Paulsboro Schools

Curriculum

Technology – Kindergarten 2013-2014

^{*}For adoption by all regular education programs as specified and for adoption or adaptation by all Special Education Programs in accordance with Board of Education Policy.

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Paulsboro Public Schools Mission Statement

The mission of the Paulsboro School District is to provide each student educational opportunities to assist in attaining their full potential in a democratic society.

Our instructional programs will take place in a responsive, community based school system that fosters respect among all people.

Our expectation is that all students will achieve the New Jersey Core Curriculum Content Standards (NJCCCS) at every grade level.

Introduction/Philosophy

The Paulsboro School District Technology Curriculum is designed to promote technological and information literacy as well as critical thinking, problem-solving, and decision-making skills that is necessary for students to compete in and connect with our constant-changing global community. The curriculum motivates, empowers and enhances students' conceptual understanding, procedural knowledge, and problem-solving skills in technology including its nature, impact, and social, ethical, and human aspects. Students learn how to use many technology tools to gather, interpret and share information and to choose appropriate technologies to complete their work.

Understanding that technology is multi-disciplinary by nature and has applications in any environment, our technology curriculum is designed to promote academic success by incorporating technological tools and applications into the teaching and learning process. A real-world approach to teaching technology allows for enhancement of the learning process, enrichment of academic experience, and bestows students with the skills necessary to succeed throughout life. The curriculum allows all students including those who are English Language Learners and those who have special needs to develop technology skills while simultaneously strengthening understanding of academic knowledge and skills. Students become active participants in the learning process and learn to efficiently access, explore, apply, and synthesize information in our digital world.

Educational Goals (taken from NJCCCS)

- **8.1 Educational Technology** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.
- **8.2 Technology Education, Engineering, and Design** 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, global society, and the environment.

Big Ideas for Standard 8.1

In strand A, students will gain knowledge and understanding of the appropriate use of technological operations, concepts and related applications through the use of digital tools. In strand B, students use digital tools and media-rich resources to enhance creativity and the construction of knowledge. In strand C, students use digital tools to gain knowledge of environments that support the learning process and foster communication and collaboration in solving local or global issues and problems. In strand D, students will understand digital citizenship through by learning how technological advancements create societal concerns regarding the practice of safe, legal and ethical behaviors. In strand E, students use digital tools effectively for information literacy and to assist in gathering and managing information for research. In strand F, students use digital tools to promote critical thinking and assist in generating solutions and making decisions.

Quarter 1

Big Idea 1

8.1.P.A.1-3: Technological Operations and Concepts: Students will gain knowledge and understanding of the appropriate use of technological operations, concepts and related applications through the use of digital tools.

Big Idea 2

8.1.P.A.4-6: Technological Operations and Concepts: Students will gain knowledge and understanding of the appropriate use of technological operations, concepts and related applications through the use of digital tools.

Quarter 2

Big Idea 3

8.1.P.B.1: Creativity and Innovation: The use of digital tools and media-rich resources enhances creativity and the construction of knowledge.

Big Idea 4

8.1.P.C.1: Communication and Collaboration: Students use digital tools to gain knowledge of environments that support the learning process and foster communication and collaboration in solving local or global issues and problems.

Quarter 3

Big Idea 5

8.1.P.E.1: Research and Information Literacy: Students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

Big Idea 6

8.1.P.F.1: Critical Thinking, Problem Solving, and Decision Making: Students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.

Quarter 4

Big Idea 7

8.1.2.A.1-2: Technology Operations and Concepts: Students will gain knowledge and understanding of the appropriate use of technological operations, concepts and related applications through the use of digital tools.

Big Idea 8

8.1.2.C.1: Communication and Collaboration: Students use digital tools to gain knowledge of environments that support the learning process and foster communication and collaboration in solving local or global issues and problems.

Subject/Grade Level
Kindergarten
Objective/Cluster/Concept/C
umulative Progress Indicators
Taken from CPI's in NJCCCS
standards
http://www.nj.gov/education
/aps/cccs
The student will be able to:
8.1.P.A.1: Use the mouse to
negotiate a simple menu on
the screen (i.e to print a
picture).

- **8.1.P.A.2:** Use electronic devices (i.e.-computer) to type name and to create stories with pictures and letters/words.
- **8.1.P.A.3:** Identify the "power keys" (i.e.-ENTER, Spacebar) on a keyboard.

Big Idea 1

8.1.P.A.1-3: Technological Operations and Concepts: Students will gain knowledge and understanding of the appropriate use of technological operations, concepts and related applications through the use of digital tools.

