

Curriculum Guide for Technology Grades Pre-K – 8



Adopted by the Irvington Board of Education August 2005

[Web Version 1.2 .PDF does not include 'resource appendices' pgs 35-88]

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**IRVINGTON PUBLIC SCHOOLS
IRVINGTON, NEW JERSEY**

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TECHNOLOGY VISION STATEMENT

The Irvington School District's vision is to see that all students become proficient in the Core Curriculum Content Standards, and that all students and teachers become proficient in the use of state-of-the-art educational technologies as they develop. We are integrating effective technology into all programs in order to provide students and staff with the competence and confidence needed for success in the twenty-first century. We believe, as is stated in "No Child Left Behind" from President George W. Bush that "schools should use technology as a tool to improve academic achievement, and that using the latest technology in the classroom should not be an end unto itself."

Our vision is to:

- Continue to improve instruction through the use of appropriate technologies that will foster creativity, encourage higher order thinking, and motivate students to learn in a student-centered learning environment.
- Continue the preparation of educators for new roles with ongoing, accessible staff development opportunities so that they are able to help all students learn through computers and through the information superhighway.
- Maintain and enhance networks and technology infrastructures to ensure the appropriate planning for student, teacher, and administrator needs for instructional access through networking resources, while encouraging the necessary linkages among technology infrastructures throughout, the state of New Jersey and the world.

DISTRICT MISSION STATEMENT

With the verbal, fiscal, and spiritual support of the people of Irvington, the children who attend the Township's public school shall be intellectually stimulated, instructionally challenged, and emotionally motivated to visually display and mentally portray their own unique gift and talents as enhanced by the type of education offered by the Board of Education.

TECHNOLOGY MISSION STATEMENT

The Irvington School District offers students and staff the opportunity to be well educated in the technology existing in our schools today and also new technology that will be installed in the near future. We encourage individual success to the fullest extent of each person's abilities. It is vitally important that students and staff are comfortable with the technology that has become a part of everyday life. We are providing our students with ready access to technology and to the world of information available online. Funding must be allotted for staff development to assist teachers to integrate technology into their teaching and curriculum planning.

AFFIRMATIVE ACTION STATEMENT

The Irvington School District shall provide equal education and employment opportunities to all persons regardless of race, color, ethnicity, creed, religion, sexual orientation, gender, ancestry, national origin, social-economic status or disability in accordance with N.J.A.C. 6:4-1-5.

Irvington Public Schools



**Course
Grades
Adopted**

**Technology Curriculum
Pre-K – 5
August 2005**

Intent

The intent of the Pre-K – 5 Technology Curriculum is to foster a learning environment that promotes the following characteristics:

- Students will use SuccessMaker courseware software to supplement their Language Arts and Math curriculum.
- Students will be able to demonstrate basic understanding of the parts and operation of a computer.
- Students will perceive the computer as a useful tool in their lives.
- Students, who have received the permission of a parent, will demonstrate the ability to access information from the Internet.
- Students will be able to develop keyboarding, data input, and retrieval skills.

ACADEMIC OBJECTIVES

Our academic objectives are:

- 1. To enable students to utilize the computer and computer applications as tools to increase lifelong individual productivity. As part of the technology curriculum we have developed grade appropriate competencies for all students.**
 - Students will be able to demonstrate basic understanding of the parts and operation of a computer.
 - Students will be able to demonstrate effective use of various peripheral devices.
 - Students will be able to perform basic tasks using computer operating systems.
 - Students will develop keyboarding, data input and retrieval skills.
 - Students will demonstrate skills in using computer software applications for a variety of purposes, including word processing, database, presentation software and spreadsheet.
 - Students will exhibit the skills necessary to load, run and use the many instructional software packages available for student use.

- 2. To utilize computer applications in the course of the general learning process in all grade levels, across the curriculum, as appropriate.**
 - Students will identify and use a variety of software programs to stimulate critical thinking and higher level processes.
 - Students will identify and utilize appropriate, varied programs to meet and complete cross-curricular objectives and assignments.
 - Based on assignments received from teachers students will have developed research, writing and higher order thinking skills by using WebQuests as a learning tool.

- 3. To use computer-based technology, both local and distant, for research and reference.**
 - Students will demonstrate the ability to locate and retrieve information from computer devices (hard drive, CD-ROM, DVD-drives, databases).
 - Students will demonstrate skills in the use of electronic communications.
 - Students, who have received the permission of a parent, will demonstrate the ability to access information from the Internet.
 - Students will demonstrate competency in various methods for evaluating information from the Internet.

- 4. To exhibit positive attitudes about computer use.**
 - Students will perceive the computer as a useful tool in their lives.
 - Students will choose to use the computer rather than other methods in situations that warrant their use.
 - Students will be able to present research and conclusions using word processing software and presentation software.
 - Students will enhance research with graphs and presentations from application software.
 - Students will enhance research with pictures, sound and video available from the Internet.

Student Performance Assessments

Listed below are a variety of methods, which can be utilized to assess student performance. However, teachers are not limited to the assessment suggestions below.

MULTIDIMENSIONAL ASSESSMENT:

- Multiple Choice Questions – one correct response and three distracters. These items appear on the NJ Ask tests.
- Performance Based – involves activities that allow students’ to exhibit the use of strategies of problem solving, cooperative learning to integrate learning across the curriculum.
- Portfolio Assessment – involves a collection of examples of a student’s work.
- Project Based – selected by the students to allow for diversity, cooperative learning, and for students’ individual strengths in learning.
- Demonstrations – performance-based and gives the students the opportunity to show their abilities consistently through a variety of formats.
- Teacher-made tests
- Written and oral quizzes
- Homework
- Class Participation

Statement of Purpose

This Pre-K - 5 Technology Curriculum is aligned to the New Jersey Core Curriculum Content Standards for Technology 8.1, 8.2. The technology education standard was developed to ensure the literacy needed by all students to succeed in a highly technological world. Business and Industry has clearly stated the need for technological skills in the workplace of the 21st Century. This standard is based on the *Standards for Technological Literacy (STL): Content for the Study of Technology (ITEA, 2000)*, developed as part of the National Science Foundation (NSF)/National Aeronautics and Space Administration (NASA) funded by the *Technology for All Americans (TfAA)* project.

