GREENWICH-STOW CREEK PARTNERSHIP SCHOOLS
TECHNOLOGY CURRICULUM
K-8

Approved:

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GREENWICH-STOW CREEK PARTNERSHIP SCHOOLS
TECHNOLOGY CURRICULUM

TABLE OF CONTENTS

THE BIG IDEA

The Greenwich-Stow Creek Partnership Schools Technology Curriculum is designed to promote
technological and information literacy as well as critical thinking, problem-solving, and decision-making skills necessary for all individuals to compete in our ever-changing global economy. The curriculum will enhance students' conceptual understanding, procedural knowledge, and problem solving skills in technology including its nature, impact, and social, ethical, and human aspects.

Recognizing that technology is multi-disciplinary by nature and has applications in any environment, our curriculum seeks to promote academic success by embedding technology tools and applications into the teaching and learning process rather than attempting to teach skills in isolation. This will enable all students including those who are English Language Learners and those who have special needs to develop technology skills in a wide-range of contexts while simultaneously strengthening understanding of essential academic knowledge and skills. This real-world approach allows classroom teachers to enhance the learning process, enrich the academic experience, and bestow students with the skills necessary to succeed throughout life. Students become active participants in the learning process and learn to efficiently access, explore, apply, and synthesize information in our digital world.

TECHNOLOGY CURRICULUM
GOAL AND OBJECTIVES

Goal: Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

Objectives (by Grade Level)
Students will…

Kindergarten:
K.1 …have an awareness of computer components and basic computer operations:
K.2 …be aware of the Internet as a source for information and communication

Grade 1:
1.1 …name computer components and execute basic computer operations:
1.2 …be exposed to the Internet as a source for information and communication through teacher modeling

Grade 2:
2.1 … begin to use the computer as a word processor and be exposed to proper keyboarding techniques
2.2 …use the Internet as a resource for information under teacher direction. 2.3
…contribute to curriculum-based technology projects.

Grade 3:
3.1 …type edit and alter a word processing document
3.2 …use the Internet as a resource for information
3.3 …use technology for solving problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives
3.4 … be introduced to the term copyright and issues surrounding it, as well as acceptable uses of technology.
3.5 … be introduced to the spreadsheet environment

Grade 4:
4.1 …use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully-edited, spell checked, finished piece 4.2
…use the Internet as a resource for information
4.3 …will use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives 4.4
…follow copyright laws and policies concerning acceptable use.
4.5 …be introduced to the concept and use of a database
4.6 … be introduced to the spreadsheet environment
4.7 …choose the technology most appropriate to solve problems and tasks

Students will…

Grade 5:
5.1 …use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully-edited, spell checked, finished piece 5.2
…use the Internet as a resource for information
5.3 …use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives. 5.4 …follow copyright laws and policies concerning acceptable use.
5.5 …use databases to aid in completing specific tasks
5.6 …use spreadsheets to aid in completing specific tasks
5.7 …choose the technology most appropriate to solve problems and tasks
* Timeline for integration is addressed in Goal III b. Indicators will be newly adopted NJTAP Grade 8 Rubric and NJTAP Grade 4 Checklist.

Grade 6:
6.1 …use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully edited, spell-checked, grammar-checked finished piece.
6.2 …use the Internet as a resource for information
6.3 …use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives. 6.4 …follow copyright laws and policies concerning acceptable use
6.5 …use databases to complete specific tasks
6.6 …use spreadsheets to aid in completing specific tasks and analyze data.
6.7 …choose the technology most appropriate to solve complex problems and multilevel tasks

Grade 7:
7.1 …use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully-edited, spell checked, grammar checked finished piece.
7.2 …use the Internet as a resource for information
7.3 …use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives. 7.4 …follow copyright laws and policies concerning acceptable use. 7.5 …use databases to complete specific tasks.
7.6 …use spreadsheets to aid in completing specific tasks and analyze data.
7.7 …choose the technology most appropriate to solve complex problems and multilevel tasks

Grade 8:
8.1 …use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully-edited, spell checked, grammar checked finished piece.
8.2 …use the Internet as a resource for information
8.3 …use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives. 8.4 …follow copyright laws and policies concerning acceptable use. 8.5 …use databases to complete specific tasks.
8.6 …use spreadsheets to aid in completing specific tasks and analyze data.
8.7 …choose the technology most appropriate to solve complex problems and multilevel tasks
8.8 …investigate the history of various technologies; research and assess the impacts of technology on individuals, society, and the environment; investigate the interactive and dynamic

relationship between people and technology; and to apply technological knowledge and use systems and tools to solve practical problems

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TECHNOLOGY CURRICULUM
IMPLEMENTATION ACTIVITY TABLES

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

K.1 Students will have an awareness of computer components and basic computer operations:
- parts of the computer
- keyboard and mouse
- turn on and shut down
- open a program
- names and uses of the following keys: letters, numbers, return, shift, space, command, and arrows
- exposure to word processing

K.2 Students will be aware of the Internet as a source for information and communication
- e-mail as a source of communication
- information obtained online

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - K1	Students use age appropriate software for exploration of computer components. Word Processing: Students type first and last name. Students label pictures with print.	By end of Kinder.	Classroom Teacher, Tech Coordinator	Teacher observes the following: identifying computer components, turning on/off a computer, running a program, and using appropriate keys
I - K1	Students communicate with electronic pen pals using district's internal student e-mail service.	By end of Kinder.	Classroom Teacher, Tech Coordinator	Print out of e-mail messages and responses
I - K.2	Students take a virtual field trip like the National Geographic Xpeditions Express[1] tour through Europe, Africa, South America, etc.	By end of Kinder.	Classroom Teacher, Tech Coordinator, Librarian	Completion of tour. Students answer questions based on knowledge from tour.

* Strategies and activities are samples. See goal III.B.1 for plan to align NJCCC technology standards with other NJCCCS.
1 http://www.nationalgeographic.com/xpeditions/hall/index.html?node=37

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

1.1 Students will name computer components and execute basic computer operations:
- parts of the computer
- keyboard and mouse
- turn on and shut down
- open a program
- names and uses of the following keys: letters, numbers, return, shift, space, command, and arrows
- insert CD's and disks appropriately
- begin to use Word Processing and other programs.

1.2 Students will be exposed to the Internet as a source for information and communication through teacher modeling.
- e-mail as a source of communication
- how information can be obtained online.

<table>
<tr><th colspan="5">Three-Year Technology Implementation Activity Table</th></tr>
<tr><th>District Goal and Objective</th><th>Strategy/Activity</th><th>Timeline</th><th>Person Responsible</th><th>Documentation</th></tr>
<tr><td>I - 1.1</td><td>Students practice saving work to folders with teacher guidance.</td><td>By end of Grade 1</td><td>Classroom Teacher, Tech Coordinator</td><td>Successful creation and labeling of folders and files</td></tr>
<tr><td>I - 1.1</td><td>Word Processing: Students type a complete sentence or thought. They then experiment with changing font size and appearance</td><td>By end of Grade 1</td><td>Classroom Teacher, Tech Coordinator,</td><td>Successful completion of word processing activities</td></tr>
<tr><td>I - 1.1</td><td>Students are guided in the use of a multimedia program like Hyperstudio or Powerpoint. They are assigned a topic and
 a) draw a picture depicting the topic
 b) write a sentence about the topic.
Students, with teacher assistance, digitize the drawings and the words and make a slide show.</td><td>By end of Grade 1</td><td>Classroom Teacher, Tech Coordinator,</td><td>Completed slide show</td></tr>
<tr><td>I - 1.2</td><td>Continue Pen Pal Activities begun in Kindergarten</td><td>By end of Grade 1</td><td>Classroom Teacher, Tech Coordinator, Librarian</td><td>Print out of e-mail messages and responses</td></tr>
<tr><td>I - 1.2</td><td>Extend Internet activities and begin teacher modeled search strategies.</td><td>By end of Grade 1</td><td>Classroom Teacher, Tech Coordinator, Librarian</td><td>Successful information gathering</td></tr>
</table>

