strategies

ACCS teachers are committed to ongoing staff development in technology. ACCS will address a number of factors critical to the success of its staff development program:

- Insuring that the structures are put in place to give all staff access to the training that they need, when they need it, to use technology successfully.
- Insuring that teachers have access to technical assistance and support staff after training.
- Insuring that the curriculum expectations and applications of technology are explicitly identified.
- Insuring that curriculum reviews and textbook selections reflect technology applications.

8.0 Technology Infrastructure

The design of the infrastructure necessary to support the Ark Community Charter School's technology vision is extremely important.

- **Stability:** Creating and preserving technological infrastructure through application of the best design and management practices in the information technology industry.
- **Flexibility:** Providing for expandability and scalability of the design in order to address new or previously undefined needs.
- **Manageability:** Adhering to industry standards and committing to controlling costs through itemized management and control techniques.
- **Performance:** Applying capacity planning and bandwidth allocation techniques to support present and future applications including Internet, video and multimedia interactive technology.
- **Cost Effectiveness:** Integrating all technology investments for the teaching and learning environment.
- **Support of the entire educational program in the ACCS, including instructional and administrative applications, through a comprehensive technology infrastructure.**

8.1 Classroom Infrastructure

- Students in each first through fifth grade classroom share a cluster of four desktop computers.
- Laptops are provided for all sixth graders.
- ACCS maintains a computer lab with ten computers and one SmartBoard.
- Kindergarten classrooms have two computers in each room.
- Teachers have their own classroom laptops.
- Each classroom has a printer that is accessible from student workstations.
- Every classroom is equipped with one TV/DVD and digital cameras.
- By 2014, all classrooms will be equipped with SmartBoard technology.
- ACCS possess three school-wide LCD/DLP projection devices for computer presentations.
- Presentation software and other applications are available on student computer clusters.

8.2 Technology Infrastructure -- Goals and Strategies

The Ark Community Charter School has a vision of an electronic learning community for the 21st century, where learning can take place any time, in any place, by everyone - students, teachers, directors and the entire community. Members of the ACCS learning community will be able to access information, communicate and collaborate on learning projects, and have access to information resources. The goals and strategies of the vision can be described from the following:

- **E-mail System:** Microsoft Exchange email system allows teachers to communicate through email in school and from home. The hardware infrastructure is on site.
- **Internet protection:** Filtering software including firewall protects students from inappropriate materials.
- **Networking:** Complete networking allows all printers and copiers to be accessed remotely from classrooms. Additionally, laptop computers are able to connect to the Internet through wireless access ports.
- **Website:** The school website is hosted on site and is updated regularly.
- **Voice systems:** Voice systems such as intercoms and telephone lines have been installed in the entire school building.
- **Software:** Software programs and operating systems are updated as needed (data software, curriculum software, educational software, and graphic design software).
- **Smart Board:** Interactive whiteboards allows students to share resources and ideas in the classroom and worldwide.

9.0 Evaluation

Ark Community Charter School will use a formative evaluation tool to assess its Educational Technology Plan (Appendix A). For this component, we will review the completion of each objective targeted for that year. We will also survey staff each year in terms of their skill levels and use of technology to identify areas for improvement.

This information includes the following: levels of technology access in the school, levels of technology use, perceptions of staff/students toward technology, perceptions of the impact of technology on student learning and achievement. A critical measure we expect to use will be our student portfolios and the results of NY State exams that are linked to the Standards and Frameworks.

The evaluation design will collect a variety of formative or process data to answer the implementation questions. These implementation questions include identifying what was accomplished and when.

Technology Committee will continue meeting regularly to discuss and review the implementation process and will provide feedback on the implementation of the plan. The members of the technology are the school's Principal, technology consultant, Business Manager, and classroom teacher.