By the conclusion of grade 5 students will be able to use technology as a tool to enhance learning across the curriculum.

STANDARD 8.1

8.1 Computers and Information Literacy

- A. Basic Computer Tools and Skills
 - Keyboarding
 - Word Processing
 - Internet Usage
 - Spreadsheets
 - Database concepts and usage
 - Publications and presentations
- B. Application of Productivity Tools
 - Social Aspects
 - Information Access and Research
 - Problem Solving

STANDARD 8.2

8.2 Technology Education

- A. Nature and Impact of Technology
- B. Design Process and Impact Assessment
- C. Systems in the Designed World

STANDARD 8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.

STANDARD 8.2 (TECHNOLOGY EDUCATION) ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF THE NATURE AND IMPACT OF TECHNOLOGY, ENGINEERING, TECHNOLOGICAL DESIGN, AND THE DESIGNED WORLD AS THEY RELATE TO THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT.

STANDARDS:

STANDARD 8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.

STANDARD 8.2 (TECHNOLOGY EDUCATION) ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF THE NATURE AND IMPACT OF TECHNOLOGY, ENGINEERING, TECHNOLOGICAL DESIGN, AND THE DESIGNED WORLD AS THEY RELATE TO THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT.

STANDARD 3.1 (READING) ALL STUDENTS WILL UNDERSTAND AND APPLY THE KNOWLEDGE OF SOUNDS, LETTERS, AND WORDS IN WRITTEN ENGLISH TO BECOME INDEPENDENT AND FLUENT READERS, AND WILL READ A VARIETY OF MATERIALS AND TEXTS WITH FLUENCY AND COMPREHENSION.

STANDARD 3.2 (WRITING) ALL STUDENTS WILL WRITE IN CLEAR, CONCISE, ORGANIZED LANGUAGE THAT VARIES IN CONTENT AND FORM FOR DIFFERENT AUDIENCES AND PURPOSES.

STANDARD 3.3 (SPEAKING) ALL STUDENTS WILL SPEAK IN CLEAR CONCISE, ORGANIZED LANGUAGE THAT VARIES IN CONTENT AND FORM FOR DIFFERENT AUDIENCES AND PURPOSES.

STANDARD 3.4 (LISTENING) ALL STUDENTS WILL LISTEN ACTIVELY TO INFORMATION FROM A VARIETY OF SOURCES IN A VARIETY OF SITUATIONS.

STANDARD 3.5 (VIEWING AND MEDIA LITERACY) ALL STUDENTS WILL ACCESS, VIEW, EVALUATE, AND RESPOND TO PRINT, NONPRINT, AND ELECTRONIC TEXTS AND RESOURCES.

STANDARD 4.1 (NUMBER AND NUMERICAL OPERATIONS) ALL STUDENTS WILL DEVELOP NUMBER SENSE AND WILL PERFORM STANDARD NUMERICAL OPERATIONS AND ESTIMATIONS ON ALL TYPES OF NUMBERS IN A VARIETY OF WAYS.

STANDARDS:

STANDARD 5.1 (SCIENTIFIC PROCESSES) ALL STUDENTS WILL DEVELOP PROBLEM-SOLVING, DECISION-MAKING AND INQUIRY SKILLS, REFLECTED BY FORMULATING USABLE QUESTIONS AND HYPOTHESES, PLANNING EXPERIMENTS, CONDUCTING SYSTEMATIC OBSERVATIONS, INTERPRETING AND ANALYZING DATA, DRAWING CONCLUSIONS, AND COMMUNICATING RESULTS.

STANDARD 5.3 (MATHEMATICAL APPLICATIONS) ALL STUDENTS WILL INTEGRATE MATHEMATICS AS A TOOL FOR PROBLEM SOLVING IN SCIENCE, AND AS MEANS OF EXPRESSING AND/OR MODELING SCIENTIFIC THEORIES.

STANDARD 5.4 (NATURE AND PROCESS TECHNOLOGY) ALL STUDENTS WILL UNDERSTAND THE INTERRELATIONSHIPS BETWEEN SCIENCE AND TECHNOLOGY AND DEVELOP A CONCEPTUAL UNDERSTANDING OF THE NATURE AND PROCESS OF TECHNOLOGY.

STANDARD 6.1 (CIVICS) ALL STUDENTS WILL KNOW, UNDERSTAND AND APPRECIATE THE VALUES AND PRICIPLES OF AMERICAN DEMOCRACY AND THE RIGHTS, RESPONSIBILITIES, AND ROLES OF A CITIZEN IN OUR DEMOCRATIC SOCIETY.

STANDARD 6.2 (CIVICS) ALL STUDENTS WILL KNOW, UNDERSTAND AND APPRECIATE THE VALUES AND PRINCIPLES OF AMERICAN DEMOCRACY AND THE RIGHTS, RESPONSIBILITIES, AND ROLES OF A CITIZEN IN THE NATION AND WORLD.

STANDARD 6.4 (ECONOMICS) ALL STUDENTS WILL ACQUIRE AN UNDERSTANDING OF KEY ECONOMIC PRINCIPLES IN RELATION TO INDIVIDUALS, INSTITUTIONS, AND GOVERNMENTS

STANDARD 6.5 (GEOGRAPHY) ALL STUDENTS WILL APPLY KNOWLEDGE OF SPATIAL RELATIONSHIPS AND OTHER GEOGRAPHIC SKILLS TO UNDERSTAND HUMAN BEHAVIOR IN RELATIONSHIP TO THE PHYSICAL AND CULTURAL ENVIRONMENT.

Strands and Cumulative Progress Indicators

By the end of Grade 5, students will:

A. Basic Computer Skills and Tools

1. Use basic technology vocabulary
2. Use basic features of an operating system (e.g., accessing programs, identifying and selecting a printer, finding help).
3. Input and access text and data, using appropriate keyboarding techniques or other input devices.
4. Produce a simple finished document using word processing software.
5. Produce and interpret a simple graph or chart by entering and editing data on a prepared spreadsheet template.
6. Create and present a multimedia presentation using appropriate software.
7. Create and maintain files and folders.
8. Use a graphic organizer.
9. Use basic computer icons.

