

Cranford Public Schools Technology Plan

AN ONGOING TECHNOLOGY PLAN: A PLAN FOR ACTION

(2007-2010)

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Developed by:

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Technology Department

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Cranford Public Schools Technology Plan 2007-2010

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I. Stakeholders

The Technology Team consists of twenty-four members including teacher representation from each school, administrators, supervisors, a community representative and Board of Education member. The team meets bi-monthly and is engaged in developing and revising technology plans that will enable both teachers and students to use technology to enhance learning and teaching practice as well as support the individual needs of students. Subcommittees are formed each with specific focus, which includes: Updating Software, Technology Evaluation and Assessment, and Student Management Systems. See attachment for list of committee members.

II. Executive Summary

The Cranford School District's Technology Plan is ongoing and active. Our plan addresses the goals and objectives of the school district, the State Core Curriculum Content Standards (NJCCCS), the State Department's technology goals, and the National Educational Technology Standards (NETS). The district continues to evaluate current practice and keep abreast of new trends in technology.

Mission Statement

The Cranford Public Schools will provide opportunities for students to pursue excellence in their endeavors. Students will acquire the skills, knowledge and understanding they need to be contributing, responsible and caring members of society.

Vision Statement

Our vision for the Cranford School District is that the Board of Education members, all staff members, parents, students and community members will work together with creative cooperation such that the whole is greater than the sum of its parts, and we will create a school district for our children that will exceed all of our expectations. We will aspire to serve as a model district that: values differences and has regard and respect for each other; builds on strengths; addresses weaknesses; has more than just good test scores; is both efficient and effective, and maximizes students' potential.

Technology Vision Statement

The Cranford Public Schools will provide each member of the school community with a technology-rich environment that is focused on helping students learn in a more self-directed fashion. Students will be engaged in experiences that allow them to use technology to meet the challenges of the 21st century.

We believe in

- Differentiating instruction through the use of technology.
- Providing an environment that is flexible and supportive.
- Utilizing technology to improve the delivery of instruction, and modify the role of the teacher.
- Supporting the ever-changing role of educators through professional development.
- Addressing the needs of the individual learner.

III. Technology Overview

Technology Inventory Chart

The following chart reflects the technology inventory needed to improve student academic achievement through 2010:

Three-Year Technology Plan Inventory Table			
Area of Need	2007-2008	2008-2009	2009-2010
Technology Equipment	Teaching for Understanding /Differentiated Instruction 12 Classroom- (50 Computers) (12 Projectors) (12 Smart Boards) 125- Classroom Computers to maintain student/computer ratio	Teaching for Understanding /Differentiated Instruction 12 Classroom- (50 Computers) (12 Projectors) (12 Smart Boards) 125- Classroom Computers to maintain student/computer ratio	Teaching for Understanding /Differentiated Instruction 12 Classroom- (50 Computers) (12 Projectors) (12 Smart Boards) 125- Classroom Computers to maintain student/computer ratio
Software used for curricular support and filtering	See Table Filtering software Websense, Inc.	See Table Filtering software Websense, Inc.	See Table Filtering software Websense, Inc.
Technology maintenance policy and plans	All computer purchased have a 3-year maintenance plan. After 3 years district will repair on a cost basis	All computer purchased have a 3- year maintenance plan. After 3 years district will repair on a cost basis	All computer purchased have a 3-year maintenance plan. After 3 years district will repair on a cost basis
Telecommunications Services	Comcast or other provider that will supply higher Bandwidth	Comcast or other provider that will supply higher Bandwidth	Comcast or other provider that will supply higher Bandwidth
Technical Support	Full time technology/coach	Add new tech position technology/coach (part-time)	Add new tech position technology/coach (part-time)

Facilities – infrastructure	Upgrade Electrical and wireless capacity	Upgrade Electrical and wireless capacity	Upgrade Electrical and wireless capacity
Other Services:			

A software list for our K-7 computer curriculum is located in the Attachment Section of this plan. The software used to support curriculum will continue to be updated. The classroom teacher maintains the classroom software curriculum support inventory.

