

**WILLIAMSBURG ELEMENTARY SCHOOL  
TECHNOLOGY PLAN  
2010 - 2015**

**PURPOSE:** Williamsburg Elementary School will promote the use of technology as a tool to promote educational excellence. The school will encourage the best methods and practices and will create an educational environment in which

- Students and teachers use computer technology easily and without fear, as a tool for gaining and applying knowledge.
- Computer technology is used to broaden horizons, recognize and appreciate diversity, and to facilitate contact across communities and cultures.
- Teachers have the resources, time and training they need to serve as models for the effective and ethical use of technology.
- Computer technology is well integrated into the entire curriculum.
- Technology is readily and equally accessible to all students and teachers.
- Students understand the practical applications of technology.
- Students have engineering experiences yearly from PK to grade 6.
- Computer technology extends beyond the school's walls to reinforce connections with homes businesses and other community facilities.
- Students use technology safely and responsibly.
- Student create (not just consume) appropriate and interesting content for a broader audience.

**RATIONALE:** The school believes that to educate for the future means to teach students **how to learn**. Students must be able to adapt to a rapidly changing environment and must see themselves as continual learners who know how and where to

access, analyze, and present information. With nearly instantaneous global communications, the quantity of information doubling every seven years, and rapidly developing technology, the adults of the future will have to be flexible, and be able to solve problems not even imagined when they were in school.

The school believes that technology has the potential to promote this vision. Technology is viewed not as replacement for teachers but as a powerful tool that teachers can use to engage the intellect of students. The school recognizes that the purchase of hardware and software and building facilities is not enough. We must provide ongoing training and professional development, which is geared towards the specific and individuals, needs of the current and future faculty of the Williamsburg schools.

**GOALS:**

1. To continually update our technology plans in order to meet and exceed all state of Massachusetts criteria. The plan will serve as a tool to guide future technology expenditures. Develop curriculum goals, plan professional development, and outline budgetary requirements. In addition the plan will satisfy eligibility requirements for available funding. Assessment of our telecommunications services, hardware, software and other services that is completed as part of our annual budget setting process. This assessment will enable cost effective technology access with the goal of improved student learning.
2. To purchase and provide instruction in the use and application of software resources appropriate to a PK - 6 setting. Emphasis will be placed on classroom integration with a focus on content creation and robotics. Joint

planning and teaching time of technology and regular teaching staff will facilitate this.

3. Every effort will be made to continually enhance technology use and technology literacy of teachers and students. Increasing access of appropriate equipment and software to students and teachers will facilitate this. The access to equipment and software will be supported by ongoing professional development of teachers and student learning opportunities.

**What was accomplished last year (from July 1, 2010 to June 30, 2011)** Our evaluation process is of a formative nature and encourages the district to monitor its progress towards the specified goals and make mid-course corrections as new opportunities arise. The formative work assessment includes both formal and informal data including interviews and student testing data. Our process is brought to a close through a summative process of completing a final evaluation of the each of our program efforts with recommendations for the next year.

- We evaluated and updated the tech plan.
- We investigated and implemented new tech projects for first and second graders including keyboard familiarization.
- We continued to utilize tech with students with disabilities including modifications for a visually impaired students and the use of the Apple iPad for students with special needs.
- We deepened our use of animation and robotics to enhance STEM education for students.
- The school web site was enhanced to increase relevance to parents. This included providing more forms online and providing teacher emails and contact information.

- We piloted the use of intelligent whiteboards in sixth grade including votes. An Elmo was also installed in sixth grade in conjunction with the intelligent whiteboard.
- We completed the second year of a new robotics program for early elementary students called Lego WeDo. We piloted the use of Terrapin Logo BeeBot robots for PK-1 students.
- The district provided leadership, curriculum, and instruction to 8 districts in the use of robotics for elementary and middle school students through a DESE ARRA grant. We trained 14 teachers in the use of the Lego WeDo robotics kits.
- Strongly participated in district technology and data teams to help district align curriculum and programs across our regional district.