B. Application of Productivity Tools

1. Discuss the common uses of computer applications and identify their advantages and disadvantages.
2. Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including:
 - Internet access
 - Copyrighted materials
 - On-Line library resources
 - Personal security and safety issues
3. Practice appropriate Internet etiquette.
4. Recognize the ethical and legal implications of plagiarism of copyrighted materials.

Information Access and Research

5. Recognize the need for accessing and using information.
6. Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.
7. Locate specific information by searching a database.
8. Recognize accuracy and/or bias information.

Problem Solving and Decision Making

9. Solve Problems individually and/or collaboratively using computer applications.
- 10.** Identify basic hardware problems and solve simple problems.

<u>CCCS # - Indicator</u>	<u>Skill/Student will be able</u>	<u>Instructional Practices for the Teacher</u>	<u>Timeline</u>	<u>Resources</u>	<u>Assessment</u>
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b 4.2a, 4.2d, 4.2e 4.3a, 4.4b, 4.5a	Students will use <u>SuccessMaker</u> courseware software to supplement their Language Arts and Math curriculum.	“Hands on” training with each student being able to log on to a individualized courseware software to supplement their comprehension of Language Arts and Math skills to assist student to prepare for the NJ Ask test.	Grades 3 & 4 Marking Periods 1, 2, 3 (until NJ Ask test) Grades 2 & 5 Marking Periods 3, 4 (After NJ Ask test) Grades K – 1 On-going (once a week – all year)	SuccessMaker software utilized in the computer lab and by the classroom teachers.	Software diagnostics from management system Written and Oral Tests Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b	Students will be able to demonstrate basic understanding of the parts and operation of a computer.	“Hands on” training with each student being able to: Identify the physical components of a computer, Communicate about technology using appropriate and accurate terminology.	Marking Period 1	Classroom computers Lab computers	Project based Teacher-made tests Written and Oral Quizzes
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b, 3.2b, 3.2d 4.1a, 4.1b 3.4a,3.5b, 3.5c	Students will perceive the computer as a useful tool in their lives.	“Hands on” training with each student being able to recognize ownership of work, identify the computer as a tool that helps people work and play; identify the role of technology in a variety of careers. Use software to support class learning, use software for individual and collaborative projects, and use a variety of media resources for directed and independent learning activities.	Marking Periods 1 through 4 on-going	See appendix for software lists See appendix for Internet sites	Project based Teacher-made tests Written and Oral Quizzes
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1h, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b	Students, who have received the permission of a parent, will demonstrate the ability to access information from the Internet.	“Hands on” training with each student being able to use the Internet to access remote information with guidance.	Marking Periods 1 through 4 on-going	See appendix for website lists	Project based Teacher-made tests Written and Oral Quizzes
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b, 3.2a, 3.2 b 4.1a, 4.1b, 4.4a, 4.5b, 4.f,4.5e	Students will be able to develop keyboarding, data input, and retrieval skills.	“Hands on” training with each student being able to demonstrate proper care and use of equipment, recognize the benefits of word processing, identify the cursor, use a mouse to select and item by clicking and dragging, use a mouse to manipulate objects.	Marking Periods 1 through 4 on-going (Grades Pre-K - 2)	Microsoft Office/Appleworks software (all program segments) Internet Keyboarding software	Project based Teacher-made tests Written and Oral Quizzes

<u>CCCS # Indicator</u>	<u>Skill/Student will be able</u>	<u>Instructional Practices for the Teacher</u>	<u>Timeline</u>	<u>Resources</u>	<u>Assessment</u>
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b, 3.2a, 3.2 b 4.5b, 4.f, 4.5e	Students will be able to develop keyboarding, data input, and retrieval skills.	Hands on” training with each student being able to demonstrate proper care and use of equipment, recognize the benefits of word processing, identify the cursor, use a mouse to select and item by clicking and dragging, use a mouse to manipulate objects. Identify commonly used letter keys, number keys, spacebar, return /enter. Demonstrate correct keyboarding posture and finger placement for home row keys.	Marking Periods 1 through 4 (Grades 3 - 5)	Microsoft Office/AppleWorks software (all program segments) Internet Search Engines and websites Keyboarding software	Project based Teacher-made tests Written and Oral Quizzes Keyboarding software report sheets Analysis of Internet search results
8.1a; 8.1b 3.2a, 3.2b, 3.2c, 3.2d; 3.1f, 3.1h	Students will be able to use applications and productivity tools and peripherals to support personal productivity, remediate skill deficiencies, and facilitate learning in all aspects of the curriculum	“Hands On “ training with each student being able to: Identify the technology tools used to collect, analyze and display data; Create, edit, format, save and print a word processing document	Marking Periods 1 through 4 On-going (Grades 3 - 5)	AppleWorks Writing Software Internet	Student projects Written and oral quizzes Teacher made tests
8.1a, 8.1b 8.2a, 8.2b, 8.2c	Students will be able to identify basic issues related to responsible use of technology and information and describe consequences of inappropriate use	“Hands on” training with each student being able to use the Internet to access remote information with guidance.	Marking Periods 1 through 4 On-going (Grades 3 - 5)	See appendix for website lists	Student projects Teacher-made tests Written and Oral Quizzes Analysis of Internet search results
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b, 3.2a, 3.2 b 4.5b, 4.f, 4.5e	Use technology resources for problem solving, self directed learning, and extended learning activities	“Hands on” training with each student being able to log on to a courseware software or Internet site to supplement their comprehension of Language Arts and Math skills	Marking Periods 1 through 4 On-Going Grades K - 5	Success Maker software See appendix for software lists See appendix for Internet sites	Webquests Student projects Teacher-made tests Written and Oral Quizzes Class Participation

Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Identify the physical components of a computer system													
Turn computer on/off	I	I	R	M	M	M	M	M	M	M	M	M	M
Identify the monitor	I	I	R	M	M	M	M	M	M	M	M	M	M
Identify a floppy disk	I	I	R	M	M	M	M	M	M	M	M	M	M
Identify a CD Rom and CD drive	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify the printer	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify the mouse	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify Headphone	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify Speakers	I	R	M	M	M	M	M	M	M	M	M	M	M
Use and understand basic computer related terms:													
Computer	I	I	R	M	M	M	M	M	M	M	M	M	M
Monitor	I	I	R	M	M	M	M	M	M	M	M	M	M
Word Processor			I	R	R	R	R	M	M	M	M	M	M
Key Board			I	I	R	R	M	M	M	M	M	M	M
Mouse	I	I	R	M	M	M	M	M	M	M	M	M	M
Floppy Disk		I	R	M	M	M	M	M	M	M	M	M	M
CD	I	I	R	M	M	M	M	M	M	M	M	M	M
Disk Drive		I	R	M	M	M	M	M	M	M	M	M	M
Printer	I	I	R	R	M	M	M	M	M	M	M	M	M
Internet	I	I	I	R	M	M	M	M	M	M	M	M	M
Copyright			I	R	M	M	M	M	M	M	M	M	M
Copyright Law			I	R	M	M	M	M	M	M	M	M	M
Acceptable Use Policy	I	I/R	R/M	M	M	M	M	M	M	M	M	M	M
Hardware		I	R	M	M	M	M	M	M	M	M	M	M
Software		I	R	M	M	M	M	M	M	M	M	M	M
License Agreement				I	R	R	R	R	M	M	M	M	M
Network			I	I	R	R	M	M	M	M	M	M	M
File		I	I	I	M	M	M	M	M	M	M	M	M

Irvington Pre- K-12 Technology Scope and Sequence

Text			I	R	M	M	M	M	M	M	M	M	M
Desktop		I	I	I	R	R	R	M	M	M	M	M	M
Icons			I	R	R	R	M	M	M	M	M	M	M
Menu			I	I	R	R	R	M	M	M	M	M	M
Edit		I	I	I	R	R	R	M	M	M	M	M	M
File Server						I	R	R	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master													
Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Social, Ethical and Human Issues													
Recognize ownership of work	I	I	R	R/M	M	M	M	M	M	M	M	M	M
Respect other's work	I	I/R	R	R/M	M	M	M	M	M	M	M	M	M
Identify the computer as a machine that helps people work and play	I	I/R	R	M	M	M	M	M	M	M	M	M	M
Knowledge of current information technologies and the effect those changes have on the workplace and society		I	R	R	R	R	R	R/M	M	M	M	M	M
Discuss uses of technology in community and how it has changed people's lives			I	R	R	R	R	R/M	M	M	M	M	M
Discuss uses of technology in New Jersey and the United States and how it has changed people's lives			I	R	R	R	R	R/M	M	M	M	M	M
Recognize and follow Copyright Laws				I	I/R	R	R	R/M	M	M	M	M	M
Identify and describe the need for Acceptable Use Policies		I	I	R	M	M	M	M	M	M	M	M	M
Recognize electronic databases					I	R	R	R	M	M	M	M	M
Recognize the benefits of word processing		I	R	R	M	M	M	M	M	M	M	M	M
Identify and understand the differences between non-networked and networked computers			I	I	R	R	M	M	M	M	M	M	M
Identify and recognize the Acceptable Use Policy		I	I	R	M	M	M	M	M	M	M	M	M
Identify and recognize the need for protection of software and hardware from computer viruses and vandalism		I	R	R	M	R	M	M	M	M	M	M	M

Irvington Pre- K-12 Technology Scope and Sequence

Recognize video conferencing as a method of interactive communication.			I	I	R	R	M	M	M	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master														

Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Technology Productivity Tools													
Use software to support in class learning, remedial deficiencies and facilitate learning	I	I	I/R	R	R	R	R	R	R	R	R	R	M
Use technology tools both software and hardware, for individual and collaborative writing, publishing, and presentation	I	I	R	R	M	M	M	M	M	M	M	M	M
Use a variety of media technology resources for directed and independent learning activities	I	I	I/R	R	M	M	M	M	M	M	M	M	M
Appropriate technology tools when useful to address tasks and problems				I	R	R	R	R	M	M	M	M	M
Identify the technology tools used to collect, analyze and display data.				I	R	R	R	R	M	M	M	M	M
Apply the technology tools used to collect, analyze and display data.				I	R	R	R	R	M	M	M	M	M
Editing Tools in Word Processing			I	I	R	R	R	R/M	M	M	M	M	M
Document layout			I	I	R	R	R	R/M	M	M	M	M	M
Use of electronic thesaurus				I	R	R	M	M	M	M	M	M	M
Create classroom projects using information from the Internet		I	I	R	R	R	R	R/M	M	M	M	M	M
Group collaboration in order to produce a project		I	I	R	M	M	M	M	M	M	M	M	M
Evaluate accuracy, credibility and validity of data					I	R	R	R	M	M	M	M	M
Evaluate usefulness and appropriateness of information obtained from the Internet					I	R	R	R	M	M	M	M	M
Create multimedia projects		I	R	R	M	M	M	M	M	M	M	M	M
Use of graphs		I	I	R	M	M	M	M	M	M	M	M	M

Irvington Pre- K-12 Technology Scope and Sequence

Use of search strategies to obtain information			I	R	M	M	M	M	M	M	M	M	M
Use of Power Point/Hyperstudio		I	I/R	R	M	M	M	M	M	M	M	M	M
Editing Tools in Power Point/Hyperstudio		I	I	R	M	M	M	M	M	M	M	M	M
Demonstrate how to research and evaluate accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems			I	I	R	R	R	R	M	M	M	M	M
Use desk-top publishing		I	R	R	M	M	M	M	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master													