Topic: Technology: Technological Operations and Concepts

Overarching Goals: Help students develop an awareness of computer components, fundamental hardware issues, and basic computer operations

Goal 1: Technological Operations and Concepts: Students will gain knowledge and understanding of the appropriate use of technology operations, concepts and related applications through the use of digital tools.

Essential Questions:

- 1. How do I use the computer?
- 2. What functions can I perform with the computer mouse?
- 3. How do I use an electronic device to communicate my ideas?
- 4. What do the "power keys" do and where are they on the keyboard?

Enduring Understandings (Students will understand that...)

- 1. The mouse can perform different functions when I click, double-click, hold, drag and hover.
- 2. I can tell a story and communicate my ideas by using different tools such as adding shapes, pictures, letters and typing words.
- 3. There are "power keys" on the keyboard that perform specific functions and will be used most often.

Conceptual Understanding: (Students will know that...)

 An awareness of computer components and basic operations will enhance the students understanding of technology and computer performance.

Classroom Applications: Learning Activities:

- Word Processing: Type first and last name; students label pictures with print.
- Log students into Headsprouts Mousing Around and have students complete the exercise by practicing using the mouse in various ways.

Assessment Evidence:

- Completion of Head Sprout's Mousing Around exercise.
- Demonstration of proper way to hold and use the mouse (click, click-and-drag, double-click.)
- Demonstration how to print a picture.
- Demonstrate use of specific "power keys" to complete a teacher created assessment.
- Demonstrate how to open Microsoft Word document and complete a teacher-created exercise. Students will print work.

Resources:

- Microsoft Office Word Program
- Google Chrome or Internet Explorer for <u>www.starfall.com</u>, www.tvokids.com, www.abcmouse.com
- Kidspiration Program
- Headsprout Mousing Around online program
- www.learning.com
- www.pbskids.com
- <u>www.discoveryeducation.com</u>
- www.brainpopjr.com
- www.tumblebooks.com
- www.bambooszoo.com

	Curriculum Management Sys	stem – Big Idea 2
Subject/Grade Level		
Kindergarten		
Objective/Cluster/Concept/C	Big Idea 2	
umulative Progress Indicators	8.1.P.A.4-6: Technological Operations and Concepts:	Students will gain knowledge and understanding of the appropriate use
Taken from CPI's in NJCCCS	of technology operations, concepts and related applic	rations through the use of digital tools.
standards	Topic: Technology: Technological Operations and Cor	ncepts
http://www.nj.gov/education	Overarching Goals: Help students develop an awareness of computer components, fundamental hardware issues, and basic	
/aps/cccs	computer operations	
	Goal 1: Technological Operations and Concepts: Stud	lents will gain knowledge and understanding of the appropriate use of
The student will be able to:	technological operations, concepts and related applications	
	Essential Questions:	Classroom Applications: Learning Activities:
	1. Where are the number keys on the keyboard?	Use non-working keyboard to demonstrate location of number keys
8.1.P.A.4: Recognize that the	2. What basic technology terms do I need to know?	on keyboard. Give students a set of numbers activity and have
number keys are in a row on	3. How do I turn the computer and other smart	students find the numbers and type them in Microsoft Word.
the top of the keyboard.	toys on and off?	Students to print work.
	·	www.abcmouse.com – students to open their individual learning
8.1.P.A.5: Use basic		path created by the teacher and complete various number learning
technological terms in	Enduring Understandings (Students will understand	and counting exercises.
conversations (i.edigital	that)	www.abcya.com – students to open and complete learning number
camera, battery, screen,	1. Most keyboards (not all) have 2 locations for the	exercises. Use refrigerator magnet exercise to identify their age and
computer, Internet, mouse,	number keys – 1) top row above the letters 2)	place that number on the refrigerator.
keyboards, and printer).	number block on the far right.	Assessment Evidence:
	2. There are vocabulary words specifically used for	• Teacher created assessment for understanding of vocabulary terms:
8.1.P.A.6: Turn smart toys on	technology.	double-click, headphones, internet start page, keyboard, monitor,
and off.	3. You can turn on the computer and monitor by	mouse button, mouse wheel, space bar, website, enter, tab,
	pushing the "power on" button.	backspace, cursor, icon.
		Resources:
		Microsoft Office Word Program
	Conceptual Understanding: (Students will know	Google Chrome or Internet Explorer for <u>www.starfall.com</u> ,
	that)	www.tvokids.com, www.abcmouse.com
	1. Knowing the parts of they keyboard – letters,	Kidspiration Program
	numbers and "power-keys" enhances my	Headsprout Mousing Around online program
	understanding of computer functions and helps	• <u>www.learning.com</u>
	me become a more effective computer user.	• www.pbskids.com
		www.discoveryeducation.com
		• www.brainpopir.com
		• <u>www.tumblebooks.com</u>

