


Standard 8: Technology  
Classroom Application Document

<p><b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.</p>	<p><b>By the end of Grade 2</b></p>
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**Strand A: Technology Operations and Concepts:** Students demonstrate a sound understanding of technology concepts, systems and operations.

**Rationale:** Students should demonstrate appropriate and effective use of technology both personally and professionally to research, communicate, create and store information.

**Technology CPI**  
[8.1.2.A.2](#)  
Create a document with text using a word processing application.



**Instructional Design Ideas**

- Interdisciplinary Learning: Content area curriculum is developed while using relevant technology applications and cultivating skills.
- TPACK: Technology, pedagogy and content overlap.
  - Universal Design for Learning: Students may use accessibility features to invert colors, change font and increase size to ensure that students can view and design products comfortably.

**Sample Activity**

Using a word processing application create a “Wellness Class” document that is an informative text. Students summarize facts and definitions from the article about strategies to prevent the spread of common cold or flu. (See lesson link for article.) Revise, edit and share the final version with students and/or class guests, providing a reference and reinforcing good wellness practices.

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**Content Area CPI**  
**Comprehensive Health & PE**  
[2.1.2.C.2](#)  
Summarize strategies to prevent the spread of common diseases and health conditions.



**Technology Options**

- [Apache Open Office](#): A free, open productivity suite
- [Dragon Dictation](#): Speech to text by Nuance
- [MindMups](#): Supports visual thinking, organizing thoughts in a mind map that can be stored online or exported to use with other applications. Documents can be developed individually or shared in a collaborative environment.














**Common Core English**  
[CCSS.ELA-Literacy.CCRA.W.2](#)  
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

- [Microsoft Word APP](#): for android tablets
- [NeoOffice](#): Office applications for Mac OS X

**Tech Tip:** There are many free options available to use on the devices presently in your classroom. Inventory the resources available and search to locate compatible freeware, open source or apps.

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<p><b>Strand A: Technology Operations and Concepts:</b> Students demonstrate a sound understanding of technology concepts, systems and operations.</p>			
<p><b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.</p>			
	Time Tips That Transform Practice		Supporting Research and Resources
	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement
	<p><b>CCSS.ELA-Literacy.W.2.2:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/">http://www.corestandards.org/ELA-Literacy/CCRA/W/</a>  <b>Comprehensive Health &amp;PE 2.1.2.C.2:</b> <a href="http://www.state.nj.us/education/cccs/2014/chpe/">http://www.state.nj.us/education/cccs/2014/chpe/</a>  <b>Technology 8.1.2.A.2:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>  <b>Technological Pedagogical Content Knowledge (TPACK):</b> <a href="http://www.tpack.org">www.tpack.org</a></p>		
	<p><b>Multiple Means of Actions:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle2">http://www.udlcenter.org/aboutudl/udlguidelines/principle2</a>            Input is not limited to keys, voice to text and handwriting to text are alternative means to achieve the desired result.</p>		
	<p><b>Flu Prevention Lesson Plan: Create a Poster -</b>  <a href="http://kidshealth.org/classroom/prekto2/problems/conditions/colds_flu.pdf">http://kidshealth.org/classroom/prekto2/problems/conditions/colds_flu.pdf</a>            NOTE: Use a word processing program to create the poster reducing material needs.</p>		
	<p><b>Blast Off! Vocabulary Instruction Using a Virtual Field Trip:</b>  <a href="http://www.readwritethink.org/classroom-resources/lesson-plans/blast-vocabulary-instruction-using-946.html">http://www.readwritethink.org/classroom-resources/lesson-plans/blast-vocabulary-instruction-using-946.html</a>            The lesson plan includes links to games, extension activities and standards alignment.</p>		
	<p><b>Apache Open Office:</b> <a href="http://www.openoffice.org/">http://www.openoffice.org/</a>  <b>Dragon Dictation:</b> <a href="http://www.nuance.com/for-individuals/mobile-applications/dragon-dictation/index.htm">http://www.nuance.com/for-individuals/mobile-applications/dragon-dictation/index.htm</a>  <b>Microsoft Word for Android tablets:</b>  <a href="https://play.google.com/store/apps/details?id=com.microsoft.office.word">https://play.google.com/store/apps/details?id=com.microsoft.office.word</a>  <b>MindMup:</b> <a href="https://chrome.google.com/webstore/detail/mindmup-free-mind-map-web/dneaecjcgeppfpaokiifokeieopppej?hl=en">https://chrome.google.com/webstore/detail/mindmup-free-mind-map-web/dneaecjcgeppfpaokiifokeieopppej?hl=en</a>  <b>NeoOffice:</b> <a href="http://www.neooffice.org/neojava/en/index.php">http://www.neooffice.org/neojava/en/index.php</a></p>		

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<p><b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.</p>	<p><b>By the end of Grade 5</b></p>
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**Strand A: Technology Operations and Concepts:** Students demonstrate a sound understanding of technology concepts, systems and operations.