Assistive Technology

Multiple assistive technology solutions are used to address the special needs of our student population. The assistive devices include: Alphasmart keyboards, laptop computers, software applications including: Solo, Kidspiration and Inspiration. In addition, Estimator, BDA scoring pro and Intellitalk, Wynn, WJIII Compuscore and IEP Writer. As student needs are identified the Child Study Team will continue to work collaboratively with the technology department to address specific needs.

District Integration of Assistive Technology

Required software as well as hardware peripherals are implemented as determined by the Child Study Team (CST) through the IEP process. Furthermore, representatives of the Cranford CST are receiving additional training in the area of assistive technology in an effort to be proactive as to meet and support the educational goals for each student. CST members are working with their respective teams to share this knowledge and implement the required changes and improvements to our IEP processes as dictated by the State of New Jersey Department of Education. During each IEP conference, the appropriateness and need for assistive technologies is evaluated.

Technological Obsolescence

Cranford is committed to keeping a current network to support the curriculum-based software and peripherals needed to enable students to achieve the NJCCCS. The technology department deems a computer obsolete when it can no longer perform a valuable function on the network. Obsolete computers will be replaced and properly discarded via an approved recycling vendor and/or through donations to charities. The strategy that the technology department employs is one that demotes the older computers to less taxing functions such as print servers or a storage repository for installation software and software images for the various models of desktops. When an older server no longer has adequate processing speed for the networked applications or no longer has sufficient storage space and becomes undependable it is replaced. Some obsolete servers and desktops are stored for repair parts for identical servers/desktops still in operation.

B. Cyber Safety

Filtering Method

Comprehensive content filtering provides us with a granular, policy-based control mechanism to manage access to inappropriate, unproductive and potentially illegal Web content through a set of categories, such as Adult Content and Educational Content. Our current Web filter is Websense Content Security Manager Series (CSM), which is an appliance-based gateway security and content filtering solution that integrates real-time gateway anti-virus and anti-spyware prevention to deliver maximum network protection from today's sophisticated Internet threats, while continuing to increase student and staff productivity, optimize network utilization and mitigate any legal liability. This unique solution integrates seamlessly behind the network firewall, enabling upgrades to our security without upgrading the firewall itself. This method is in compliance with Children's Internet Protection Act (CIPA). During the school years 2007-2010, the Technology Department will evaluate new efficient filtering solutions that meet CIPA compliance.

Acceptable Use Policies

The District's Acceptable Use Policy is annually revised and can be found in the Student and Faculty Handbook. All students have a signed copy on file attached to the student code of conduct. See attachment for copy of District's AUP.

Online Safety

Computer teachers, media specialists, and classroom teachers all address online safety with students. Parents can attend an assembly on Internet safety hosted annually in district provided by the Cranford Police Department.

C. Needs Assessment

Current Capabilities

Our current capabilities include computers in every classroom, networked computer labs (grades 7-12), Internet access in each classroom, portable computer carts, E-mail accounts for each staff member and a Web-based student management system. We support our current technology with effective staff development, the Cranford E-board, Web-based resources, distance learning opportunities for staff and students, and by integrating technology into the district's curriculum and core curriculum content standards.

Potential for Future

With the continual support of the Board of Education and community, the Cranford Public School District has the potential to achieve the vision put forth where through the continued and effective use and integration of technology into the curriculum and Core Curriculum Content Standards.

Priorities for Achieving the Future

The district's priority is to enhance student learning through the achievement of the Core Curriculum Content Standards and the district's "Teaching for Understanding" model. The technology priorities include staff development, ongoing technical support, resources for integration of technology into the curriculum, and continued research into the field of technology and learning. Currently, we support staff with development opportunities that include: ETTC workshops, New Jersey Educational Computing (NJECC), consultants, out-of-district workshops and conferences, in-district workshops, and "Teaching for Understanding" seminars.