www.bambooszoo.com

Subject/Grade Level Kindergarten		
Objective/Cluster/Concept/Cu mulative Progress Indicators Taken from CPI's in NJCCCS standards http://www.nj.gov/education/	Big Idea 3 8.1.P.B.1: Creativity and Innovation: The use of digital tools and media-rich resources enhances creativity and the construction of knowledge. Topic: Technology: Creativity and Innovation Overarching Goals: Using digital photography helps the student become more involved with the subject.	
aps/cccs	Goal 1: Creativity and Innovation: Use digital tools and media-rich resources to enhance creativity and the construction of knowledge.	
The student will be able to: 8.1.P.B.1: Use a digital camera to take a picture	Essential Questions: 1. How do I use a digital camera? 2. What are the basic functions of a digital camera? 3. How do I take a picture and what can I do with it? Enduring Understandings (Students will understand that) 1. A digital camera is easy to use and convenient. 2. You can use a digital camera as a tool to help you explore and understand other subjects. 3. You can use pictures to communicate your ideas. Conceptual Understanding: (Students will know that) 1. Taking basic pictures with a digital camera is simple, convenient and easy to use. 2. Pictures can be easily edited on the camera itself. 3. Pictures can be uploaded to a computer, can be viewed on a screen or smartboard, or emailed as attachments. 4. There are lots of ways to communicate with pictures.	 Classroom Applications: Learning Activities: Give students a list of items to look for in the classroom or in the school. They must take pictures and compile a presentation (slide show) of the things they found during their scavenger hunt to prove they found them all. Have each kindergartener choose a letter. Then go on a walk around the school. When the student finds something that begins with that letter, take a picture of the student with that object. Use the pictures to create a classroom alphabet chart. Take pictures for science projects: to document growth, such as plants, butterflies, frogs, etc. Use these pictures to illustrate life cycles or stages of growth. Let students take pictures of themselves and make trading cards. Make the cards in Word by making a table with 2 columns. Students should include information about themselves (name, birthday, favorite class, favorite cartoon, etc.) Take pictures of your classroom to make a virtual tour. Compile these into a brochure, slide show or web page. Assessment Evidence: Demonstrate the procedures for how to take a picture. Completion of any of the above learning activities. Resources: www.tvokids.com/snap-it http://takeacloserlook.homestead.com http://photoisland.com www.drscavanaugh.org/digitalcamera/whatdo.htm http://k-12.pisd.edu/techs/dhitt/digital/camideas.htm

Subject/Grade Level Kindergarten Objective/Cluster/Concept/C umulative Progress Indicators Taken from CPI's in NJCCCS standards http://www.nj.gov/education /aps/cccs The student will be able to: 8.1.P.C.1: Operate frequently used, high-quality, interactive games or activities in either screen or toy-based formats.

8.1.P.C.2: Access materials on a disk, cassette tape, or DVD. Insert a disk, cassette tape, CD-Rom, DVD, or other storage device and press "play" and "stop."

Big Idea 4

8.1.P.C.1: Communication and Collaboration: Students use digital tools to gain knowledge of environments that support the learning process and foster communication and collaboration in solving local or global issues and problems.

Topic: Technology: Communication and Collaboration

Overarching Goals: Understand and use technology systems.

Goal 1: Communication and Collaboration: Students use digital tools to gain knowledge of environments that support the learning process and foster communication and collaboration in solving local or global issues and problems.

Essential Questions:

- 1. How can I use technology without getting stuck?
- 2. How can I put information onto a disk, CD or DVD and what can I do with it?

Enduring Understanding (Students will understand that...):

- There are common problem-solving skills universal to most interactive games, programs and toy-based formats (such as: closing a program, drag and drop, toolbar functions,etc.)
- There are procedures for copying information to an external source (CD, DVD, disk) and for accessing it and saving it to a hard drive for future use.

Conceptual Understanding (Students will know that...):

- Computer programs have similar tools and toolbars. This makes technology easier to understand and use.
- The procedures for copying information onto a disk, CD or DVD and accessing that information is an important tool to communicate and use data.

Classroom Applications: Learning Activities:

- Break up the lesson into three parts. First, bring in disk. Explain it's
 function, how to use it and access information from it. Pre-load data onto
 each disk. Give each student a disk and have them practice putting it in,
 accessing information and saving it to a file. Follow the next 2 lessons
 with a DVD, then a USB.
- Have students open a word document, add information via teacher's instruction, save the file to the disk. Students can practice taking the disk out and put back in again to access the same file.