Grade Level		1	2	3	4	5	6	7	8	9	10	11	12
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Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Technology Communications Tools													
Identify the Internet as a source of Information	I	I/R	R	R/M	M	M	M	M	M	M	M	M	M
Navigate the WWW with a browser including use of go, back, forward, home, save and print commands	I	I/R	R	R/M	M	M	M	M	M	M	M	M	M
Use of vertical and horizontal scroll bars	I	I	I	R	M	M	M	M	M	M	M	M	M
Access teacher selected bookmark sites		I	R	R	M	M	M	M	M	M	M	M	M
Enter a URL into Web browser		I	I	R/M	M	M	M	M	M	M	M	M	M
Using search engines		I	R	R/M	M	M	M	M	M	M	M	M	M
Participate in Internet Activities	I	I	R	R	R	R	R	R	R	R	R	R	M
Discuss reliability of information of Internet sites			I	I	R	R	M	M	M	M	M	M	M
Demonstrate the role of URL in selecting reliable sites				I	R	R	M	M	M	M	M	M	M
Evaluate sites based on author's organization's credentials and revision dates				I	I/R	R	R	R	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master													

Irvington Pre- K-12 Technology Scope and Sequence

Irvington Public Schools



Course
Grades
Adopted

Technology Curriculum
6 - 8
August 2005

Intent

The intent of the Grades 6 - 8 Technology Curriculum is to foster a learning environment that promotes the following characteristics:

- Students will use common features of multiple operating systems and appropriate technology vocabulary.
- Students will be able to demonstrate input device usage using the proper techniques.
- Students will create documents, files and simple spreadsheets.
- Students will be able to create a simple database.
- Students will be able to store and retrieve data from various network resources.
- Students will be able to manipulate the desktop.
- Students will be able to choose appropriate tools and search engines to support research and solve problems.
- Students will be able to troubleshoot hardware problems.
- Students will be able to explain the consequences for inappropriate use of the Internet and electronic mail.

ACADEMIC OBJECTIVES

Our academic objectives are:

1. To enable students to utilize the computer and computer applications as tools to increase lifelong individual productivity. As part of the technology curriculum we have developed grade appropriate competencies for all students.

- Students will be able to demonstrate basic understanding of the parts and operation of a computer.
- Students will be able to demonstrate effective use of various peripheral devices.
- Students will be able to perform basic tasks using computer operating systems.
- Students will develop keyboarding, data input and retrieval skills.
- Students will demonstrate skills in using computer software applications for a variety of purposes, including word processing, database, presentation software and spreadsheet.
- Students will exhibit the skills necessary to load, run and use the many instructional software packages available for student use.

3. To utilize computer applications in the course of the general learning process in all grade levels, across the curriculum, as appropriate.

- Students will identify and use a variety of software programs to stimulate critical thinking and higher level processes.
- Students will identify and utilize appropriate, varied programs to meet and complete cross-curricular objectives and assignments.
- Based on assignments received from teachers students will have developed research, writing and higher order thinking skills by using WebQuests as a learning tool.

3. To use computer-based technology, both local and distant, for research and reference.

- Students will demonstrate the ability to locate and retrieve information from computer devices (hard drive, CD-ROM, DVD-drives, databases).
- Students will demonstrate skills in the use of electronic communications.
- Students, who have received the permission of a parent, will demonstrate the ability to access information from the Internet.
- Students will demonstrate competency in various methods for evaluating information from the Internet.

4. To exhibit positive attitudes about computer use.

- Students will perceive the computer as a useful tool in their lives.
- Students will choose to use the computer rather than other methods in situations that warrant their use.
- Students will be able to present research and conclusions using word processing software and presentation software.
- Students will enhance research with graphs and presentations from application software. Students will enhance research with pictures, sound and video available from the Internet

Student Performance Assessments

Listed below are a variety of methods, which can be utilized to assess student performance. However, teachers are not limited to the assessment suggestions below.

MULTIDIMENSIONAL ASSESSMENT:

- Multiple Choice Questions – one correct response and three distracters. These items appear on the NJ Ask tests.
- Performance Based – involves activities that allow students’ to exhibit the use of strategies of problem solving, cooperative learning to integrate learning across the curriculum.
- Portfolio Assessment – involves a collection of examples of a student’s work.
- Project Based – select by the students to allow for diversity, cooperative learning, and for students’ individual strengths in learning.
- Demonstrations – performance-based and give the students the opportunity to show their abilities consistently through a variety of formats.
- Teacher-made tests
- Written and oral quizzes
- Homework
- Class Participation

Statement of Purpose

This Technology Curriculum for Grades 6 - 8 is aligned to the New Jersey Core Curriculum Content Standards for Technology 8.1, 8.2. The technology education standard was developed to ensure the literacy needed by all students to succeed in a highly technological world. Business and Industry has clearly stated the need for technological skills in the workplace of the 21st Century. This standard is based on the *Standards for Technological Literacy (STL): Content for the Study of Technology (ITEA, 2000)*, developed as part of the National Science Foundation (NSF)/National Aeronautics and Space Administration (NASA) funded by the *Technology for All Americans (TfAA)* project.

By the conclusion of grade 8 students will be able to navigate multiple operating systems, keyboard, create documents, files, spreadsheets and simple databases. The student will also be able to manage data, create shortcuts, work-out hardware problems, master search engines and master navigating the WWW with a browser.

STANDARD 8.1

8.1 Computers and Information Literacy

- A. Basic Computer Tools and Skills
 - Keyboarding
 - Word Processing
 - Internet Usage
 - Spreadsheets
 - Database concepts and usage
 - Publications and presentations
- B. Application of Productivity Tools
 - Social Aspects
 - Information Access and Research
 - Problem Solving

STANDARD 8.2

8.2 Technology Education

- A. Nature and Impact of Technology
- B. Design Process and Impact Assessment
- C. Systems in the Designed World

STANDARDS:

STANDARD 8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.

STANDARD 8.2 (TECHNOLOGY EDUCATION) ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF THE NATURE AND IMPACT OF TECHNOLOGY, ENGINEERING, TECHNOLOGICAL DESIGN, AND THE DESIGNED WORLD AS THEY RELATE TO THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT.