Teacher and Library Media Personnel Proficiency

The follow chart reflects the personnel proficiency in the use of technology as on the 2005 State Technology Survey:

Beginner	6%
Intermediate	27%
Advanced	55%
Instruction	10%

Access to Technology

Currently, all students have access to technology within the classroom. Elementary classrooms are equipped with a workstation of three to five computers and/or a portable wireless cart of computers. Both middle schools have two portable carts, a computer lab and media center, which enable teachers and students access to the Internet and computers.

Needs of Students and Staff

The needs of both students and staff are evaluated regularly through faculty meetings, technology committee meetings, and teacher/administrator conferences. Teachers are supported by a district technology coach, building computer teachers, and technicians.

Needs and Barriers

The needs and barriers related to using technology as part of instruction include difficulty in supporting teachers with "just-in-time" technical assistance and limited funds for purchasing support materials such as equipment and software when needed.

Professional Development Activities

Teachers have access to varied technologies and software depending on subject/grade levels. All teachers have the capability of using videoconferencing equipment and other technologies including laptops, PDAs, AlphaSmarts, digital and video cameras through the Technology Office. Teachers in both middle schools are using mobile carts (C.O.W) that provide wireless computers to students and teachers when needed. Interactive whiteboards are utilized by multiple classroom teachers and media specialists at all grade levels.

Professional Development for Administrators

Ongoing, sustained high-quality professional development opportunities including workshops, conferences, educational journals and online resources are available to administrators. All administrators have the opportunity to participate in district technology workshops to further the effective use of technology in the classrooms and library media centers. More than 50% of our administrators have completed the New Jersey Exemplary Leadership Institute for Technology in Education, NJELITE.

Professional Development Opportunities for 2007-2010

Based on teacher and library media personnel proficiency as identified on the District and State Technology Surveys as well as from classroom visitations, teachers will be able to select from an array of workshops similar to the 2006-2007 course catalog. Other professional development opportunities include participation in the Union County ETTC and NJECC workshops, access to consultants, as well as conference opportunities. Distance learning, including online professional development, will be further pursued and developed. Additionally, teachers involved in the “Technology Enhanced Teaching for Understanding Classroom Project” participate in a project related to professional development opportunities.

IV. Goals and Objectives: Technology Goals 2004-2007

1. **STAFF DEVELOPMENT:** To provide members of the educational community with ongoing professional development opportunities for enhancing student achievement through the effective use of technology.
2. **CURRICULUM INFUSION:** To enhance the instructional process by integrating technology into the K-12 curriculum and the “Teaching for Understanding” instructional model.
3. **TECHNOLOGY MANAGEMENT:** To efficiently manage hardware, software and networks; maintenance and upgrades; Internet use; and administrative systems.

4. **COMMUNICATION/NETWORK SYSTEMS:** To enrich the students' educational experience by providing access to information through a variety of electronic resources and to enhance community communications.

5. **BUDGETARY CONSIDERATIONS:** To align funding with the technology plan for efficient and effective implementation.

6. **COMMUNITY LINKAGE:** To enhance school, parent, and community Interactions utilizing technology.

7. **INTEGRATED ADMINISTRATIVE SYSTEMS:** To automate administrative tasks.

8. **FACILITIES DESIGN:** To prepare and maintain facilities for technology usage.