Goal	Evaluation
<p>Goal #1 Technology will be used for teaching and learning throughout the school.</p>	<p>A survey given annually will be used to determine use of technology in the classroom. Informal observation of classrooms will be done on a regular basis to determine types and frequency of technology usage.</p>
<p>Goal #2 All students will be instructed in information literacy skills in order to:</p> <ul style="list-style-type: none"> • Enhance their ability to acquire, interpret, and use information • Achieve proficiency on the New York State Learning Standards • Conduct research across academic areas • Foster creativity and higher level thinking skills 	<p>All students will reach proficiency as measured by individual teacher evaluation. Proficiency is reached when students are able to:</p> <p>Access and use technology to acquire information that supports the students' ability to reach proficiency on the New York State Assessments (Level 3 or Level 4) and advance the level of higher level thinking skills as addressed in Bloom's Taxonomy.</p>
<p>Goal #3 Increase the use of technology for communication.</p> <ul style="list-style-type: none"> • Create and maintain technology partnerships with community organizations, professional groups and businesses • Use technology to inform and gather input via e-mail, school website, etc. • Make use of new technologies to extend learning and communication beyond the classroom. 	<p>Review use of technology to assess its impact on school-wide communication.</p> <ul style="list-style-type: none"> • Create and maintain a database of community contacts. • Check participation levels and time spent using software such as PowerSchool, Atlas, PowerTeacher, EVI Data Mate, etc.)
Goal 4	Evaluation
<p>Goal #4 Continue to expand the availability of technology learning resources.</p>	<ul style="list-style-type: none"> • ACCS administration will document the number of requests for technology and requests for in-service training. • The ACCS Administration will review requests for new technology, determine the feasibility, develop a budget, and develop an implementation schedule.
<p>Goal #5 ACCS Staff will expand the use of technology to make data driven decisions regarding:</p> <ul style="list-style-type: none"> • Student Performance • Curriculum and Instruction • Attendance 	<ul style="list-style-type: none"> • ACCS will be able to accurately report student data to NYSED. • ACCS will be able to evaluate students' attendance to improve attendance. • ACCS will be able to correlate student attendance with other variables such as student

<ul style="list-style-type: none"> Code of Conduct <p>Technology will allow all staff to access data, make correlations, and ultimately make decisions that will benefit our students.</p>	<p>performance.</p> <ul style="list-style-type: none"> ACCS will be able to modify curriculum and instruction based on data regarding student performance.
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10.01 Technology Budget 2008-2011

Funding Source to support the plan include local funding, E-Rate, Grants and possible Title II funding. The breakdown projected for each year of the plan is as follows: pending grant, E-rate and title II funding.

Funding - 3 year plan

Items	2011-12	2012-13	2013-14
Local Funding			
E-Rate			
Grants			
Title II			
Totals			

Technology Expenses - 3 year plan

Items	2011-12	2012-13	2013-14
PC, laptop, & printer			
Telecommunications			
Software			
Licenses			
Training			
Peripherals (digital cameras, video cameras, projectors, toner)			
E-Rate network equipment, servers & basic maintenance			
PC & peripheral maintenance			
totals			

10.2 E-Rate Products and Services

Between 2011-14, ACCS will upgrade our E-Rate eligible Internal connections equipment to include new eligible servers, switches, wireless access points, videoconferencing CODEC, and an entirely new IP Phone system. As always, ACCS will annually request eligible basic maintenance on these items, on a time and materials basis. ACCS will also make more than a sufficient investment in non-E-Rate eligible equipment and software, to take full advantage of the connectivity E-Rate is supporting.”

10.3 Technology Inventory

A substantial infrastructure is already in place at ACCS to support our vision. The following provides an overall assessment of the technology already in place. Note that every Windows PC is networked, and has access to the Internet. The majority of the PCs are at least a Pentium IV with 1GB for RAM.

Below is our technology inventory.

Item	Quantity
Classroom Computers and Labs	87
Administration and Other Non Instructional Areas	23
SmartBoards	4
Projectors	7
Digital Cameras	13
Video Cameras	1
Projection Cameras	0
Televisions	13
DVD Players	13
Music players	13
Wii players	3
Copier/printer/fax/scanner	2
Piano Keyboards	10

11.0 Acceptable Use Policy

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INTERNET SAFETY POLICY

Introduction:

It is the policy of the Ark Community Charter School to (a) prevent user access over its computer network to, or transmission of, inappropriate material via Internet, electronic mail, or other forms of direct electronic communications; (b) prevent unauthorized access and other unlawful online activity; (c) prevent unauthorized online disclosure, use, or dissemination of personal identification information of minors; (d) comply with the Children's Internet Protection Act; and (e) not allow any download of inappropriate material including pictures or literature that expresses sexual content, or bias towards any person's race, religion color, creed, national origin, citizenship, age, sex, sexual orientation, or nationality. [Pub. L. No. 106-554 and 47 USC 254(h)].