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2.1 Students will begin to use the computer as a word processor and be exposed to proper keyboarding techniques

- home row keys
- left and right hand placement
- be able to type and edit a sentence with a capital and punctuation
- change Font and size
- insert a picture

2.2 Students will use the Internet as a resource for information under teacher direction

- use teacher created bookmarks or Word document with hyper links and direct students to specific topic related Web sites to gather information
- use district INTRANET as a resource for students.
- use district e-mail

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I- 2.1	Continue Pen Pal Activities and check for punctuation and capitalization.	By end of Grade 2	Classroom Teacher, Tech Coordinator	Printed e-mail messages and responses
I- 2.1	Students use a teacher created template to publish a picture book or similar project on different topics from across the curriculum.	By end of Grade 2	Classroom Teacher, Tech Coordinator	Completed picture books.
I- 2.2	Students do a series of projects on different topics. Example: Work in groups and gather information about ancient Egypt. Find pictures to tie in with writing.[1]	By end of Grade 2	Classroom Teacher, Tech Coordinator, Librarian	Worksheet with information, saved pictures
I- 2.2	Use teacher created bookmarks or Word document with hyper links and direct students to specific topic related Web sites to gather information. Example: Send students to an astronomy site to find the distance each planet is from the sun using Astronomy Web Guide for K-6 students[2]	By end of Grade 2	Classroom Teacher, Tech Coordinator Librarian, Librarian	Science worksheet

1 http://www.go.groliers.com
2 http://astronomywebguide.com/links_kids.html

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2.3:   Students will contribute to curriculum based technology projects

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 2.3	Students take information gathered from the Internet (2.2) and use it to create a multimedia presentation. Example: Use information gathered on Ancient Egypt and prepare slides to be combined into a larger slide show. Use any graphics saved from previous lessons. Play Egyptian music, found on the Web, while the slides are presented and the students read their information.	By end of Grade 2	Classroom Teacher, Tech Coordinator, Librarian	Completed slide show
I - 2.3	Students use Google Earth to produce a map of their neighborhood in relationship to New Jersey, the United States and the world.	By end of Grade 2	Classroom Teacher, Librarian, Tech Coordinator	Completed project with rubric[1]

1 http://www.rubrician.com/technology.htm

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3.1 Students will type edit and alter a word processing document
- size & font spell
- check
- copy, paste, move
- save and retrieve a document
- insert images

3.2: Students will use the Internet as a resource for information
- be aware of key word searches
- use and adding of bookmarks
- use district curriculum links

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 3.1	Students go through the writing process but substitute paper and pencil with the computer to create a story. Example prompt: "The Time I Got Lost", tied in to "Pedro's Journal" or another grade level appropriate book about getting lost.	By end of Grade 3	Classroom Teacher, Tech Coordinator	Completed story saved and printed
I - 3.1	Students write an imaginative story. Example prompt: "The boy/girl who changed winter". Stories are written and edited before students word process them. Students learn to select their font and the size of their text. They review how to save and open a document. (Each child has an electronic portfolio that contains all of the stories that they have done on the keyboard all year). They also learn how to put a picture/clip art in the story, go to reference, check their spelling and grammar, and print the story.	By end of Grade 3	Classroom Teacher, Tech Coordinator, Librarian	Completed story saved and printed
I - 3.2	Use *Hunt the Fact Monster*[1] printable as a computer-learning-center activity.	By end of Grade 3	Classroom Teacher, Tech Coordinator, Librarian	Completed question sheet
I - 3.2	Students send an e-mail to teacher, parents, or friend. Tie in greeting card with seasonal holiday including a well-written, thoughtful message.	By end of Grade 3	Classroom Teacher, Tech Coordinator	Received greeting card

1 http://www.education-world.com/a_lesson/factmonster/ideas.shtml

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3.3: Students will use technology for solving problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives

3.4: Students will be introduced to the term copyright and issues surrounding it, as well as acceptable uses of technology

3.5: Students will be introduced to the spreadsheet environment
- record data
- create bar & pie graphs

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 3.3	Students use Grolier Online's *New Book of Knowledge*[1] to select a potential project to complete from Projects and Experiments. Consult with teacher regarding feasibility and possible revisions to project.	By end of Grade 3	Classroom Teacher, Tech Coordinator, Librarian	At least one completed project demonstrating PBL skills
I - 3.4	Students navigate to the Paterson Public Schools Web Site[1] and find the information about the AUP. They discuss the AUP and the proper use of the Internet in the classroom.	By end of Grade 3	Classroom Teacher, Tech Coordinator, Librarian	Discussion
I - 3.5	Teachers guide students to solve a math information problem by choosing most appropriate graph type[2] and interpreting data to complete graph.	By end of Grade 3	Classroom Teacher, Tech Coordinator	Completed spreadsheet and graph

1 http://www.go.groliers.com
2 http://nces.ed.gov/nceskids/createagraph/

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4.1: Students will use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully-edited, spell checked, finished piece
- writing compositions
- note taking
- Internet research collection

4.2: Students will use the Internet as a resource for information
- conduct and narrow key word searches
- explore online references
- use and adding of bookmarks
- use district curriculum links

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 4.1	Students se *Top 10 List* to pick a part of the world and working in teams do research and list the Top 10 reasons to visit that place.[1]	By end of Grade 4	Classroom Teacher, Tech Coordinator, Librarian	Print out list
I - 4.1	In *The Jolly Postman*, a postman rides his bicycle delivering letters to storybook and nursery rhyme characters. After reading *The Jolly Postman*, students learn the attributes of different types of mail. They then categorize the letters from the book, and finally produce their own mail.	By end of Grade 4	Classroom Teacher, Tech Coordinator, Librarian	Completed letters
I - 4.2	Students complete *Hunt the Fact Monster*[2] (printable as a computer-learning-center activity) Linked via district INTRANET	By end of Grade 4	Classroom Teacher, Tech Coordinator, Librarian	Completed question sheet
I - 4.2	Students engage the interactive feature in Xpedition Hall called Uplink Outpost to discover ways to interpret geography in their community. They create a plan for the future of their community based on geographic factors, and write a class e-mail to the next generation of students.[4] Linked via district INTRANET	By end of Grade 4	Classroom Teacher, Tech Coordinator, Librarian	Have each student draw a picture of the community in 20 years. Remind them to place themselves, as they would look in 20 years, in the picture. Then have them share their pictures with each other.

1 http://www.go.groliers.com
2 http://www.education-world.com/a_lesson/factmonster/ideas.shtml
3 http://www.readwritethink.org/lessons/lesson_view.asp?id=322
4 http://www.nationalgeographic.com/xpeditions/lessons/18/g35/uplink.html

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4.3: Students will use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives

4.4: Students will follow copyright laws and policies concerning acceptable use
- all activities should be checked for plagiarism, acceptable use, citing resources, etc.
- students will navigate to the Greenwich-Stow Creek Partnership Schools Web Site and find the information
about the AUP. Students will discuss the AUP and the proper use of the Internet in the classroom

	Three-Year Technology Implementation Activity Table			
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 4.3	Introductory Computer Programming Teacher models a sample program using HyperLogo computer language without telling students what design/geometric shape would be created. Once the design appeared on the screen, student and teacher look again at the commands and discuss how those commands created the design. Students predict what changes they would need to make in order to create a new design. They then create their own shapes and designs.	By end of Grade 4	Classroom Teacher, Tech Coordinator	Print outs of Logo scripts, Design print outs
I - 4.4	All activities should be checked for plagiarism, acceptable use, citing resources, etc.	By end of Grade 4	Classroom Teacher, Tech Coordinator, Librarian	Teacher inspection, Note taking rubric
I - 4.4	Students navigate to the Greenwich-Stow Creek Partnership Schools Web Site and find information about the AUP. Students discuss the AUP and the proper use of the Internet in the classroom.	By end of Grade 4	Classroom Teacher, Tech Coordinator, Librarian	Discussion

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4.5: Students will be introduced to the concept and use of a database
- defining records
- defining fields
- collecting/inputting data
- creating a report
- using sort and query
-

4.6: Students will be introduced to the spreadsheet environment
- record data
- create bar & pie graphs
- identify tools used to collect, analyze, and display data

4.7: Students will choose the technology most appropriate to solve problems and tasks
- select appropriate computer application software for a given task.
- select other technologies or types of software appropriate to a given task
- use technology as a tool to solve the problem.