Evaluation of Goals 2004-2007

1. **Staff Development:** The district continues to provide meaningful professional development for all instructional staff. Customized computer courses are offered throughout the year on multiple applications.
2. **Curriculum Infusion:** The “Teaching for Understanding” instructional model continues into its seventh year with over 100 teachers in district trained and supported by technology. The present survey indicates that 99% of teachers have infused technology into the curriculum.
3. **Technology Management:** To maintain effective use of equipment all computers carry a three-year maintenance plan and machines are upgraded when considered obsolete. Internet access has been increased to a higher bandwidth. Pearson System has been installed since the student management system has the ability to track data as required by the No Child Left behind Act. Pearson Systems is also used for administrative services such as scheduling, attendance, testing data, and other administrative tasks.
4. **Communication/Network Systems:** Students have access to the video libraries that support the curriculum, Internet newsletters, e-mail accounts, teacher Websites, e-boards and homework postings.
5. **Budgetary Considerations:** The district continues to align funding with the needs of each school building but must adhere to certain budgetary constraints.
6. **Community Linkage:** The Pearson system allows parents access to student data and E-mail accounts are used to communicate with teachers. E-newsletters and mailing lists are also used to communicate with parents and community. The Cranford School District’s Website is also used to post announcements and current information.
7. **Administrative Systems:** Several administrative systems have been implemented to effectively automate administrative tasks: On-line purchase order and human resource systems, attendance system, and employee application system.
8. **Facilities Design:** Electric and wiring are continually upgraded and enhanced to support new technology.

Goals and Objectives 2007-2010

1. **Staff Development:** To support all staff with ongoing professional development opportunities that effectively enhance the teaching and learning process and address the needs of all learners:
 - 1.1 Administrators, teachers, and staff will be provided with technology training, that support district initiatives, during the school day, after school, and out of district
 - 1.2 All newly-hired teachers will attend the “Teaching for Understanding” workshop and seminar.
 - 1.3 Technical support personnel will provide teachers with the necessary assistance to effectively utilize technological tools that address the needs of all learners.
 - 1.4 Technical support personnel will assist with the objectives set forth by principals, supervisors, and directors.

2. **Curriculum Infusion:** To enhance the instructional process by integrating technology into the K-12 curriculum and the “Teaching for Understanding” instructional model:
 - 2.1 Staff will have access to Web-based resources, e-boards, on-line video libraries, Internet resources and Websites that enhance the teaching and learning process.
 - 2.2 All students will use technology resources to research, problem solve, report data, make informed decisions, and present information.
 - 2.3 All content area curriculums will be revised to include effective technological practices that reflect the New Jersey Core Curriculum Standards 8.1 and 8.2.

3. **Student Management System:** Continued development and enhancement of the Student Management System to coordinate administrative tasks, reporting and parental information:
 - 3.1 Web-based student management system will be implemented in all schools for taking attendance, reporting grades, and other administrative tasks.
 - 3.2 Parent access to Web-based student management system will continue to be implemented at the high school level through 2008 and at the elementary level through 2010.

4. **Technology Management:** Use cost effective maintenance and upgrade of hardware, software, communication and electric infrastructure to support other goals:
 - 4.1 District electronics will be maintained and upgraded.
 - 4.2 Infrastructural hardware and software will be maintained and upgraded.

5. **Assessment:** Utilize assessment of students and teachers to evaluate past practices and to keep abreast of changing needs.

5.1 Teachers will utilize student checklists to assess NJ Core Curriculum Content Standards 8.1 & 8.2.

5.2 District will assess teacher proficiencies through the use of a technology survey.

5.3 District will evaluate the progress of the 2007-2010 technology goals through the use of a checklist. As either: complete, in-progress, or not started.

V. Implementation Activity Tables 2007-2010

District Goal & Objective	Strategy/ Activity	Timeline	Person Responsible Documentation
1.1	The technology department will provide technology training based on the needs of each building and the initiatives set forth by the district	2007 - 2010	Technology Department
1.1	The technology department will offer after school computer classes based on surveyed need	2007- 2010	Technology Coach
1.1	Principals will budget for appropriate out-of-district professional development opportunities for staff	2007- 2010	Principals
1.2	Curriculum office will require all new staff to attend "Teaching for Understanding" seminar.	2007- 2010	Curriculum Office
1.3	Principals will provide flexible time for computer teachers to support staff	2007- 2010	Principals Computer teachers
1.3	District technology coach available to support with necessary in-class support	2007- 2010	Technology Coach
2.1	During new teacher orientation and district professional develop day teachers will be trained and made aware of the technological resources available to them. Log-on information for United Streaming, E-mail accounts, the E-board are available through the Technology Department	2007- 2010	Technology Department, Mike Mangini Maureen Scepkoski Garnett Nichols
2.2	All teachers will utilize technology to differentiate instruction and address the needs of all learners.	2007- 2010	Classroom teachers & Media specialists
2.2	Teachers will provide all students with	2007-	Classroom