**Rationale:** Students should demonstrate appropriate and effective use of technology both personally and professionally to research, communicate, create and store information.




**Technology CPI**

**8.1.5.A.2**  
Format a document using a word processing application to enhance text and include graphics, symbols and/or pictures.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Engagement:** What different options are offered to students to complete an activity? Students are offered concept maps (digital or paper) to organize thoughts, and/or suggested sites to find graphics, symbols and/or pictures to import into a word processing document. They can be provided opportunities to draw, scan or import these items into a document, and/or develop a video diary of their work progress.

**Sample Activity**

Construct a latch using magnets to keep a door shut. Using a word processing application, write and format a report that organizes and defines the solution to this simple design problem. Clearly explain how it worked and insert a chart, graph or picture recording the results as evidence.

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**Content Area CPI**

**Next Generation Science 3PS2-4**  
Define a simple design problem that can be solved by applying scientific ideas about magnets.

**Common Core English**


**CCSS.ELA-LITERACY.CCRA.W.2**  
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

**Technology Options**

- **CAST Science Writer:** provides a structure to scaffold supports in developing the lab report. Text to speech is embedded for easy access
- Cell phone or iPad to capture images
- Scanner to convert printed image or sketch to digital for content variations

- **Microsoft Word APP:** For android tablets
- **NeoOffice:** Office applications for Mac OS X









**Tech Tip:** When copy and paste are not performing, use the control key strokes instead. First select the object (text, image, etc.) to be copied. Next hold the Ctrl key on the keyboard and “C” to copy or “V” to paste.









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<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 5</b>
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**Strand A: Technology Operations and Concepts:** Students demonstrate a sound understanding of technology concepts, systems and operations.













<b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.			
	Time Tips That Transform Practice		Supporting Research and Resources
	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<b>CCSS.ELA-Literacy.W.5.2:</b> <a href="http://www.corestandards.org/ELA-Literacy/W/5/2/">http://www.corestandards.org/ELA-Literacy/W/5/2/</a> <b>Next Generation Science – 3PS2-4:</b> <a href="http://www.nextgenscience.org/3fi-forces-interactions">http://www.nextgenscience.org/3fi-forces-interactions</a> <b>Technology 8.1.5.A.2:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>
	<b>Multiple Means of Representation:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle1">http://www.udlcenter.org/aboutudl/udlguidelines/principle1</a> Lost or forgotten homework is accessible from any device connected to the internet. Students can hear text using screen readers. Communication with parents is increased when the class web site is shared.
	Why retrofit your lessons when using technology to initially develop them can reduce barriers to information and save time by sharing files digitally.
	<b>BUY GREEN: Being an Eco-Friendly Consumer:</b> <a href="http://www.pbs.org/parents/eeeworld/lessons4_1.html">http://www.pbs.org/parents/eeeworld/lessons4_1.html</a> <b>Science Fair Lesson Plans:</b> <a href="http://www.brainpop.com/educators/community/lesson-plan/planning-projects/">http://www.brainpop.com/educators/community/lesson-plan/planning-projects/</a> The lesson plans include links to games, interactive sites and extension activities.
	<b>CAST Science Writer:</b> <a href="http://sciencewriter.cast.org/welcome;jsessionid=64D97BE37DFEDADBDC44D17A377F1DFC">http://sciencewriter.cast.org/welcome;jsessionid=64D97BE37DFEDADBDC44D17A377F1DFC</a> <b>Microsoft Word for Android tablets:</b> <a href="https://play.google.com/store/apps/details?id=com.microsoft.office.word">https://play.google.com/store/apps/details?id=com.microsoft.office.word</a> <b>NeoOffice:</b> <a href="http://www.neooffice.org/neojava/en/index.php">http://www.neooffice.org/neojava/en/index.php</a> <b>Text option for Copy/Paste keystrokes:</b> <a href="http://www.180techtips.com/082.html">http://www.180techtips.com/082.html</a> <b>Video option for Copy/Paste Tips:</b> <a href="https://www.youtube.com/watch?v=NqTxMSt99po">https://www.youtube.com/watch?v=NqTxMSt99po</a>
	<b>CAST Science Writer:</b> <a href="http://sciencewriter.cast.org/welcome;jsessionid=64D97BE37DFEDADBDC44D17A377F1DFC">http://sciencewriter.cast.org/welcome;jsessionid=64D97BE37DFEDADBDC44D17A377F1DFC</a> <b>Microsoft Word for Android tablets:</b> <a href="https://play.google.com/store/apps/details?id=com.microsoft.office.word">https://play.google.com/store/apps/details?id=com.microsoft.office.word</a> <b>NeoOffice:</b> <a href="http://www.neooffice.org/neojava/en/index.php">http://www.neooffice.org/neojava/en/index.php</a> <b>Text option for Copy/Paste keystrokes:</b> <a href="http://www.180techtips.com/082.html">http://www.180techtips.com/082.html</a> <b>Video option for Copy/Paste Tips:</b> <a href="https://www.youtube.com/watch?v=NqTxMSt99po">https://www.youtube.com/watch?v=NqTxMSt99po</a>