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 4.5	Students create a database of student names, birthdays, and astrological signs using data collection sheet. Data is entered into Access or Excel to produce a final report sorted by field of choice.	By end of Grade 4	Classroom Teacher, Tech Coordinator,	Completed data collection forms, Completed database, Sorted and printed report by date
I - 4.6	Students collect and record data in the classroom (i.e., m & m activity[1]) . They then build a bar graph using a spreadsheet and type a paragraph explaining what they have done.	By end of Grade 4	Classroom Teacher, Tech Coordinator	Completed survey, completed spreadsheet and bar graph

1 http://www.lessonplanspage.com/MathCIMandMGraphsSpreadsheets36.htm

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4.7: Students will choose the technology most appropriate to solve problems and tasks
- select appropriate computer application software for a given task.
- select other technologies or types of software appropriate to a given task
- technology will be the tool to solve the problem.

	Three-Year Technology Implementation Activity Table			
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 4.7	Students complete multilevel tasks and produce a final product. Example - Create maps with different lists of information: capitals, topological features, population, etc. Document how they obtained the information and create a map with the information attached or combined. Select type of presentation software such as Microsoft Word, Appleworks, Hyperstudio, Kidspiration, Inspiration, Powerpoint, etc.	By end of Grade 4	Classroom Teacher, Tech Coordinator, Librarian	Completed map with information

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5.1 Students will use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully-edited, spell checked, finished piece

- writing compositions
- note taking
- Internet research collection
- desktop publishing

5.2 Students will use the Internet as a resource for information

- conduct and narrow key word searches
- use online references
- use and adding of bookmarks
- use district curriculum links

5.3: Students will use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 5.1	Use MS Word, Publisher, Appleworks, other application to create an attractive and informative flyer advertising an event. Describe the event, share info about your organization, date, time, place, what to bring etc.	By end of Grade 5	Classroom Teacher, Tech Coordinator	Completed flyer
I - 5.1	Collaborate with fellow student(s) to create a newsletter. Assign jobs such as editor, layout designer, proofreader, etc. Distribute throughout classroom and other classes.	By end of Grade 5	Classroom Teacher, Tech Coordinator	Completed newsletter
I - 5.2	As a center activity students test their navigation knowledge with the "Click and Discover" and the "Search and Discover" worksheets provided in the For Educators section of Grolier Online[1].	By end of Grade 5	Classroom Teacher, Tech Coordinator, Librarian	Completed worksheets
I - 5.2	As a center activity, students take the Dr. Martin Luther King Scavenger Hunt[2].	By end of Grade 5	Classroom Teacher, IA, Tech Coordinator, Librarian	Completed worksheets
I - 5.3	As part of a unit on South America students chose a specific country and find the top ten reasons to visit that country using trade books, reference books, Internet, on-line databases, and other resources. In teams of two they create a Powerpoint slide shows to persuade vacationers to visit their country.	By end of Grade 5	Classroom Teacher, Tech Coordinator,	Slide Planner sheet, completed vacation packet, completed Powerpoint with citations

1 http://www.go.groliers.com
2 http://tstrong.com/Martin2007.htm

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5.4: Students will follow copyright laws and policies concerning acceptable use.
All activities should be checked for plagiarism, acceptable use, citing resources, etc.

5.5: Students will use databases to aid in completing specific tasks
- defining records
- defining fields
- collecting/inputting data
- creating a report
- using sort and query.

5.6: Students will use spreadsheets to aid in completing specific tasks
- record data
- create bar & pie graphs
- identify tools used to collect, analyze, and display data
- insert a graph into a published piece

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 5.4	All activities should be checked for plagiarism, acceptable use, citing resources, etc.	By end of Grade 5	Classroom Teacher, Tech Coordinator, Librarian	Teacher inspection
I - 5.4	Students visit a Web site regarding copyright issues and cite reasons one should not plagiarize..	By end of Grade 5	Teacher, Tech Coordinator, Librarian	Discussion
I - 5.5	Use the Native American Database at http://www.nativeweb.org/resources to create an Excel spreadsheet with select fields of information which compare and contrast the different tribes of Americas.	By end of Grade 5	Classroom Teacher, Tech Coordinator	Printed reports
I - 5.5	Students collect data from their own weather station and/or the Internet. Chart ten different world cities over a two month period, recording high/low temperature, precipitation, barometric pressure, and humidity. Manipulate data to produce reports illustrating the climate of a world city and compare it to Paterson.	By end of Grade 5	Classroom Teacher, Tech Coordinator	Completed data collection forms, completed database, sorted and printed report by temperature
I - 5.6	Revisit the M & M project from 4th grade. This year students use Candy Hearts. Using a spreadsheet application students create a tally sheet, enter data, and create a chart.	By end of Grade 5	Classroom Teacher, Tech Coordinator	Completed spreadsheet and bar graph

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5.7: Students will choose the technology most appropriate to solve problems and tasks
- select appropriate computer application software for a given task
- select other technologies or types of software appropriate to a given task
- technology will be the tool to solve the problem

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 5.7	Students use the Big 6 information problem solving process to: • Create a script, based on research, for a news feature story. • Research a historical figure and make a presentation to the class as that person. • Select the most appropriate presentation tool to present the information to the class or school.	By end of Grade 5	Classroom Teacher, Tech Coordinator, Librarian	Completed projects, Big 6 Task List, completed rubric
I - 5.7	For more sample activities refer to the Curriculum Frameworks available at the Paterson INTRANET	By end of Grade 5	Classroom Teacher, Tech Coordinator, Librarian	Completed projects

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6.1: Students will use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully-edited, spell checked, grammar checked finished piece
- writing compositions
- note taking
- Internet research collection
- desktop Publishing

6.2: Students will use the Internet as a resource for information
- conduct and narrow key word searches
- use online references
- use and adding of bookmarks
- use district curriculum links
- include citations

6.3: Students will use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 6.1	Students create a brochure on a theme being studied in class, such as a travel brochure, a skill such a skate boarding, pets, sports, etc. Included are headers, footers, multi-columns, over 100 words, and three graphics with citations.	By end of Grade 6	Classroom Teacher, Tech Coordinator	Completed brochure
I - 6.1	Teacher creates a word processing document with intentional spelling and grammatical errors, which students have to correct.	By end of Grade 6	Classroom Teacher, Tech Coordinator, Librarian	Printed fixed paragraphs
I - 6.2	Create a brochure on Mexico as the final element of a research project. See the Apple Learning Exchange Example[1]	By end of Grade 6	Classroom Teacher, Tech Coordinator, Librarian	Completed rubric
I - 6.3	Students debate which power was responsible for the outbreak of World War I. Students research the causes of the outbreak of World War I in preparation for a (limited) reenactment of the Paris Peace Conference.	By end of Grade 6	Classroom Teacher, Tech Coordinator	At least one completed project demonstrating PBL skills

1 http://edcommunity.apple.com/ali/story.php?itemID=368&version=175&pageID=352

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6.4: Students will follow copyright laws and policies concerning acceptable use

6.5: Students will use spreadsheets to aid in completing specific tasks and analyze data
- record data
- create bar & pie graphs
- identify tools used to collect, analyze, and display data
- insert a graph into a published piece