Definitions:

Key terms are as defined in the Children's Internet Protection Act.

Access to Inappropriate Material

To the extent practical, technology protection measures (or "Internet filters") shall be used to block or filter Internet, or other forms of electronic communications, access to inappropriate information.

Specifically, as required by the Children's Internet Protection Act, blocking shall be applied to visual depictions of material deemed obscene, or child pornography or to any material deemed harmful to minors.

Subject to staff supervision, technology protection measures may be disabled, or in the case of minors, minimized only for the bona fide research or other lawful purposes.

Inappropriate Internet use:

Practical steps should be taken to promote safety and security to all the users of the ACCS computer network when using e-mail, instant message, chat room and other forms of internet direct communications. Specifically as required by the Children's Internet Protection Act, prevention of inappropriate network uses includes: (a) unauthorized access including hacking and other unlawful activity (b) unauthorized disclosure, use and dissemination of personal identification information regarding minors and (c) unauthorized downloading of any inappropriate material that may be bias towards any person's race, religion color, creed, national origin, citizenship, age, sex, sexual orientation, or nationality.

Supervision and Monitoring:

It shall be the responsibility of all staff members of ACCS to supervise and monitor the use of online computer network and access to the Internet in accordance with this policy and the Children's Internet Protection act.

Procedure for the disabling or other modification of any computer or the use of various technology protection measures shall be the responsibility of any staff member, intern, substitute teacher or other appropriate adult who is present during the use of computers.

The Board of ACCS adopted this Internet Safety Policy at its meeting on Tuesday June 25, 2002.

The ACCS Staff adopted this Policy at its meeting on Wednesday June 19, 2002.

CIPA definitions of terms:

TECHNOLOGY PROTECTION MEASURE.

The term "technology protection measure" means a specific technology that blocks or filters Internet access to visual depictions that are:

1. OBSCENE, as that term is defined in section 1460 of title 18, United States Code;

2. CHILD PORNOGRAPHY, as that term is defined in section 2256 of title 18, United States Code;

or

3. HARMFUL TO MINORS. The term "harmful to minors" means any picture, image, graphic image file, or other visual depiction that:

(a). Taken as a whole and with respect to minors, appeals to a prurient interest in nudity, sex, or excretion;

(b). Depicts, describes, or represents, in a patently offensive way with respect to what is suitable for minors, an actual or simulated sexual act or sexual contact, actual or simulated normal or perverted sexual acts, or a lewd exhibition of the genitals; and

(c). Taken as a whole lacks serious literary, artistic, political, or scientific value as to minors.

4. SEXUAL ACT; SEXUAL CONTACT. The terms "sexual act" and "sexual contact" have the meanings given such terms in section 2246 of title 18, United States Code.

All students and staff are asked to sign an [Internet Acceptable Use Contract](#).

Ark Community Charter School Internet Acceptable Use Contract

I _____ agree to use the Ark Community Charter School's computers only for assigned projects. I understand that I shall not do the following:

- Visit any chat rooms.
- Use instant messenger as a form of communication.
- Visit any websites that contain pornographic or inappropriate materials.
- Visit any websites that express terrorist activity, including material that expresses discrimination.
- Share personal information on the web.
- Download anything without adult consent. (including desktops and screen savers).

If a web page described above happens to appear in a website that I have visited I agree to immediately shut the screen off and tell an adult who is in the room.