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<p><b>Strand A: Technology Operations and Concepts:</b> Students demonstrate a sound understanding of technology concepts, systems and operations.</p>		
<p><b>Rationale:</b> Students should demonstrate appropriate and effective use of technology both personally and professionally to research, communicate, create and store information.</p>		
<p><b><u>Technology CPI</u></b> <b><u>8.1.8A.5</u></b> Create a database query, sort and create a report and describe the process, and explain the report results.</p> 	<p style="text-align: center;"><b><u>Instructional Design Ideas</u></b></p> <ul style="list-style-type: none"> <li>• Interdisciplinary Learning: Content area curriculum is developed while using relevant technology applications and cultivating skills.</li> <li>• Rubrics for assessment</li> <li>• Multiple Means of Engagement: Students are offered the choice of analyzing and visually mapping the data using tools such as Excel or digital mapping tools and importing the data into a database. They can create graphs to display the final product, or create video depictions of changes that occurred in the graph, or use other methods to complete the task.</li> </ul>	<p style="text-align: center;"><b><u>Sample Activity</u></b></p> <p>Create a collaborative database with classmates who each enter their data for a survey completed on a relevant content area topic that addresses a problem and increases community awareness. Critically analyze the data by querying, sorting, and developing a graphical display. Use the analysis to validate any conclusions or hypothesis to persevere in solving the problems. Write an explanatory text to support the development of a public service document conveying ideas and concepts.</p> <div style="text-align: center;">  </div>
<p><b><u>Content Area CPI</u></b> <b><u>21<sup>st</sup> Century Life &amp; Careers C.RP8</u></b> Utilize critical thinking to make sense of problems and persevere in solving them.</p> <p><b><u>Common Core English</u></b> <b><u>CCSS.ELA-LITERACY.CCRA.W.2</u></b> Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.</p> 	<p style="text-align: center;"><b><u>Technology Options</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Audacity:</u></b> Create audio files to share online</li> <li>• Cell phone to capture video presentation</li> <li>• <b><u>Create a Graph:</u></b> visualizing data</li> <li>• <b><u>Google forms:</u></b> Can be used to develop surveys, text or with pictures, collect data and sort for analysis</li> <li>• <b><u>CutePDF:</u></b> to increase compatibility</li> </ul> <p><b>Tech Tip:</b> Not all files can be opened in all programs, they are not compatible. Use .pdf file format which has greater compatibility. The author must open the file and “save as” a .pdf file format.</p>	  