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 6.4	All activities should be checked for plagiarism, acceptable use, citing resources, etc.	By end of Grade 6	Classroom Teacher, Tech Coordinator, Librarian	Teacher inspection
I - 6.4	Students select a copyright Web site and cite five strategies to follow copyright laws and to avoid plagiarism.	By end of Grade 6	Classroom Teacher, Tech Coordinator, Librarian	Discussion
I - 6.5	Use a spreadsheet to show the possible distribution for the sums of a roll of numbered cubes. Think about the question. List possibilities. Simulate random rolls. Record results in spreadsheet. Make bar graphs from the data. Analyze results. Which sum occurred most frequently when you rolled 10 times? Which occurred most frequently when you rolled 100 times? If they are different, how can you explain the difference? Calculate the probability of each sum occurring.	By end of Grade 6	Classroom Teacher, Tech Coordinator	Completed spreadsheets and bar graphs, completed analysis sheets
I - 6.5	Computer Programming in Excel. Have students create a general knowledge quiz of five questions. Research questions from different resources. Model the if-then formula and show examples for students.	By end of Grade 6	Classroom Teacher, Tech Coordinator	Successful applications of if-then model

1 http://edcommunity.apple.com/ali/story.php?itemID=368&version=175&pageID=352

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

6.6: Students will use databases to complete specific tasks
- defining records
- defining fields
- collecting/inputting data
- creating a report
- using sort and query
- analyze data

6.7: Students will choose the technology most appropriate to solve complex problems and multilevel tasks
- review all possible technologies available to solve a problem
- select most appropriate technology for a given problem
- attempt to use technology to assist in solving the problem.

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 6.6	Find out your weight on other planets, moons, and stars while learning about the difference between mass and weight. Students go to the Exploratorium site and enter their weight. It automatically calculates the weight on the other planets. Collect data in a database/spreadsheet, and make charts[1]	By end of Grade 6	Classroom Teacher, Tech Coordinator	Completed charts
I - 6.7	Students complete a district-wide language arts research lab project and four social studies projects using Big Six TurboTools and Big Six strategies	By end of Grade 6	Classroom Teacher, Tech Coordinator, Librarian	Completed projects, Big 6 Task List, completed rubric
I - 6.7	For more sample activities refer to the Curriculum Frameworks available at the Paterson INTRANET	By end of Grade 6	Classroom Teacher, Tech Coordinator, Librarian	Completed projects

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

7.1: Students will use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully edited, spell checked, grammar checked finished piece
- writing compositions
- note taking
- Internet research collection
- desktop Publishing

7.2: Students will use the Internet as a resource for information
- conduct and narrow key word searches
- use online references
- use and adding of bookmarks
- use district curriculum links
- include citations

7.3: Students will use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives.
Focus on critical thinking and programming skills

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 7.1	Students write a book report with a twist- it must be done in a multimedia format. Using PowerPoint, Hyperstudio, or a Web page editor, students follow the rubric found at http://intranet/BookReportRubric.htm to create a multimedia report on a novel.	By end of Grade 7	Classroom Teacher, Tech Coordinator	At least one completed project (brochures, flyers, newsletters) demonstrating skills
I - 7.2	Students use the intermediate *Hunt the Fact Monster*[1] printable as a computer-learning-center activity to assess searching techniques.	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Completed searches
I - 7.2	Students choose one of the interactive lessons from Education World Interactivity Center and complete the project.[2]	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Completed searches
I - 7.3	Students use technologies to input, retrieve, organize, manipulate, evaluate, and communicate information. Apply appropriate technologies to critical thinking, creative expression, and decision-making skills. See practices lesson on the Underground Railroad[1]	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Rubrics, Big Six Organizer

1 http://www.remc11.k12.mi.us/bstpract/bpIII/091/091.PDF
2 http://www.educationworld.com/a_tech/archives/interactivity.shtml

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

7.4: Students will follow copyright laws and policies concerning acceptable use

7.5: Students will use databases to complete specific tasks
- defining records
- defining fields
- collecting/inputting data
- creating a report
- using sort and query
- analyze data

7.6: Students will use spreadsheets to aid in completing specific tasks and analyze data
- record data
- create bar & pie graphs
- identify tools used to collect, analyze, and display data
- insert a graph into a published piece

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 7.4	All activities should be checked for plagiarism, acceptable use, citing resources, etc.	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Teacher inspection
I - 7.4	Students select a copyright Web site and cite five strategies to follow copyright laws and to avoid plagiarism.	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Discussion
I - 7.5	Students build a Black History timeline by researching famous people or events in Black History. They synthesize the information and produce a product using the TimeLiner software.	By end of Grade 7	Classroom Teacher, Tech Coordinator,	Completed database and timeline
I - 7.6	Students use Excel program to develop a grade book program for their teacher to use for a specific project.	By end of Grade 7	Classroom Teacher, Tech Coordinator	Working grade book

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

7.7: Students will choose the technology most appropriate to solve complex problems and multilevel tasks
- review all possible technologies available to solve a problem
- select most appropriate technology for a given problem
- attempt to use technology to assist in solving the problem.

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 7.7	Students complete a district-wide language arts research lab project and four social studies projects using Big Six TurboTools and Big Six strategies to assist in selecting appropriate tools.	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Completed district-wide LA project, Turbo Tools student locker.
I - 7.7	Students visit Whodunnit[1] Web site to study the objects related to a crime. They decide the appropriate strategy to solve the crime including: observation, classification, comparison, measurement, prediction, interpretation of data, and drawing inferences in an attempt to solve the crime.	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Completed work sheets, proof of crime solved

1 http://www.cyberbee.com/whodunnit/crime.html

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

8.1: Students will use word processing/proper keyboarding techniques to aid in specific tasks and be able to produce a fully edited, spell checked, grammar checked finished piece
- writing compositions
- note taking
- Internet research collection
- desktop publishing
- research paper

8.2: Students will use the Internet as a resource for information
- conduct and narrow key word searches
- use online references
- use and adding of bookmarks
- use district curriculum links
- include citations

8.3: Students will use technology to solve problems, develop decision-making skills, and participate in project-based learning activities that support curriculum objectives.
Focus on critical thinking and programming skills

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 8.1	Given a list 10 words, students use work processing to write a script for a TV commercial using all of the words. The commercial is typed out in a script format showing actions and dialogue.	By end of Grade 8	Classroom Teacher, Tech Coordinator	Completed TV commercial
I - 8.2	Students research a historical figure currently being studied using Internet and print resources. Students use Timeliner to create a timeline of milestones, word process a brief biography, create a database of quotes, create a poster of pictures, and list all the Web citations.	By end of Grade 8	Classroom Teacher, Tech Coordinator, Librarian	Completed timeline, biography, database, poster, and bibliography
I - 8.3	Students plan and create a short movie using imovie or MovieMaker software.	By end of Grade 8	Classroom Teacher, Tech Coordinator, Librarian	Completed movies
I - 8.3	Students create a Web page (programmed in HTML) on a famous person using the information gathered from the suggested activity in 8.2. Web page is featured on school Web site.	By end of Grade 8	Classroom Teacher, Tech Coordinator, Librarian	Completed Web page, Web page rubric

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

8.4: Students will follow copyright laws and policies concerning acceptable use
- activities will be checked for plagiarism, acceptable use, citing resources, etc.
- follow MLA descriptions in Grolier Online
- incorporate rules into all student produced content

8.5: Students will use databases to complete specific tasks
- defining records
- defining fields
- collecting/inputting data
- creating a report
- using sort and query
- analyze data

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 8.4	All activities are checked for plagiarism, acceptable use, citing resources, etc.	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Teacher inspection
I - 8.4	Students select a copyright Web site and cite five strategies to follow copyright laws and to avoid plagiarism.	By end of Grade 7	Classroom Teacher, Tech Coordinator, Librarian	Discussion
I - 8.5	Students study bones online to estimate the height, age and build of deceased animals and people. They measure the length of the humerus (from shoulder to elbow), the radius (from elbow to wrist)and the tibia (from knee to ankle) and input the data into Web site formulas to determine the height of the animal. Just like scientists, they then apply the information to recreate animals and predict the overall height.	By end of Grade 8	Classroom Teacher, Tech Coordinator	Completed student created database (sorted and printed) and draw document

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

8.6: Students will use spreadsheets to aid in completing specific tasks and analyze data
- record data
- create bar & pie graphs
- identify tools used to collect, analyze, and display data
- insert a graph into a published piece

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 8.6	Students, working in groups of 3-4, use the scientific method to determine how many seeds are in a watermelon. Use the following handouts found on the INTRANET Handout1 Handout2 Handout3 Handout4	By end of Grade 8	Classroom Teacher, Tech Coordinator	Completed spreadsheets and bar graphs, completed analysis sheets.