STANDARD 3.1 (READING) ALL STUDENTS WILL UNDERSTAND AND APPLY THE KNOWLEDGE OF SOUNDS, LETTERS, AND WORDS IN WRITTEN ENGLISH TO BECOME INDEPENDENT AND FLUENT READERS, AND WILL READ A VARIETY OF MATERIALS AND TEXTS WITH FLUENCY AND COMPREHENSION.

STANDARD 3.2 (WRITING) ALL STUDENTS WILL WRITE IN CLEAR, CONCISE, ORGANIZED LANGUAGE THAT VARIES IN CONTENT AND FORM FOR DIFFERENT AUDIENCES AND PURPOSES.

STANDARD 3.3 (SPEAKING) ALL STUDENTS WILL SPEAK IN CLEAR CONCISE, ORGANIZED LANGUAGE THAT VARIES IN CONTENT AND FORM FOR DIFFERENT AUDIENCES AND PURPOSES.

STANDARD 3.4 (LISTENING) ALL STUDENTS WILL LISTEN ACTIVELY TO INFORMATION FROM A VARIETY OF SOURCES IN A VARIETY OF SITUATIONS.

STANDARD 3.5 (VIEWING AND MEDIA LITERACY) ALL STUDENTS WILL ACCESS, VIEW, EVALUATE, AND RESPOND TO PRINT, NONPRINT, AND ELECTRONIC TEXTS AND RESOURCES.

STANDARD 4.1 (NUMBER AND NUMERICAL OPERATIONS) ALL STUDENTS WILL DEVELOP NUMBER SENSE AND WILL PERFORM STANDARD NUMERICAL OPERATIONS AND ESTIMATIONS ON ALL TYPES OF NUMBERS IN A V VARIETY OF WAYS.

STANDARDS:

STANDARD 5.1 (SCIENTIFIC PROCESSES) ALL STUDENTS WILL DEVELOP PROBLEM-SOLVING, DECISION-MAKING AND INQUIRY SKILLS, REFLECTED BY FORMULATING USABLE QUESTIONS AND HYPOTHESES, PLANNING EXPERIMENTS, CONDUCTING SYSTEMATIC OBSERVATIONS, INTERPRETING AND ANALYZING DATA, DRAWING CONCLUSIONS, AND COMMUNICATING RESULTS.

STANDARD 5.3 (MATHEMATICAL APPLICATIONS) ALL STUDENTS WILL INTEGRATE MATHEMATICS AS A TOOL FOR PROBLEM SOLVING IN SCIENCE, AND AS MEANS OF EXPRESSING AND/OR MODELING SCIENTIFIC THEORIES.

STANDARD 5.4 (NATURE AND PROCESS TECHNOLOGY) ALL STUDENTS WILL UNDERSTAND THE INTERRELATIONSHIPS BETWEEN SCIENCE AND TECHNOLOGY AND DEVELOP A CONCEPTUAL UNDERSTANDING OF THE NATURE AND PROCESS OF TECHNOLOGY.

STANDARD 6.1 (CIVICS) ALL STUDENTS WILL KNOW, UNDERSTAND AND APPRECIATE THE VALUES AND PRICIPLES OF AMERICAN DEMOCRACY AND THE RIGHTS, RESPONSIBILITIES, AND ROLES OF A CITIZEN IN OUR DEMOCRATIC SOCIETY.

STANDARD 6.2 (CIVICS) ALL STUDENTS WILL KNOW, UNDERSTAND AND APPRECIATE THE VALUES AND PRINCIPLES OF AMERICAN DEMOCRACY AND THE RIGHTS, RESPONSIBILITIES, AND ROLES OF A CITIZEN IN THE NATION AND WORLD.

STANDARD 6.4 (ECONOMICS) ALL STUDENTS WILL ACQUIRE AN UNDERSTANDING OF KEY ECONOMIC PRINCIPLES IN RELATION TO INDIVIDUALS, INSTITUTIONS, AND GOVERNMENTS

STANDARD 6.5 (GEOGRAPHY) ALL STUDENTS WILL APPLY KNOWLEDGE OF SPATIAL RELATIONSHIPS AND OTHER GEOGRAPHIC SKILLS TO UNDERSTAND HUMAN BEHAVIOR IN RELATIONSHIP TO THE PHYSICAL AND CULTURAL ENVIRONMENT.

Strands and Cumulative Progress Indicators

Building upon knowledge and skills gained in preceding grades, by the end of Grade 8, students will:

A. Basic Computer Skills and Tools

1. Use appropriate technology vocabulary.
2. Use basic features of an operating system (e.g., accessing programs, identifying and selecting a printer, finding help).
3. Input and access text and data, using appropriate keyboarding techniques or other input devices.
4. Demonstrate effective input of text and data, using touch keyboarding with proper technique.
5. Create documents with advanced text-formatting and graphics using word processing.
6. Create a file containing customized information by merging document.
7. Construct a simple spreadsheet, enter data, and interpret the information.
8. Design and produce a basic multimedia project.
9. Plan and create a simple database, define fields, input data, and produce a report using sort and query.
10. Use network resources for storing and retrieving data.
11. Choose appropriate electronic graphic organizers to create, construct, or design a document.
12. Create, organize and manipulate shortcuts.

B. Application of Productivity Tools

Social Aspects

1. Demonstrate an understanding of how changes in technology impact the workplace and society.
2. Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse.
3. Explain the purpose of an Acceptable Use Policy and the consequences of inappropriate use of technology.
4. Describe and practice safe Internet usage.
5. Describe and practice “etiquette” when using the Internet and electronic mail.

Information Access and Research

6. Choose appropriate tools and information resources to support research and solve real world problems, including but not limited to:
 - On-Line resources and databases
 - Search engines and subject directories
7. Evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information sources.

Problem Solving and Decision Making

8. Use computer applications to modify information independently and/or collaboratively to solve problems.
9. Identify basic hardware problems and demonstrate the ability to solve common problems.
10. Determine when technology tools are appropriate to solve a problem and make a decision.