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	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement
	<b>21st Century Life &amp; Careers CRP8:</b> <a href="http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf">http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf</a> <b>CCSS.ELA-Literacy.W.8.2:</b> <a href="http://www.corestandards.org/ELA-Literacy/W/8/2/">http://www.corestandards.org/ELA-Literacy/W/8/2/</a> <b>Developing and Using Instructional Rubrics:</b> <a href="http://www.nesacenter.org/uploaded/conferences/FLC/2012/handouts/Arpin/ArpinReadingDevelopingUsingInstructionalRubrics.pdf">http://www.nesacenter.org/uploaded/conferences/FLC/2012/handouts/Arpin/ArpinReadingDevelopingUsingInstructionalRubrics.pdf</a> <b>Technology 8.1.8.A.2 and 8.1.8.A.5:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>		
	<b>Multiple Means of Engagement:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle3">http://www.udlcenter.org/aboutudl/udlguidelines/principle3</a> <b>Why, what and how to create rubrics:</b> <a href="http://www.udlcenter.org/implementation/examples/examples8_1">http://www.udlcenter.org/implementation/examples/examples8_1</a>		
	<b>Drive-Thru Nutrition:</b> <a href="http://www.educationworld.com/a_tech/techlp/techlp029.shtml">http://www.educationworld.com/a_tech/techlp/techlp029.shtml</a> Students can individually record their intake for a designated time period, do research to evaluate personal nutritional habits, and enter into a collaborative database to increase the amount of data for analysis. <b>Rock Your World Initial PSA Ideas:</b> <a href="http://www.rock-your-world.org/brainstorming-initial-psa-ideas-reviewing-project-requirements-planning-out-individual-psa-concepts">http://www.rock-your-world.org/brainstorming-initial-psa-ideas-reviewing-project-requirements-planning-out-individual-psa-concepts</a>		
	<b>Audacity:</b> <a href="http://sourceforge.net/projects/audacity/">http://sourceforge.net/projects/audacity/</a> <b>Create a Graph:</b> <a href="http://nces.ed.gov/nceskids/createagraph/">http://nces.ed.gov/nceskids/createagraph/</a> <b>CutePDF:</b> <a href="http://www.cutepdf.com/">http://www.cutepdf.com/</a> <b>Google Forms:</b> <a href="https://support.google.com/docs/answer/87809?hl=en">https://support.google.com/docs/answer/87809?hl=en</a>		









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<p><b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.</p>		<p><b>By the end of Grade 12</b></p>
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<p><b>Rationale:</b> Students should demonstrate appropriate and effective use of technology both personally and professionally to research, communicate, create and store information.</p>		
<p><b>Technology CPI</b></p> <p><u><a href="#">8.1.12.A.3</a></u> Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.</p> 	<p><b>Instructional Design Ideas</b></p> <ul style="list-style-type: none"> <li>• Interdisciplinary Learning: Content area curriculum is developed while using relevant technology applications and cultivating skills.</li> <li>• Multiple Means of Representation: A video can be shown and real world graphic examples of global environmental issues and the areas of concern can be shared and discussed.</li> </ul>	
<p><b>Content Area CPI</b></p> <p><b>Next Generation Science</b> <u><a href="#">HS-ESS3-4</a></u> Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.</p> <p><u><a href="#">CCSS.ELA-Literacy.CCRA.W.7</a></u> Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation</p> 	<p><b>Sample Activity</b></p> <p>Evaluate or refine a technological solution to reduce the impact of humans on natural systems. Use multiple sources and sustained research to present and identify the issue, and prior attempts to solve it. Collaborate online to further research other perspectives on the issue(s), previous solutions and their impact(s). Discuss a resolution. Pose a self-generated question to prepare a report to increase knowledge and awareness regarding the issues. Demonstrate understanding by recommending strategies to decrease or resolve the issue.</p> <p style="text-align: center;"><b>L</b></p>	<p><b>Technology Options</b></p> <ul style="list-style-type: none"> <li>• <u><a href="#">The Global Classroom Project</a></u>: facilitate global connections with an open project; register as a participant of a project seeking collaborators</li> <li>• <u><a href="#">ooVoo</a></u>: A synchronous conferencing or video recorder</li> <li>• <u><a href="#">Google Drive</a></u>: Allows users to create, communicate and share files and is compatible with a variety of operating systems.</li> </ul> <p><b>Tech Tip:</b> When viewing pages on the Internet the text on the screen may be too large to view the entire window or too small to read. Adjust the size by using the Control + or – keys. Hold the Ctrl key, next while holding use + to enlarge or – to decrease. Visit the Web Accessibility Initiative Site for additional accessibility tips <a href="http://www.w3.org/WAI/changedesign.html">http://www.w3.org/WAI/changedesign.html</a></p>  