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

8.7: Students will choose the technology most appropriate to solve problems and tasks

- review all possible technologies available to solve a problem
- select most appropriate technology for a given problem
- attempt to use technology to assist in solving the problem.

8.8: Students will investigate the history of various technologies; research and assess the impacts of technology on individuals, society, and the environment; investigate the interactive and dynamic relationship between people and technology; and to apply technological knowledge and use systems and tools to solve practical problems. Students will

- understand the nature and role of technology
- understand how technological systems are designed, used, and controlled
- be able to value the benefits and assess the risks associated with technology and be able to respond rationally to ethical dilemmas caused by technology
- acquire the skills necessary to make decisions as citizens, consumers, and employees in a technological society

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - 8.7	Students complete a district-wide language arts research lab project and four social studies projects using Big Six TurboTools and Big Six strategies to assist in selecting appropriate tools.	By end of Grade 8	Classroom Teacher, Tech Coordinator, Librarian	Completed district-wide LA project, Turbo Tools student locker
I - 8.8	Students research the history of technology and the impact of technology on life in the 20th century. They then design a Web page or Powerpoint with findings and present to class or school.	By end of Grade 8	Classroom Teacher, Tech Coordinator, Librarian	Completed project and report

Goal I --Every student will be technologically literate, as defined in NJCCC Technology Standards 8.1, by grade 8 and will refine skills in grades 9-12

ELEM.1: Students complete a project-based learning research activity each marking period

ELEM.2: In grades K-8, reinforce Internet research and information skills

ELEM.3: Students develop a basic technology vocabulary appropriate to grade level

K12.1: Students demonstrate grade level proficiency in e-mail skills

Three-Year Technology Implementation Activity Table				
District Goal and Objective	**Strategy/Activity**	**Timeline**	**Person Responsible**	**Documentation**
I - ELEM.1	Students in Grades 3-8 complete at least one technology-supported project-based learning activity per marking period in the curricula areas of Language Arts, Social Studies and/or Science. (See Curriculum Leadership Goal IIIA.1)	Quarterly	C & I Directors, C & I Assistant Supt., Principal, Technology Coordinator, Librarian, Teacher	Project rubrics, student portfolios, student presentations
I - ELEM.2 . I - ELEM.3	Students integrate use of online databases, such as jerseyclicks.com, Grolier Online, Facts on File, etc. as information gathering tools when teaching the research process in core curriculum areas: Art, Health/P.E., LAL, Math, Science, Social Studies and World Languages	Ongoing	Classroom Teachers, Technology Coordinator, Librarian	Project rubrics, student portfolios, student presentations, teacher observation
I - K12.1	Students introduced to technology terms (See Appendix III).	Ongoing Grade Level Appropriate	Classroom Teacher, Tech Coordinator	Tests, discussion.
	Students use proper e-mail techniques, etiquette, and grammar when sending or receiving e-mail.	Ongoing	Language Arts Teachers, Technology Coordinator	District student E-mail logs

Paterson Public Schools Technology-Curriculum Integration Guide

		By the end of...		
ogy Standard 8.1 Computer and Information Literacy		**Grade 4**	**Grade 8**	**Grade 12**
Basic Operations and Concepts	Technology Vocabulary	LAL: Introduce vocabulary for different technology components in the classroom in conversation and formally through as vocabulary words. Have students write a short story integrating some or all of the words.	LAL: Introduce higher-level technology vocabulary words including internet/web terminology. Have students construct visual maps of words linking them to other components in Inspiration or equivalent. (3.1.8F, 3.1.8H)	LAL: Continue expanding technology vocab incorporating programming and networking have students explore their etymology onli
	Understanding and using features of an Operating System.	ALL: Students are introduced to basic features of an Operating System in a computer lab setting with reinforcement in all content area classrooms.	ALL: Students are introduced to basic features of an Operating System in a computer lab setting with reinforcement in all content area classrooms.	ALL: Students are introduced to basic featu System in a computer lab setting with reinf content area classrooms.
	Grade appropriate input of text and data.	ALL: Have students research and complete projects using Microsoft Word, Powerpoint, Excel, Publisher, and Access as well as web browsers and search engines for research. MATH: Use number pad and windows calculator to perform addition, subtraction, multiplication, and division with whole and decimal numbers. (4.1.4B.4, 4.1.4B.5)	ALL: Have students research and complete projects using Microsoft Word, Powerpoint, Excel, Publisher, and Access as well as web browsers and search engines for research. MATH: Compute compound intereset using a calculator. (4.3.8C2b) Use numer pad and windows calculator to perform operations with intergers. (4.1.8B.1)	ALL: Have students research and complete Microsoft Word, Powerpoint, Excel, Publish well as web browsers and search engines fo
	Use files, folders, or network resources to store or retrieve data.	ALL: Students conduct research; saving information and images into folders they create to store their work.	ALL: Students conduct research; saving information and images into folders they create to store their work.	ALL: Students conduct research; saving info images into folders they create to store the
	Use computer icons.	ALL: Students are taught about icons in a computer lab setting with reinforcement in all content areas.	ALL: Students are taught about icons in a computer lab setting with reinforcement in all content areas.	ALL: Students are taught about icons in a c with reinforcement in all content areas.
Software Applications	Create, organize, and manipulate shortcuts.	LAL/SOCIAL STUDIES: Have students store primary online sources by dragging shortcut from browser to student work folder or by saving them in the favorites menu.	LAL/SOCIAL STUDIES: Have students store primary online sources by dragging shortcut from browser to student work folder or by saving them in the favorites menu.	LAL/SOCIAL STUDIES: Have students store sources by dragging shortcut from browser folder or by saving them in the favorites me
	Produce grade appropriate documents using age appropriate software.	LAL/SOCIAL STUDIES: Creating a historical script in which the students assume the roll of Thomas Paine and express his viewpoints and his motivation for writing *Common Sense* . (SS: 6.4.2B.1, LAL: 3.1.4H, 3.2.4A)	LAL: Students will conduct research using online databases and compose an autobiography of an American Revolution person of interest. (3.1.8H, 3.2.8A) SOCIAL STUDIES: Students create a Bill that they would like to become a law from the perspective of Congressman Bill Pascrell. (6.2.2A.1)	SOCIAL STUDIES: Students create a docume the European arrival to the Americas in Mic compile annotated bibliographies measurin sources they used. (6.2.4E.2)
	Create and use graphic organizers to create, construct, or design a document.	MATH: Create a graphic organizer to be used in solving word problems. (4.5B) SOCIAL STUDIES: Create Venn diagram to compare/contrast development of East and West New Jersey using brainstorming software such as Kidspiration. (6.4.4A.1)	MATH: Create a graphic organizer to be used in solving open-ended problems. (4.5B) SOCIAL STUDIES: Create diagrams of the "checks and balances" system and timelines reflecting the creation of the constitution. (6.2.8A.3)	SOCIAL STUDIES: Creating timelines on the diagrams on Napoleonic invasions, and flow forms of government using Mindmeister or brainstorming/diagramming software. (6.3.