I HAVE READ AND AGREE TO THE ABOVE:

_____ (Student) Date: _____

_____ (Teacher) Date: _____

Appendix A

NETS Standard 1: Basic Operations and Concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

Grades K – 2	Grades 3 – 4	Grades 5 – 6
Use a variety of media and technology resources for directed activities.	Use a variety of media and technology resources for directed and independent learning activities.	Use a variety of media and technology resources for directed, independent learning activities and presentations.
Use keyboards and other input/output devices such as <ul style="list-style-type: none"> • Digital cameras • Adaptive devices as appropriate 	Use keyboards and other input/output devices such as: <ul style="list-style-type: none"> • Digital cameras • Printers • CD ROMS • Adaptive devices as appropriate 	Develop proficiency with keyboards and other input/output devices such as <ul style="list-style-type: none"> • Scanners, • Digital and video cameras, • Printers, • CD ROMS • Adaptive devices as appropriate.
Recognize and use basic computer terminology (e.g. monitor, keyboard, mouse, storage devices, application and utility names).	Demonstrate familiarity with basic computer terminology (e.g. monitor, CPU, storage devices, mouse, server, projector, keyboard, scanner, application and utility names and browser terms).	Use grade appropriate computer terminology.
Develop familiarity with basic skills necessary to use a network: <ul style="list-style-type: none"> • Logging on and off • Saving and accessing files 	Demonstrate proficiency in basic skills necessary to use a network such as: <ul style="list-style-type: none"> • Logging on and off • Saving and accessing files 	Use network system with facility: <ul style="list-style-type: none"> • Access and use files and programs at remote station via network.
Develop familiarity with keyboard, left/right hand position and home row. Recognize special keys on keyboard (e.g. Enter, Space Bar, Shift, Backspace, and punctuation marks)	Develop keyboarding skills using home row and touch-keyboarding techniques. Recognize and use special keys on keyboard (e.g. Enter, Space Bar, Tab, Caps Lock, Delete, Shift, Backspace, Arrows and punctuation marks).	Develop speed and accuracy while using “home row” touch keyboarding techniques using both hands.
Use simple Windows Office programs to: <ul style="list-style-type: none"> • Open and close programs • Scroll through document • Use Menu bar for fonts 	Use Windows Office programs to: <ul style="list-style-type: none"> • Open and close programs. • to create PowerPoint presentations and Word documents. • Use Taskbar to navigate among several open programs. • Use scroll bar, menu bars, minimize and maximize windows. • Use accessories such as the calculator. 	Demonstrate skill in using Windows Office programs (Word, Excel, PowerPoint and Publisher and Email).
	Use browser software to navigate the Internet effectively (e.g. back button, stop, reload or refresh, address window, bookmarks or favorites, location or address, and print).	Use browser software to navigate the Internet effectively and to print, copy, and paste into another application.

		Apply strategies for identifying routine hardware and software problems that occur in everyday life.
		Use ergonomically appropriate posture and techniques to perform a task efficiently.

NETS Standard 2: Social, Ethical, and Human Issues

- Students understand the ethical, cultural, and societal issues related to technology.
- Students practice responsible use of technology systems, information, and software.
- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Grades K – 2	Grades 3 – 4	Grades 5-6
Use equipment and software safely.	Use equipment and software safely.	
Respect the work of others.	Respect the privacy and work of others.	Demonstrate responsible behaviors when using information and technology and discuss consequences of misuse.
Work collaboratively and cooperatively with others using technology.	Work collaboratively and cooperatively with others using technology.	Cooperate with others while using technology in a small or large group setting.
Demonstrate positive and ethical social behavior when using technology.	Demonstrate awareness of and compliance with copyright rules. Give proper credit to others' work	Demonstrate understanding of copyright law.
Introduction to the world technologies and how it relates to wants and needs	Understand the history and role technology plays in everyday life	Understand the history and development of technology.
		Understand the Internet and its history
		Evaluate websites for purpose, source, and content.