Assessment Evidence:

- Have students demonstrate how to properly put a usb, cd and/or dvd into a disk drive, and the procedures for accessing the information.
- Demonstrate how to information from an external source to a computer hard drive.
- Demonstrate how to navigate a web-based game or activity by opening the activity, using the logout or close button, using the back (arrow) button, accessing the toolbars to find a tool.

Resources:

- www.tvokids.com/snap-it
- http://takeacloserlook.homestead.com
- http://photoisland.com
- www.kodak.com
- www.drscavanaugh.org/digitalcamera/whatdo.htm
- http://k-12.pisd.edu/techs/dhitt/digital/camideas.htm
- www.starfall.com
- www.abcmouse.com
- www.learning.com
- <u>www.abcya.com</u>

Subject/Grade Level Kindergarten			
Objective/Cluster/Concept/C umulative Progress Indicators Taken from CPI's in NJCCCS standards http://www.nj.gov/education /aps/cccs	information in order to solve problems individually and collaboratively and to create and communicate knowledge. Topic: Technology: Research and Information Literacy		
The student will be able to:	Essential Questions: 1. How do I use the internet effectively?	Classroom Applications: Learning Activities: Use the Internet to take a class field trip. Take virtual tours of interesting places. Let students go on several	
8.1.P.E.1: Use the Internet to explore and investigate questions with teacher's support.	 Enduring Understandings (Students will understand that) 1. It is important to understand website layout. 2. You have to plan your strategy to guide your inquiry by knowing how to choose links and menus. Conceptual Understanding: (Students will know that) 1. Knowing how to navigate the internet is an 	tours on Brightlink. Use teacher led questions – Where is their digital neighborhood on this site? How might they wander away from this site? What bling do they see that could be distracting? Where are ads? What are ads? Demonstrate how 1) to get back to assigned website with the back button and tabbed browser 2) to use back arrow if click on wrong website by accident 3) to ignore ads that call for action. • Explore the planet – explore Google Earth with class. Show how to drag globe around, pan in and out with mouse wheel. Incorporate lesson vocabulary.	
	important tool in finding and selecting information sources, and will help their research	Assessment Evidence:	
	be more effective.	 Vocabulary comprehension Related 'virtual' to reality Used previously –learned skills Used Internet properly Showed good keyboarding habits Resources: Google Earth Websites for a class field trip Virtual Tour websites - 360 panorama of world, 3D toads and more, world of wonders, pomeii, Sistine chapel, virtual body, virtual farm, virtual tour of America, virtual tour – undersea or zoo, walk through the forest, The White House. 	

Curriculum Management System – Big Idea 6			
Subject/Grade Level			
Kindergarten			
Objective/Cluster/Concept/C	Big Idea 6		
umulative Progress Indicators	8.1.P.F.1: Critical Thinking, Problem Solving, and Dec	cision Making: Students will use digital tools to access, manage, evaluate,	
Taken from CPI's in NJCCCS	and synthesize information in order to solve problem	s individually and collaboratively and to create and communicate	
standards	knowledge.		
http://www.nj.gov/education	Topic: Technology: Critical Thinking, Problem Solving, and Decision Making:		
/aps/cccs	Overarching Goals: Awareness of computer components and basic computer operations; awareness of the Internet as a source		
	for information and communication.		
The student will be able to:	Goal 1: Critical Thinking, Problem Solving, and Decision	on Making: Students will use digital tools to access, manage, evaluate,	
	and synthesize information in order to solve problem	s individually and collaboratively and to create and communicate	
8.1.P.F.1: Navigate the basic	knowledge.		
functions of a browser,	Essential Questions:	Classroom Applications: Learning Activities:	
including how to open or close	1. What is the purpose of a browser?	Use the Internet to take a class field trip.	
windows and use the "back"	2. How do I use a browser?	Take virtual tours of interesting places.	
key.	3. How do I navigate through windows?	Have students practice locating web browser, web address using	
		websites they are already familiar with, help navigate through site,	
		using toolbars, back key, opening & closing windows program.	
	Enduring Understandings (Students will understand	Assessment Evidence:	
	that)	Teacher Observation	
	1. It is important to know how to perform basic	Used tools and toolbars	
	computer operations in order to navigate	Joined class discussions	
	windows and the Internet safely and effectively.	Demonstrate how 1) to get back to assigned website with the back	
		button and tabbed browser 2) to use back arrow if click on wrong	
	Conceptual Understanding: (Students will know	website by accident 3) to ignore ads that call for action.	
	that)	Resources:	
	Being aware of computer components and basic	• <u>www.tvokids.com/snap-it</u>	
	computer operations helps students use the	http://takeacloserlook.homestead.com	
	computer in order to solve problems, do	http://photoisland.com	
	research, create and communicate knowledge.	• <u>www.kodak.com</u>	
		<u>www.drscavanaugh.org/digitalcamera/whatdo.htm</u>	
		 http://k-12.pisd.edu/techs/dhitt/digital/camideas.htm 	
		• <u>www.starfall.com</u>	
		• <u>www.abcmouse.com</u>	
		• <u>www.learning.com</u>	
		• <u>www.abcya.com</u>	
		Windows Programs	