Technology Standard 8.1 Computer and Information Literacy		By the end of...		
		Grade 4	Grade 8	Grade 12
	Plan and create a database, define fields, and input data. 9-12: produce a report using sort and query.	MATH: Students conduct survey, create spreadsheet with labeled columns, and enter results into spreadsheet. Sort results based on desired information.	LAL: Students will create a reading inventory that includes time, genres, and reading interests in an Access database or Excel spreadsheet and generate reports. MATH: Students conduct survey, create spreadsheet with labeled columns, and enter results into spreadsheet. Sort results based on desired information.	SOCIAL STUDIES: Students explore the var sources available in a specific continent an inequity of sources while analyzing univers access of water by creating a database in M student contributes to with one table conta by continent and country and another table information about each country including p They can then generate reports and querie countries have the most access of water by (6.2.12E.14)
	Produce and interpret graphs and charts by entering data on a spreadsheet.	MATH: Sorting M&M's - use spreadsheet to collect and analyze data. (4.4.4A.1) Create a bar graph or line graph from data collected. (4.4.4A.2)	LAL: Students will develop a rubric using rubistar.com and MS Excel to self-assess the effectiveness of their American Revolution final Powerpoint presentation project. (3.5.8B3)	MATH: Use spreadsheet to evaluate a func variables. (4.3.12.D2) HEALTH ED: Students chart fitness results evaluate their own progress using MS Exce
	Merging information from one document to another.	LAL: Students create poems in MS Word and then copy and paste into PowerPoint, format text, and add images to present their work in class. (3.2.4D)	LAL: Students will create booklet/brochure about an American Revolution historical figure based on an autobiography composed by another student/group. (3.1.8H, 3.2.8A)	LAL/SOCIAL STUDIES: Students compose le state and local politicians concerning a curr use Mail Merge to input recipients informa spreadsheet. (SS: 6.2.2A.3) MATH: Graph a linear equation using a gra computer programs, internet site, or sprea to a word document. (4.3.12.B2)
	Create and produce a grade appropriate multimedia presentation/project.	ART: Students create digital portfolios showcasing their work over a given period using MS PowerPoint for school-wide presentation. (1.2.2)	CAREERS: Students will research a career that they project to be relevant to their future using online resources and create a presentation that describes the career and highlights why they chose it. Then compare/contrast with other students. (9.1.B.1)	ART: Students take virtual field trips to ren reinforce art concepts in architectural desig related themes. (1.3.1)
	Produce and edit page layouts in different formats using desktop publishing and graphics software.	WORLD LANG: Students create food menu with ethnic dishes from specific countries using MS Word or Publisher. (7.2) SOCIAL STUDIES: Students create a flyer to recruit slaves to fight on the side of the Union highlighting the various promises made for their contribution to the war effort. (6.4.3B.3)	LAL: Students will create a full page advertisement/brochure on a Civil Rights era leader using appropriate text structures/features, including facts, examples, other details, images, and sources. (3.2.8.D10) SOCIAL STUDIES: Create a travel brochure for an Asian country in MS Publisher highlighting geographic, historic, social, and political features that encourage travel to this destination. (6.6.2A.3)	HEALTH ED: Classify foods by food group, value. Identify 6 classes of nutrients. Crea breakfast, lunch, and dinner using MS Publi SOCIAL STUDIES: Students in groups of thr website using MS Publisher or Adobe Dream their knowledge of the American Civil War. choose a specific component such military healthcare on the battlefield, roles of wom the impact of "brother vs. brother" scenari
	File development for website or webpage inclusion.	LAL: Students will compose a short play to submit to the NJ Young Playwright's website. (3.2.4D)	LAL: Students will create a basic web page using flow charts to map links and create storyboards for Civil Rights final project (3.1.8H, 3.2.8A) Students will compose a short play to submit to the NJ Young Playwright's website. (3.2.8D)	ART: Students use graphic and web design Adobe Photoshop and Adobe Dreamweave commercial drawings, photos, advertiseme online publication. (1.3.1)

		By the end of...		
ogy **Standard 8.1** Computer and Information Literacy		**Grade 4**	**Grade 8**	**Grade 12**
Social, Ethical, and Human Issues	Explain the purpose of an Acceptable Use Policy and consequences for inappropriate use of technology.	LAL: Students will create a script and then record a podcast to share with other students concerning the purpose of an AUP and consequences for inappropriate uses.	LAL: Students will create a script and then record a podcast to share with other students concerning the purpose of an AUP and consequences for inappropriate uses.	HEALTH ED: Each High School has a studen committee that addresses safe and approp technology resources. (2.1E)
	Practice safe internet usage and appropriate internet and email etiquette.	LAL: Email a student in another Paterson school with guidance from instructor on proper email etiquette.	LAL: Students will research digital etiquette using Brainpop.com's "Digital Citizenship Spotlight" and present them to the class using appropriate technology.	HEALTH ED: Each High School has a studen committee that addresses safe and approp technology resources. (2.1E)
	Demonstrating an understanding of current and future technology impact on society.	SCIENCE: Students will research the impact of "Green" technology on the environment and develop understanding of how future environmental catashtrophes can be prevented.	SCIENCE: Students will research the impact of "Green" technology on the environment and develop understanding of how future environmental catashtrophes can be prevented.	HEALTH ED: Explore technology used in dif Health and Physical Education such as Doct Coaches. (2.2F)
	Recognize, exhibit social, legal, and ethical behaviors when using information and technology; understands consequences or misuse (i.e., plagiarism of copyrighted material)	LAL: Students will watch BrainPop.com video entitled "Plagiarism: Don't Be A Cheat" and will compose an "I Will" Statement regarding their personal ethics when conducting research. ART: Students create posters to inform other students of the dangers and consequences of online identity theft/privacy, cyber-bullying, and posting inappropriate material. (1.2.2)	LAL: Students will research different ethics topics using Brainpop.com's "Digital Citizenship Spotlight" and present them to the class using appropriate technology. ART: Students create posters to inform other students of the dangers and consequences of online identity theft/privacy, cyber-bullying, and posting inappropriate material. (1.2.2)	LAL: Students explore importance of citing committing plaigarism in their written worl Students create posters/flyers to inform ot dangers and consequences of online identit cyber-bullying, and posting inappropriate n
	Make informed choices among technology resources in a variety of contexts.	SOCIAL STUDIES: Students explore the Leni Lenape Native Americans using any available digital or print resources and reflect their knowledge through the creation of a documentary using either PowerPoint, video, podcast, or other digital tool. (6.4.4B.1)	SOCIAL STUDIES: Students conduct a mock trial based on a Supreme Court case and create a presentation using either PowerPoint/Prezi, video, podcast, or other digital tool. (6.4.4B.1) WORLD LANG: Students show a visual or auditory presentation using either a PowerPoint, recording a TV or radio commercial, or creating a song that provides the audience with valuable information about a country and its culture. (7.1C)	SOCIAL STUDIES: Students use ITV or other tools to connect with other students throug and come internationally to collaborate on integrate Black History on a daily basis. (6. MATH: Students investigate the use of the through real world and virtual resources an explain additional examples using technolo design software, web-based resources, grap etc. (4.5.12B)
Information Access and Research Tools	Choose appropriate technology information resources to support research and solve real world problems.	SCIENCE/MATH: Students research science concepts using web-based resources and conduct inquiry-based science activities to formulate hypotheses and develop experiments to prove or disprove theories. (5.1.4.A.1.2.3)	SCIENCE/MATH: Students research science concepts using web-based resources and conduct inquiry-based science activities to formulate hypotheses and develop experiments to prove or disprove theories. (5.1.4.A.1.2.3) MATH: Use internet resources to find the proof and applications for the Pythagorean Theorem. (4.2.8A2) Use the National Library of Virtual Manipulatives to explore probability using coin tossing. (4.4.8B4)	SCIENCE/MATH: Students research science web-based resources and conduct inquiry-b activities to formulate hypotheses and dev to prove or disprove theories. (5.1.4.A.1.2. CAREERS: Students plan a career-based co project such as a fashion show by conductin collecting survey data, and creating an invit script, agenda, and event flowchart using v based tools. (9.2.A2)