<u>CCCS # - Indicator</u>	<u>Skill/Student will be able</u>	<u>Instructional Practices for the Teacher</u>	<u>Timeline</u>	<u>Resources</u>	<u>Assessment</u>
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b 5.1a, 5.1b, 5.1c 6.1, 6.2b	Students will use common features of multiple operating systems and appropriate technology vocabulary.	“Hands on” training with each student being able to log on to a different PC and Mac computers using software to supplement their comprehension of Language Arts, Math, Science and Social Studies.	Grade 6 Marking Periods 1 and 2 On-going (once a week – all year)	Software utilized in the computer lab and classroom computers by the classroom teachers. Mac OS Microsoft Windows	Project based Teacher-made tests Written and Oral Tests Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b 5.1a, 5.1b, 5.1c 5.1a, 5.1b, 5.1c 6.1, 6.2b	Students will be able to demonstrate input device usage using the proper techniques.	“Hands on” training with each student being able to: Identify the physical components of a computer, Communicate about technology using appropriate and accurate terminology.	Grade 6 Marking Period 3 On-going (once a week – all year)	Classroom computers Lab computers Mac OS Microsoft Windows	Project based Teacher-made tests Written and Oral Quizzes Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b 5.1a, 5.1b, 5.1c 5.1a, 5.1b, 5.1c 6.1, 6.2b 6.4a, 6.4b, 6.4d	Students will create documents, files and simple spreadsheets.	“Hands on” training with each student using keyboarding software, document software and spreadsheet software and using the software to supplement their comprehension of Language Arts, Math, Science and Social Studies.	Grade 6 Marking Period 4	Classroom computers Lab computers Microsoft Office/ Appleworks	Project based Teacher-made tests Written and Oral Quizzes Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b 5.3b, 5.3c, 5.4a 6.1, 6.2b	Students will be able to create a simple database.	“Hands on” training with each student using database software and using the software to supplement their comprehension of Language Arts, Math, Science and Social Studies.	Grades 7 Marking Periods 1 and 2 On-going (once a week – all year)	Classroom computers Lab computers Microsoft Office/ Appleworks	Project based Teacher-made tests Written and Oral Quizzes Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a	Students will be able to store and retrieve data from various network resources.	“Hands on” training with each student being able to access and store data from the	Grade 7 Marking Period 3	Classroom computers Lab computers	Project based Teacher-made tests

3.3b, 3.3c, 3.4a, 3.4b, 3.5 4.1a, 4.1b 5.3b, 5.3c, 5.4a 6.1, 6.2b, 6.4a 6.4b, 6.4d		network and websites. Use browser software to supplement their comprehension of Language Arts, Math, Science and Social Studies	On-going (once a week – all year)	Mac OS Microsoft Windows Microsoft Office/ Appleworks See appendix for website lists	Written and Oral Quizzes Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b 5.3b, 5.3c, 5.4a 6.1, 6.2b, 6.4a 6.4b, 6.4d	Students will be able to manipulate the desktop.	“Hands on” training with each student being able to demonstrate proper care and use of equipment. Including wallpaper, background and short-cut setup.	Grade 7 Marking Period 4 On-going (once a week – all year)	Classroom computers Lab computers Mac OS Microsoft Windows See appendix for website lists	Project based Teacher-made tests Written and Oral Quizzes Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b 5.5a, 5.5b, 5.5c 6.5a, 6.6a, 6.6b	Students will be able to choose appropriate tools and search engines to support research and solve problems.	“Hands on” training with each student being able to access and store data from the network and websites. Use browser software to supplement their comprehension of Language Arts, Math, Science and Social Studies	Grade 8 Marking Periods 1 and 2 On-going (once a week – all year)	Classroom computers Lab computers See appendix for website lists	Project based Teacher-made tests Written and Oral Quizzes Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b 4.1a, 4.1b	Students will be able to troubleshoot hardware problems.	“Hands on” training with each student being able to demonstrate proper troubleshooting procedures using proper software and accessing help menus.	Grade 8 Marking Period 3 On-going (once a week – all year)	Classroom computers Lab computers Mac OS Microsoft Windows	Project based Teacher-made tests Written and Oral Quizzes Class Participation
8.1a, 8.1b 8.2a, 8.2b, 8.2c 3.1f, 3.1g, 3.3a 3.3b, 3.3c, 3.4a, 3.4b, 3.5 4.1a, 4.1b 5.5, 5.6, 5.7 6.1, 6.4, 6.6	Students will be able to explain the consequences for inappropriate use of the Internet and electronic mail.	“Hands on” training with each student being able to access websites. Use browser software to supplement their comprehension of Language Arts, Math, Science and Social Studies	Grade 8 Marking Period 4 On-going (once a week – all year)	Classroom computers Lab computers See appendix for website lists	Project based Teacher-made tests Written and Oral Quizzes Class Participation

Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Identify the physical components of a computer system													
Turn computer on/off	I	I	R	M	M	M	M	M	M	M	M	M	M
Identify the monitor	I	I	R	M	M	M	M	M	M	M	M	M	M
Identify a floppy disk	I	I	R	M	M	M	M	M	M	M	M	M	M
Identify a CD Rom and CD drive	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify the printer	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify the mouse	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify Headphone	I	R	M	M	M	M	M	M	M	M	M	M	M
Identify Speakers	I	R	M	M	M	M	M	M	M	M	M	M	M
Use and understand basic computer related terms:													
Computer	I	I	R	M	M	M	M	M	M	M	M	M	M
Monitor	I	I	R	M	M	M	M	M	M	M	M	M	M
Word Processor			I	R	R	R	R	M	M	M	M	M	M
Key Board			I	I	R	R	M	M	M	M	M	M	M
Mouse	I	I	R	M	M	M	M	M	M	M	M	M	M
Floppy Disk		I	R	M	M	M	M	M	M	M	M	M	M
CD	I	I	R	M	M	M	M	M	M	M	M	M	M
Disk Drive		I	R	M	M	M	M	M	M	M	M	M	M
Printer	I	I	R	R	M	M	M	M	M	M	M	M	M
Internet	I	I	I	R	M	M	M	M	M	M	M	M	M
Copyright			I	R	M	M	M	M	M	M	M	M	M
Copyright Law			I	R	M	M	M	M	M	M	M	M	M
Acceptable Use Policy	I	I/R	R/M	M	M	M	M	M	M	M	M	M	M
Hardware		I	R	M	M	M	M	M	M	M	M	M	M
Software		I	R	M	M	M	M	M	M	M	M	M	M
License Agreement				I	R	R	R	R	M	M	M	M	M
Network			I	I	R	R	M	M	M	M	M	M	M
File		I	I	I	M	M	M	M	M	M	M	M	M