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	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<b>CCSS.ELA-Literacy.W.11-12.7:</b> <a href="http://www.corestandards.org/ELA-Literacy/W/11-12/7/">http://www.corestandards.org/ELA-Literacy/W/11-12/7/</a> <b>Next Generation Science HS-EES3-4:</b> <a href="http://www.nextgenscience.org/print/1148">http://www.nextgenscience.org/print/1148</a> <b>Technology 8.1.12.A.3:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>
	<b>Multiple Means of Representation:</b> Guideline 1– Learners differ in the ways that they perceive and comprehend information that is presented to them. There is not one means of representation that will be optimal for all learners; providing options for representation is essential. Teachers should also encourage students to customize resources by modifying the view on screen and selecting a format compatible to their learning style. <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle1">http://www.udlcenter.org/aboutudl/udlguidelines/principle1</a> <b>Teacher vs Student-Centered Instruction:</b> <a href="http://www.nclrc.org/essentials/goalsmethods/learncentpop.html">http://www.nclrc.org/essentials/goalsmethods/learncentpop.html</a>
	<b>Collaborative Projects with lesson plans:</b> <a href="http://www.ciese.org/materials/k12/">http://www.ciese.org/materials/k12/</a> <b>Multiple lesson plans with asynchronous communication:</b> <a href="http://www.pbs.org/independentlens/classroom/web-originals/">http://www.pbs.org/independentlens/classroom/web-originals/</a>
 	<b>Google Drive:</b> <a href="https://tools.google.com/dlpage/drive">https://tools.google.com/dlpage/drive</a> <b>Getting Started with Google Drive:</b> <a href="https://support.google.com/drive/answer/2424384?hl=en">https://support.google.com/drive/answer/2424384?hl=en</a> <b>What is Google Drive:</b> <a href="http://www.gcflearnfree.org/googledriveanddocs/1.2">http://www.gcflearnfree.org/googledriveanddocs/1.2</a> <b>The Global Classroom Project:</b> collaborative projects - <a href="http://theglobalclassroomproject.org/category/our-contributors/ernille-ripp/">http://theglobalclassroomproject.org/category/our-contributors/ernille-ripp/</a> <b>Cool Ways to Use Skype in the Classroom:</b> <a href="http://www.teachhub.com/using-skype-classroom">http://www.teachhub.com/using-skype-classroom</a> <b>ooVoo – synchronous video chat or video recording:</b> <a href="http://www.oovoo.com/home.aspx">http://www.oovoo.com/home.aspx</a>



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**By the end of Grade 2**

**Strand B: Creativity and Innovation:** Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.

**Rationale:** Digital tools offer opportunities for new experiences and means of outreach and collaboration that support creative and innovative approaches to problem solving and product development.

**Technology CPI**

**8.1.2.B.1**

Illustrate and communicate original ideas and stories using multiple digital tools and resources.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Representation:** Provide the assignment in both written and digital formats. Share the file online for use of parents and students. Digital copies can then be printed by

**Sample Activity**

Use a variety of digital tools and resources to produce, illustrate and publish a digital scrapbook. Collaborate with peers discussing the roles and responsibilities of family members. Include information about each member's responsibilities in the family and anything that makes the person special. With guidance and support from adults, images (hand drawn/ scanned, digital pictures or clip art) can be inserted.



parents or students and can be customized for the user (change print size, adjust contrast, use a screen reader to hear the content, etc.) meeting the needs of any learner.



**Content Area CPI**

**Health & PE**

**2.4.2.A.2**

Distinguish the roles and responsibilities of different family members.

**Common Core English**

**CCSS.ELA-LITERACY.CCRA.W.6**

Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

**Technology Options**

- **CAST Bookbuilding:** A free resource to create, save, print and publish if desired.

- **MyEbookMaker:** Create books in the cloud.
- **PicGrid-Photo Collage:** A free app for android Maker.
- **Pics4Learning:** A free gallery of photos and clipart.
- **Scrap It for iPad:** Free scrapbooking app for iPad.

**Tech Tip:** The saying is “A Picture is Worth a Thousand Words.” Did you know copyright applies to images too! If the images used are not the original work of the student, this is a teachable moment for increasing understanding and methods to give credit.









**[12 Most Perfect Ways to Ensure You're Legally Using Online Photos.](#)**









Standard 8: Technology  
Classroom Application Document

<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 2</b>
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**Strand B: Creativity and Innovation:** Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.