gy Standard 8.1 Computer and Information Literacy		By the end of...		
		Grade 4	Grade 8	Grade 12
	Identify and use appropriate, accurate and relevant electronic information sources to solve real problems.	SCIENCE: Students research real-world scientific problems and use a combination of web-based resources, science tools, and software applications to gather information and formulate a hypothesis or solution. (5.1.4.A.1.2.3)	SCIENCE: Students research real-world scientific problems and use a combination of web-based resources, science tools, and software applications to gather information and formulate a hypothesis or solution. (5.1.8.A.1.2.3) HEALTH/PHYS ED: Students use heart monitors and pedometers to gather information regarding heart rate and target heart rate and devise fitness plans to reach targets. (2.6A)	SCIENCE: Students research real-world scie use a combination of web-based resources, software applications to gather information hypothesis or solution. (5.1.12.A.1.2.3) SOCIAL STUDIES: Using JSTOR, EBSCO Host, students are exposed to primary sources an experts in their fields to create their own re (6.1.12A.1)
	Compose, send, and organize email messages with and without attachments.	WORLD LANG: Students connect with students in other countries via ePals using email and share pictures and other documents. (7.1A)	SOCIAL STUDIES: Students communicate local current events on a weekly basis to other students via email. (6.1.12A.3)	SOCIAL STUDIES: Students communicate lo on a weekly basis to other students via ema
	Locate specific information by searching a database; evaluate the accuracy and relevance of that information.	LAL: Students use Brainpop.com, Visual Thesaurus, and Worldbook to locate information regarding research topics.	LAL: Students will research online databases to gather information about an American Revolution and Civil Rights era leader. (3.1.8H)	SOCIAL STUDIES: Using JSTOR, EBSCO Host, students are exposed to primary sources an experts in their fields to create their own re (6.1.12A.1)
Problem Solving and Decision Making Tools	Utilize and manipulate computer applications to independently or collaboratively solve problems.	WORLD LANG: Students use GoogleMaps and other online resources to research geographic information about a particular country including location, capital, population, and surrounding countries. (7.2A) Students use Skype to interview each other about their cultural and family backgrounds. (7.1B)	MATH: Use online resources to obtain a street map of Paterson. Create a vertex-edge graph indidcating the most efficient route to plow the streets in a neighborhood after a major snow storm. (4.4.8D.1B) Use "Green Globs" software to find the relationship between equations and their graphs. (4.3.8B.1)	SCIENCE: Students conduct inquiry-based e scientific concepts using the various module Synergistic Labs. (5.1.12.D.3)
	Identify hardware problems and suggest solutions to solve them.	CAREERS: Students in computer lab setting explore different technology components and learn to troubleshoot common problems.	CAREERS: Students in computer lab setting explore different technology components and learn to troubleshoot common problems.	CAREERS: Students in computer lab setting technology components and learn to troubl problems.
	Identify a problem and formulate a strategy to solve the problem using technology tools, brainstorming, flowcharting, and appropriate resources.	MATH: Students are given a basic quadrant map and must create a simple flow chart using Kidspiration indicating the most efficient route to travel from one point to another. (4.4.8D.1B) SCIENCE: Students research a real-world problem and use scientific equipment and tools to gather,analyze and communicate experimental results (5.1.4.D.3)	MATH: Students are given a detailed street map and must create a flowchart chart using Inspiration indicating the most efficient route to travel to complete pizza deliveries. (4.4.8D.1B) SCIENCE: Students research a real-world problem and use scientific equipment and tools to gather,analyze and communicate experimental results (5.1.8.D.3)	SCIENCE: Scientific Equipment and Tools ar gather,analyze and communicate experim MS Word, Powerpoint and Excel. (5.1.4.D.3) ED: Students research costs and responsibi with having children and planning a prom u resources, develop an activity plan/flow cha budgets using MS Excel. (2.2C)
	Integrate new information into a knowledge base and communicate the results in a project or presentation.	SOCIAL STUDIES: Students create biographical wikispace on the life of Alexander Hamilton with specific emphasis on his contribution to Paterson's industrial growth. (6.4.3B.2)	SOCIAL STUDIES: Students create wikispace from the perspective of a politcal candidate addressing various issues affecting their school community. (6.2.1A.1)	SOCIAL STUDIES: Students contribute to Dis studies Google Custom Search Engine by ad resources they have found most valuable/re present through their final project's annota (6.1.8A.3)

Technology Curriculum

Assessment Process

The District requires that students in grades K-4 be assessed using the NJTAP-IN Fourth Grade Checklist (see pages 39-40). Schools should convene curriculum articulation meetings across grades at least two times each school year to discuss the assessments and modify instruction accordingly.

Students in grades 5-8 are required to be assessed using the NJTAP-IN General Rubric (see pages 41-43). The District realizes that student proficiency, related to all 8.1 cumulative progress indicators, will not be achieved in one year. The acquisition of information literacy skills occurs over time by learning more and more skills throughout the year and building on skills in each consecutive grade level. Two interim assessments will be administered for each student in grades 5-8, one in December and one in June, to monitor progress towards the final assessment in June of grade 8. Schools should also convene curriculum articulation meetings across grades 5-8 to discuss the assessments and modify instruction accordingly.

ID _____   **STUDENT NAME** _____

_____   **SCHOOL NAME** _____

MPUTER AND INFORMATION LITERACY - NJTAP Fourth Grade Checklis

andard/Indicator	Item	Dem
technology vocabulary	Properly names parts of the computer such as monitor, keyboard, screen and mouse	
	Uses proper vocabulary for on-screen items such as icons, software, shortcuts, scroll bar, task bar	
features of an operating system g programs, identifying and nter, finding help)	Starts programs from Start Menu or from desktop icon	
	Prints from a word-processing program	
	Identifies printers available on computer	
	Closes down programs and shuts down computer	
access text and data, using eyboarding techniques or other	Inputs 10 to 20 words into a word-processing document.	
	Inputs at least five numbers into a spreadsheet	
simple finished document ocessing software	Uses Bold, italics and other simple formatting	
	Aligns text to center and along left and right margins	
nd interpret a simple graph or ing and editing data on a dsheet template	Reads a simple bar graph for minimum and maximum values	
	Creates a pie chart from a set of numbers	
d present a multimedia sing appropriate software	Creates a simple presentation with at least three slides	
	Adds titles, text and graphics to a presentation	
d maintain files and folders	Creates, deletes and moves folders	
	Renames, deletes and moves documents	
phic organizer	Creates a concept map with at least three components	
	Uses a graphic organizer to categorize objects	
computer icons	Starts programs from the desktop	
	Recognizes common icons such as print, save, copy/paste	

andard/Indicator	Item	Dem
ne common uses of computer nd identify their advantages and	Describes everyday uses for word-processing, spreadsheet and presentation software.	
	When given a specific task, chooses the correct tool to use	
e and practice responsible social haviors when using technology, d the consequences of use including: ; naterials y resources rity and safety issues	Demonstrates understanding of the Acceptable Use Policy	
	Demonstrates understanding of copyright materials on Internet	
	Identifies author and copyright information on a given web page	
	Understands guidelines regarding disclosure of personal information on the web	
ppropriate Internet etiquette	Uses electronic mail in proper manner	
e the ethical and legal of plagiarism of copyrighted	Provides attribution when using copyrighted materials	
e the need for accessing and tion	Understands the advantages and disadvantages of Internet resources versus the school or public library	
nd use web browsers, search lirectories to obtain information vorld problems	Uses child-safe search engines such as Yahooligans to research new topics	
	Demonstrates understanding of risks when using general search engines in terms of inaccuracy and age-inappropriate information	
ecific information by searching	Searches a child-safe web database to find relevant information	
e accuracy and/or bias of	Breaks down web address to recognize government and educational websites	
	Can point out author of a webpage and discuss possible issues on bias and accuracy	
blems individually and/or y using computer applications	Works in a group setting on collaborative projects such as a presentation or Internet research	
basic hardware problems and roblems	Reboots computer to handle minor problems	
	Handles software and webpage errors correctly	