NETS Standard 3: Technology Productivity Tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Grades K – 2	Grades 3 – 4	Grades 5 – 6
Create documents using word processing and desktop publishing software. Use the following commands: <ul style="list-style-type: none"> • Office Button: New, Open, Close, Save • Review: Spell check • Page Layout: Font type and size 	Word Processing applied to grade appropriate narrative and expository writing in support of NYS standards. Use all previous commands and: <ul style="list-style-type: none"> • Office Button: Save As, Print Preview, Print, Page Setup, Exit • Edit: Undo, Cut, Copy, Paste, Select All • Page Layout: line spacing, justification and style (bold, underline and italics) margins and page orientation 	Word Processing applied to grade appropriate narrative and expository writing in support of NYS standards. Use all previous commands and: <ul style="list-style-type: none"> • Office Button: Page Setup use, Close Document vs. Close Program • Edit: Clear, Find, etc. • Insert: Use any/all suitable commands. • Page Layout: Use any/all suitable commands. • View: Normal, Print Layout,

		Header and Footer <ul style="list-style-type: none"> ● Insert: Picture and Breaks
Introduction to adding graphics to documents	Enhance documents with graphics	
		Spreadsheet Application <ul style="list-style-type: none"> ● Identify a spreadsheet and explain basic spreadsheet terms (e.g. column, row, cell, sort). ● Identify a database and define basic database terms (e.g. file, record and field)
PowerPoint <ul style="list-style-type: none"> ● Create text and insert graphics 	PowerPoint <ul style="list-style-type: none"> ● Selects a design layout that engages viewer ● Creates a PowerPoint of at least 5 slides 	PowerPoint <ul style="list-style-type: none"> ● Independently create PowerPoint Presentations with at least 10 slides.

NETS Standard 4: Technology Communications Tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Grades K – 2			Grades 3 – 4			Grades 5-6		
Word Processing and Desktop Publishing <ul style="list-style-type: none"> ● Begin to use print media to communicate ideas and information to audiences. 			Word Processing and Desktop Publishing <ul style="list-style-type: none"> ● Use print media to communicate research findings, ideas and information to audiences. 			Word Processing and Desktop Publishing <ul style="list-style-type: none"> ● Continue to use print media to communicate research findings, ideas and information to audiences. 		
Multimedia Presentations <ul style="list-style-type: none"> ● Participate in presentation planning. ● Prepare visuals and text to enhance concepts. ● Create presentations as a group to include text, visuals, etc. ● Develop presentation skills. 			Multimedia Presentations <ul style="list-style-type: none"> ● Plan presentation using outline or storyboard. ● Prepare visuals, sound and text to enhance concepts. ● Create presentation to include text, sound, visuals etc. ● Develop presentation skills and media design skills. 			Multimedia Presentations <ul style="list-style-type: none"> ● Plan presentation using a variety of tools. ● Create multimedia elements to communicate ideas in presentation using increasingly sophisticated means. ● Save and store presentations incorporating graphics, video, and sound. ● Further develop presentation skills and media design skills. 		
			Telecommunications <ul style="list-style-type: none"> ● Exchange information using the Internet (e-mail, video-conferencing, etc.) 			Telecommunications <ul style="list-style-type: none"> ● Use supervised email to share multi-page documents and graphic elements. ● Create video clip for communication via the Internet. 		

NETS Standards 5 & 6: Technology Research Tools & Technology Problem-Solving and Decision-Making Tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world

Grades K – 2	Grades 3 – 4	Grades 5-6
Use technology tools to define research task and formulate research questions.	Use technology tools to define research task and formulate research questions.	Use technology tools to define research task and formulate research questions.
Begin using technology to research a problem or decision to be made.	Use technology to research a problem or decision to be made.	Use technology to research a problem or decision to be made.
Begin to understand the differences and capabilities of various information and data sources.	<p>Demonstrate an understanding of the differences and capabilities of various information and data sources.</p> <p>Select and use appropriate tools for research task.</p> <p>Determine when technology is useful and when another source is better suited.</p>	<p>Demonstrate an understanding of the differences and capabilities of various information and data sources.</p> <p>Select and use appropriate tools for research task.</p> <p>Determine when technology is useful and when another source is better suited.</p>
Experience locating sources and finding information within selected sources.	Locate sources and find information within selected sources.	Locate sources and find information within selected sources.
Engage and extract information in source.	Engage and extract information in source.	Engage and extract information in source.
Synthesize information gathered.	Synthesize information gathered.	Synthesize information gathered.
Present information.	Present information.	Present information.
Evaluate product and process for effectiveness.	Evaluate product and process for effectiveness.	Evaluate product and process for effectiveness.