Irvington Pre- K-12 Technology
Scope and Sequence

Irvington Pre- K-12 Technology Scope and Sequence

Text			I	R	M	M	M	M	M	M	M	M	M
Desktop		I	I	I	R	R	R	M	M	M	M	M	M
Icons			I	R	R	R	M	M	M	M	M	M	M
Menu			I	I	R	R	R	M	M	M	M	M	M
Edit		I	I	I	R	R	R	M	M	M	M	M	M
File Server						I	R	R	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master													
Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Social, Ethical and Human Issues													
Recognize ownership of work	I	I	R	R/M	M	M	M	M	M	M	M	M	M
Respect other's work	I	I/R	R	R/M	M	M	M	M	M	M	M	M	M
Identify the computer as a machine that helps people work and play	I	I/R	R	M	M	M	M	M	M	M	M	M	M
Knowledge of current information technologies and the effect those changes have on the workplace and society		I	R	R	R	R	R	R/M	M	M	M	M	M
Discuss uses of technology in community and how it has changed people's lives			I	R	R	R	R	R/M	M	M	M	M	M
Discuss uses of technology in New Jersey and the United States and how it has changed people's lives			I	R	R	R	R	R/M	M	M	M	M	M
Recognize and follow Copyright Laws				I	I/R	R	R	R/M	M	M	M	M	M
Identify and describe the need for Acceptable Use Policies		I	I	R	M	M	M	M	M	M	M	M	M
Recognize electronic databases					I	R	R	R	M	M	M	M	M
Recognize the benefits of word processing		I	R	R	M	M	M	M	M	M	M	M	M
Identify and understand the differences between non-networked and networked computers			I	I	R	R	M	M	M	M	M	M	M
Identify and recognize the Acceptable Use Policy		I	I	R	M	M	M	M	M	M	M	M	M
Identify and recognize the need for protection of software and hardware from computer viruses and vandalism		I	R	R	M	R	M	M	M	M	M	M	M

Recognize video conferencing as a method of interactive communication.			I	I	R	R	M	M	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master													

Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Technology Productivity Tools													
Use software to support in class learning, remedial deficiencies and facilitate learning	I	I	I/R	R	R	R	R	R	R	R	R	R	M
Use technology tools both software and hardware, for individual and collaborative writing, publishing, and presentation	I	I	R	R	M	M	M	M	M	M	M	M	M
Use a variety of media technology resources for directed and independent learning activities	I	I	I/R	R	M	M	M	M	M	M	M	M	M
Appropriate technology tools when useful to address tasks and problems				I	R	R	R	R	M	M	M	M	M
Identify the technology tools used to collect, analyze and display data.				I	R	R	R	R	M	M	M	M	M
Apply the technology tools used to collect, analyze and display data.				I	R	R	R	R	M	M	M	M	M
Editing Tools in Word Processing			I	I	R	R	R	R/M	M	M	M	M	M
Document layout			I	I	R	R	R	R/M	M	M	M	M	M
Use of electronic thesaurus				I	R	R	M	M	M	M	M	M	M
Create classroom projects using information from the Internet		I	I	R	R	R	R	R/M	M	M	M	M	M
Group collaboration in order to produce a project		I	I	R	M	M	M	M	M	M	M	M	M
Evaluate accuracy, credibility and validity of data					I	R	R	R	M	M	M	M	M
Evaluate usefulness and appropriateness of information obtained from the Internet					I	R	R	R	M	M	M	M	M
Create multimedia projects		I	R	R	M	M	M	M	M	M	M	M	M
Use of graphs		I	I	R	M	M	M	M	M	M	M	M	M

Irvington Pre- K-12 Technology Scope and Sequence

Irvington Pre- K-12 Technology Scope and Sequence

Use of search strategies to obtain information			I	R	M	M	M	M	M	M	M	M	M
Use of Power Point/Hyperstudio		I	I/R	R	M	M	M	M	M	M	M	M	M
Editing Tools in Power Point/Hyperstudio		I	I	R	M	M	M	M	M	M	M	M	M
Demonstrate how to research and evaluate accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems			I	I	R	R	R	R	M	M	M	M	M
Use desk-top publishing		I	R	R	M	M	M	M	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master													

Grade Level		1	2	3	4	5	6	7	8	9	10	11	12
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Grade Level	PK/K	1	2	3	4	5	6	7	8	9	10	11	12
Technology Communications Tools													
Identify the Internet as a source of Information	I	I/R	R	R/M	M	M	M	M	M	M	M	M	M
Navigate the WWW with a browser including use of go, back, forward, home, save and print commands	I	I/R	R	R/M	M	M	M	M	M	M	M	M	M
Use of vertical and horizontal scroll bars	I	I	I	R	M	M	M	M	M	M	M	M	M
Access teacher selected bookmark sites		I	R	R	M	M	M	M	M	M	M	M	M
Enter a URL into Web browser		I	I	R/M	M	M	M	M	M	M	M	M	M
Using search engines		I	R	R/M	M	M	M	M	M	M	M	M	M
Participate in Internet Activities	I	I	R	R	R	R	R	R	R	R	R	R	M
Discuss reliability of information of Internet sites			I	I	R	R	M	M	M	M	M	M	M
Demonstrate the role of URL in selecting reliable sites				I	R	R	M	M	M	M	M	M	M
Evaluate sites based on author's organization's credentials and revision dates				I	I/R	R	R	R	M	M	M	M	M
I = Introduce, R = Reinforce, M = Master													