8.1 COMPUTER AND INFORMATION LITERACY – NJTAP-IN GENERAL RUBRIC

New Jersey Technology Assessment for Proficiency and Integration

STRAND A: BASIC COMPUTER SKILLS AND TOOLS

Standard 8.1 - End of Grade 8 SCORE	Advanced Proficient 3	Proficient 2	Partially Proficient 1	Novice 0
NOTE: 8.1.8.A.1: Use appropriate technology vocabulary				
Vocabulary will be assessed as part of each of the various skills noted below A.2 – A.12				
8.1.8.A.2: Use common features of an **operating system** (e.g., creating and organizing files and folders) 8.1.8.A.12: Create, organize and manipulate **shortcuts**	Create/ customize common features of an operating system (e.g., shortcuts, files, and folders)	Independently use common features of an operating system (e.g., creating and organizing files and folders; and creating, organizing and manipulating shortcuts)	With assistance, use common features of an operating system (e.g., creating and organizing files and folders; and creating, organizing and manipulating shortcuts)	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.A.3: Effective, accurate and uses proper techniques when inputting text and data, using **touch keyboarding**	Able to model to others the proper techniques to effectively and accurately input text and data using touch keyboarding while completing a specific task in a specific core curriculum content area	Use proper techniques to effectively and accurately input text and data using touch keyboarding.	With assistance input text and data, using touch keyboarding	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.A.5: Create documents with advanced text formatting and graphics using **word processing**	Able to create a multi-page document with citations, advanced text formatting and graphics using word processing software in conjunction with other tools that demonstrates the ability to format, edit and print in a specific core curriculum content area	Create word processing documents independently that include advanced text-formatting and graphics	With assistance, create documents with advanced text formatting and graphics using word processing	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.A.6: Create a file containing customized information by **merging documents**	Independently create two or more documents to create a merged document in a specific core curriculum content area	Independently use two or more existing documents to create a merged document	With assistance, create a file containing customized information by merging documents	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.A.7: Construct a simple **spreadsheet**, enter data, and interpret the information	Able to create a spreadsheet, enter data, use mathematical or logical functions to manipulate and process data, generate charts and graphs, and interpret the results in a specific core curriculum content area	Independently construct a spreadsheet by entering data and interpreting information	With assistance, construct a simple spreadsheet, enter data, and interpret the information	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.A.8: Design and produce a basic **multimedia project**	Independently create and produce an original multimedia project using text, graphics, moving images and sound in a specific core curriculum content area	Independently design and produce a basic multimedia project importing text, graphics, moving images and sound.	With assistance, design and produce a basic multimedia project using text.	Unable to perform task with assistance (Evidence must be available upon request)

Standard 8.1 - End of Grade 8 SCORE	Advanced Proficient 3	Proficient 2	Partially Proficient 1	Novice 0
8.1.8.A.9: Plan and create a simple **database**, define fields, input data, and produce a report using sort and query	Create a database, define fields, input data from multiple records, produce a report using sort and query, and interpret the data in an original task-specific core curriculum content area	Independently create and produce a report by sorting and querying a database file	With assistance, plan and create a simple database, define fields, input data, and produce a report using sort and query	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.A.10: Use **network resources** for storing and retrieving data	Able to model and assist others with managing and organizing network resources for storing and retrieving data	Independently use network resources to store and retrieve data	With assistance, use network resources for storing and retrieving data	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.A.11: Choose appropriate electronic **graphic organizers** to create, construct, or design a document	Use the appropriate electronic graphic organizer in an independent and original task in a specific core curriculum content area	Choose the appropriate electronic graphic organizer to create, construct or design a document	With assistance, use an electronic graphic organizer to create, construct, or design a document	Unable to perform task with assistance (Evidence must be available upon request)

STRAND B: APPLICATION OF PRODUCTIVITY TOOLS

Standard 8.1 for end of Grade 8 SCORE	Advanced Proficient 3	Proficient 2	Partially Proficient 1	Novice 0
8.1.8.B.2: Exhibit **legal and ethical behaviors** when using information and technology, and discuss consequences of misuse	Exhibit legal and ethical behavior when using information and technology in an independent and original task in a specific core curriculum content area	Exhibit legal and ethical behavior when using information and technology as evidenced by using copyright fair-use laws as part of an assignment in a specific core curriculum content area	Demonstrate (i.e., verbally, graphically) an understanding between appropriate and inappropriate behavior related to legal and ethical issues as defined in the copyright fair-use laws	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.B.3: Explain the purpose of an **Acceptable Use Policy** and the consequences of the inappropriate use of technology 8.1.8.B.4: Describe and practice safe Internet usage 8.1.8.B.5: Describe and practice "etiquette" when using the Internet and electronic mail	Distinguish safe and appropriate use and misuse of technology according to the AUP when making choices while working independently	Exhibit an understanding of the district's AUP through the safe and appropriate use of technology when completing school work	Conveys (i.e. verbally, graphically) an understanding of safe and appropriate use and misuse of technology according to the approved district Acceptable Use Policy (AUP) and knows the consequences of misuse	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.B.6: **Choose appropriate tools** and information resources to support research and solve real world problems, not limited to: online resources and databases; and search engines and subject directories	Able to effectively and efficiently use Boolean logic for research, and use filtering strategies	Independently choose appropriate tools and information resources to support research and solve real-world problems (online resources and databases, search engines and subject directories)	With assistance, choose appropriate tools and information resources to support research and solve real world problems, including but not limited to: online resources and databases; and search engines and subject directories	Unable to perform task with assistance (Evidence must be available upon request)

Standard 8.1 - End of Grade 8 SCORE	Advanced Proficient 3	Proficient 2	Partially Proficient 1	Novice 0
8.1.8.B.7: Evaluate the **accuracy, relevance, and appropriateness** of print and non-print electronic information sources	Able to cite and support information sources using credible (accurate, relevant and appropriate) print and non-print electronic information sources	Independently evaluate information sources for credibility of print and non-print electronic information sources based on a predetermined criteria list	With assistance, evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information sources	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.B.8: Use computer applications to modify information independently and/or collaboratively to solve problems	Consistently demonstrates the ability to create and manipulate information independently and/or collaboratively to solve problems and to design and develop products in a specific core curriculum content area	Independently and collaboratively use computer applications to modify information to solve problems	With direct instruction use computer applications to modify, gather and sort information independently and/or collaboratively to solve problems	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.B.9: Identify basic hardware problems and demonstrate the ability to solve common problems	Identify, diagnose and suggest solutions for non-functioning technology systems	Identify basic hardware problems and demonstrate the ability to solve common problems without assistance	Given basic hardware problems, demonstrate the ability to solve common problems with assistance	Unable to perform task with assistance (Evidence must be available upon request)
8.1.8.B.10: Determine when technology tools are appropriate to solve a problem and make a decision	Identify a problem in a content area and formulate a strategy to solve the problem using the appropriate technology tool(s), if applicable	Determine when technology tools are appropriate to solve a problem and make a decision	Given a problem, select the appropriate technology tool, if applicable, to solve the problem from a given set of solutions	Unable to perform task with assistance (Evidence must be available upon request)

LEGEND:

Greater than 31 = Student Proficient

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