Subject/Grade Level Kindergarten		
Objective/Cluster/Concept/C umulative Progress Indicators Taken from CPI's in NJCCCS standards http://www.nj.gov/education /aps/cccs	Big Idea 7 8.1.2.A.1-2: Technological Operations and Concepts: Students will gain knowledge and understanding of the appropriate use of technological operations, concepts and related applications through the use of digital tools. Topic: Technology: Technological Operations and Concepts Overarching Goals: Help students develop an awareness of computer components, fundamental hardware issues, and basic computer operations. Goal 1: Technological Operations and Concepts: Students will gain knowledge and understanding of the appropriate use of	
 8.1.2.A.1: Identify the basic features of a computer and explain how to use them effectively. 8.1.2.A.2: Use technological terms in daily practice. 	Essential Questions: 1. What are the basic parts of a computer and what do they do? Enduring Understandings (Students will understand that) 1. Knowledge of computer parts and its uses will enhance their ability to use the computer effectively and appropriately. Conceptual Understanding: (Students will know that) 1. The use of technology and digital tools requires knowledge and appropriate use of operations and related applications.	Classroom Applications: Learning Activities: Children learn the names of the parts of the computer and get basic introduction to how it works. Assembling a computer model with cutouts reinforces their understanding of computer terms. Assessment Evidence: Teacher created paper quiz for identifying parts of the computer. Teacher directed. Teacher observation of basic understanding of various technology terms previously introduced and discussed. Resources: http://technology.pppst.com www.wartgames.com http://kidscomputerlessons.blogspot www.lessonplanet.com

Subject/Grade Level			
Kindergarten			
	Big Idea 8		
Objective/Cluster/Concept/C	8.1.2.C.1: Communication and Collaboration: S	Students use digital tools to gain knowledge of environments that support the	
umulative Progress Indicators	learning process and foster communication and	d collaboration in solving local or global issues and problems.	
Taken from CPI's in NJCCCS	Topic: Technology: Communication and Collab	oration	
standards	Overarching Goals: Develop cultural understanding and global awareness by engaging with learners of other cultures.		
http://www.nj.gov/education	Goal 1: Communication and Collaboration: Students use digital tools to gain knowledge of environments that support the		
/aps/cccs	learning process and foster communication and	d collaboration in solving local or global issues and problems.	
	Essential Questions:	Classroom Applications: Learning Activities:	
The student will be able to: 8.1.2.C.1: Engage in a variety	1. What kind of digital tools can I use to communicate with people around the world?	 Register with PenPal programs like Amazing Kids, International Pen Friends or Circle of Friends to communicate globally. Students can write letters, ask questions, etc. Communicate throughout the year with various 	
of developmentally	Enduring Understanding (Students will	topics.	
appropriate learning activities with students in other classes, schools, or countries using	understand that):1. You can develop an understanding of other cultures through the use of digital tools such	 Teach students how to use Skype to communicate with the Principal and other teachers within the school, as well as communicate with other classrooms around the world. 	
electronic tools.	as Skype, Google Docs, Twitter, PenPal sites		
	and blogging.	Assessment Evidence:	
		Teacher observation	
	Conceptual Understanding (Students will know that):	Completion of teacher assignment	
		Resources:	
	1. Digital tools and environments support the learning process and foster collaboration in solving local and global issues and problems.	 Students and teachers can create free websites, participate in global projects or communicate with students from around the world using Thinkquest. The Center for Innovation in Engineering and Science Education (CIESE) has designed interdisciplinary projects that utilize real time data for teachers and students worldwide. 	
		 Here Birdy, Birdy Project is an example of a collaborative project in which students from five North American schools gathered data about birds over time and analyzed trends. Global SchoolNet is the Internet's oldest (1995) and largest clearing- house for teacher-conducted global learning projects. 	
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•A list of teachers who teach at International Schools.