**E-rate Expenditures 2010 - 2011** \$200 was used to help defray the cost of the district Teleconferencing Connection through Comcast. Our intent is to continue having E-rate help defray our costs for telecommunications services in the next fiscal year.

## **2011 - 2012**

1. We will evaluate and update technology plan and fully align it with the emerging district technology plan.
2. We will continue to utilize technology to aid students with disabilities. We use predictive writing software, text-to-speech software, iPads, and other specialized software for specific students.
3. We will implement individualized PD for teachers based on a PD survey they filled out.
4. We will refine, share, and expand an innovative PK-6 engineering curriculum based on robotics that will spread to other districts.

5. We will put into use 5 new digital cameras, 2 FlipCams, a new Camcorder, and 2 webcams that use the SAM Animations software program.
6. We will continue work on the District Technology Plan and continue to work with district curriculum and data teams.
7. We will create a technology vision for our new building project (see draft below).

## **2012 - 2015**

1. Review and update assistive technology for SPED and 504 students.
2. Update all technology in conjunction with a planned building renovation. This includes new computers, wireless access everywhere, intelligent whiteboards for classrooms, and an updated fileserver. We will move towards a more tablet based hardware and revamp our technology integration curriculum to match the new devices and paradigms.
3. Increase our professional development opportunities and to focus these offerings on using technology to meet the state curriculum standards including the new state math and ELA frameworks based on the Common Core.
4. To continue to utilize MCAS analysis, data warehousing, and sample test software to increase MCAS readiness.
5. To increase the use of standards aligned, video clips in the curriculum.
6. Implement, refine, and share our innovative PK-6 Elementary Engineering Curriculum (EEC)
7. Increase the number of laptops and tablets at each school and utilize them effectively and creativity.
8. Provide new laptops for all teachers and training so they utilize them effectively and creativity

**Evaluation Process.** Note that our evaluation process is of a formative nature and encourages the district to monitor its progress towards the specified goals and make mid-course corrections as new opportunities arise. The formative work assessment includes both formal and informal data including interviews, student testing data, and the like. Our process is brought to a close through a summative process of completing a final evaluation of the each of our program efforts with recommendations for the next year.

# WILLIAMBURG SCHOOLS - NEW BUILDING TECH VISION

Provide modern, up-to-date equipment and infrastructure to support the integration of technology throughout the curriculum and engineering and multimedia creation projects at all grade levels. Technology will connect teachers, students, parents, and administrators both within and outside our community. Infrastructure should be flexible to new technology and to the needs of all learners.

- Fiber Optic connection to the Internet
- Server/wiring closet
- Wireless coverage throughout building – cloud managed, will be moving towards separate but connected networks for students, staff, and guests
- Wired connection to each room – 1 GB
- Electrical outlets in numerous locations to support different classroom setups (or an agreed upon universal setup)
- Intelligent whiteboard and document camera in each classroom with good audio and a way to reduce outside light
- Cluster of 4 new computers in each room; one would run the whiteboard and be a teacher computer normally
- Mobile laptop carts (2, 1 new) – MacBook based
- iPad carts (2)
- Tech lab with lots of shelf space for robot parts, floor space, and desktops with ergonomic, collaborative furniture and an intelligent whiteboard
- Modern copiers with scanning to fileserver and color capabilities
- Large room (gym/cafeteria) with projection system/audio
- Assistive Technology should be considered throughout- desks, FM wireless systems for teachers are 2 examples
- Video conferencing - we are involved in a videoconferencing grant, that will provide some kind of portable videoconferencing equipment
- Low maintenance, cloud/web managed, Macintosh compatible systems (alarms, firewalls, routers, phone)
- Modern phone/PA systems integrated with computers

- Replacement of computers with modern computer will mean letting go of all Classic (Macintosh 9.x) software and standardizing and updating of all software.