	opportunities to develop the skills required to meet the challenges of the 21 st century through the use of problem-based learning and the TFU model.	2010	teachers & Media Specialists Technology Coach
2.3	All new curricula will include effective technological practice aligned with the state standards	2007-2010	Curriculum Office
3.1	All staff will be trained in appropriate use of student management system for specific tasks	2007-2008	Mike Mangini
3.2	Parents will attend meeting of how to access student information via web-based management system	2007-2008	Mike Mangini
3.2	Requirements for teachers will be set forth according to specific conditions for posting grades and other information into student management system.	2007-2008	Principals
4.1	The district will upgrade wiring and follow industry guidelines for cable and electrical to support computer hardware	2007-2010	Facilities
4.2	The technology department will upgrade the network infrastructure in each building	2007-2010	Technology Department

VI. Funding Plan 2007-2008

Projected Costs

Technology is an investment in our future. Adequate funding is a necessity in order for this plan to become a reality and fulfill our visions. Costs will go well beyond the actual hardware devices to include: personnel, professional development, electronically delivered learning materials, print resources, attendance at conferences and workshops, online research, consultants, software, facilities preparation, furniture, networks, maintenance, upgrades, and replacement costs of obsolete equipment.

The projected costs are based on the local district budget, grants, and local donations. These monies will be invested in acquiring new equipment and software to support district and state goals, replace and/or update existing equipment, staff development opportunities, technology personnel and Internet costs. Distance learning devices and tools will be purchased. As needed, provisions will be made for interoperability among components of technologies mentioned above. Cranford's projected technology cost for the 2007-2008 year is \$940,000. The staff development projected cost for the 2007-2008 school year is \$80,000.

Sources of Funds

In order to maximize technology, a variety of funding strategies will be pursued. Some sources include an annual budgetary line item, federal and state grants, business and corporate partnerships, private donations, and lease-purchase agreements. The ongoing technology budget, approved by the Board of Education and passed by the community provides for technology costs as outlined below:

Local Funds	850,000
Federal and State Grants	20,000
E-Rate	60,000
Local Grants and Donations	10,000
Total	940,000

As the program is assessed and developed, the technology budget for years 2008-2010 will continue to provide for our needs and help ensure that students have access to technology and that teachers are prepared to integrate technology effectively into curricula and instruction.

Board Approval

The technology plan is scheduled for Board Approval on May 21, 2007.

VII. Professional Development

The professional development activities for teachers, administrators, secretaries, support staff and school library media personnel are managed and coordinated by the Office of Curriculum and Instruction and the Technology Department. Technology is an integral part of the district's "Teaching for Understanding" workshop as well as all other professional development.

Professional Development Activities

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VIII. Evaluation Plan

Annually, the District's Technology Plan and programs are evaluated and the results reported to the Technology Team and administrators. The Technology Team uses the data from this report to inform and update the District's Technology Plan, as well as determine where additional training is needed and how to most effectively utilize available funding.

Integrating Technology

1. Administrators regularly evaluate staff and reference the use of technology into the curriculum.
2. Teachers reference the use of technology and software in lesson plans submitted weekly to administration.
3. Various district initiatives provide support for classrooms teachers to incorporate technology.
4. Supervisors and administrators provide recommendations for growth in teacher evaluations.
5. Teachers attend workshops that provide the necessary technological support for today's classroom.

Student Achievement & Life-Long Learning

1. Teachers are provided with a technology skill set checklist for each grade level which are aligned with 8.1.
2. Teachers reference NJ CCCS 8.1 in their plan books.
3. Students perform Problem-Based tasks, which enable students to incorporate technology using real-world applications.

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