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	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Assessment

	<b>CCSS.ELA-Literacy.W.2.6:</b> <a href="http://www.corestandards.org/ELA-Literacy/W/2/">http://www.corestandards.org/ELA-Literacy/W/2/</a> <b>Health and Physical Education:</b> <a href="http://www.state.nj.us/education/cccs/2014/chpe/">http://www.state.nj.us/education/cccs/2014/chpe/</a> <b>Technology 8.1.2.B.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>
 	<b>CAST UDL and Book Builder</b> can be used to prepare and distribute the assignments increasing access to the directions while reducing the need to repeat directions: <a href="http://www.cast.org/learningtools/book_builder/">http://www.cast.org/learningtools/book_builder/</a>
	<b>Taking Photos of Curious George: Exploring Character Through Images:</b> <a href="http://www.readwritethink.org/classroom-resources/lesson-plans/taking-photos-curious-george-986.html?tab=2#tabs">http://www.readwritethink.org/classroom-resources/lesson-plans/taking-photos-curious-george-986.html?tab=2#tabs</a> <b>What do you know about your town?:</b> <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=4331">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=4331</a> <b>Year of Memories:</b> <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=2432">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=2432</a>
 	<b>CAST Bookbuilding:</b> <a href="http://www.cast.org/learningtools/book_builder/">http://www.cast.org/learningtools/book_builder/</a> <b>MyEbookMaker:</b> <a href="http://www.myebookmaker.com/">http://www.myebookmaker.com/</a> <b>PicGrid-Photo Collage:</b> <a href="https://play.google.com/store/apps/details?id=com.rcplatform.photocollage&amp;hl=en">https://play.google.com/store/apps/details?id=com.rcplatform.photocollage&amp;hl=en</a> <b>Pics4Learning:</b> <a href="http://Pics4Learning">Pics4Learning</a> <b>Scrap It for iPad:</b> <a href="https://itunes.apple.com/us/app/scrap-it-hd/id496854171?mt=8">https://itunes.apple.com/us/app/scrap-it-hd/id496854171?mt=8</a> <b>What is Plagiarism:</b> <a href="http://kidshealth.org/kid/feeling/school/plagiarism.html">http://kidshealth.org/kid/feeling/school/plagiarism.html</a>

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 5**

**Strand B: Creativity and Innovation:** Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.

**Rationale:** Digital tools offer opportunities for new experiences and means of outreach and collaboration that support creative and innovative approaches to problem solving and product development.

**Technology CPI**

**8.1.5.B.1**

Collaborate to produce a digital story about a significant local event or issue based on first-person interviews.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Action and Expression:** “There is no medium of expression that is equally suited for all learners or for all kinds of communication. On the contrary, there are media, which seem poorly suited for some kinds of expression, and for some kinds of learning. While a learner with dyslexia may excel at story-telling in conversation, he may falter when telling that same story in writing. It is important to provide alternative means for expression to allow the learner to appropriately (or easily) express knowledge, ideas and concepts in the learning environment” (udlcenter.org).

**Sample Activity**

Collaborate to write a digital story examining the impact of a local issue. Take notes from first person-interviews and print and digital sources to convey ideas and information clearly. Consider the perspectives of different groups, including community members and local officials. Categorized information and provide a list of sources. Make an entry (audio, video, picture, written) to a shared digital file explaining how individual perspective and experience cause different interpretations.



**Content Area CPI**

**Social Studies**

**6.3.4.A.2**

Examine the impact of a local issue by considering the perspectives of different groups, including community members and local officials.

**Common Core English**

**CCSS.ELA-Literacy.CCRA.W.8**

Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
















**Technology Options**

- **Podomatic:** Students create radio announcements as one option to share information while not being in front of a camera.
  - Smartphones can be used to capture video.
- **Wikispaces Classroom:** Create a class page shared with all learners. Students see entries of their classmates. Individual pages can be created too where students may draft a response and copy to the shared page. The creator and/or instructor can see all pages and historical entries.
- **Wise Mapping:** A graphic organizer for brainstorming. The file is stored online, can be shared and embedded into other programs.

**Tech Tip:** Interpreting the URL can keep you safer. The “S” in https stands for secure.



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	<b>CCSS.ELA-LITERACY.W.4.2:</b> <a href="http://www.corestandards.org/ELA-Literacy/W/4/#CCSS.ELA-Literacy.W.4.8">http://www.corestandards.org/ELA-Literacy/W/4/#CCSS.ELA-Literacy.W.4.8</a> <b>Social Studies 6.1.4.D.19:</b> <a href="http://www.state.nj.us/education/cccs/2014/ss/">http://www.state.nj.us/education/cccs/2014/ss/</a> <b>Technology 8.1.5.B.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>		
 	<b>Introduction to UDL: an online module</b> <a href="http://udlonline.cast.org/page/module1/13/?jsessionid=31AB536435D7B5B57965EAA061101DFB">http://udlonline.cast.org/page/module1/13/?jsessionid=31AB536435D7B5B57965EAA061101DFB</a> <b>UDL Guideline 5: Provide Options for Communication and Expression:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle2">http://www.udlcenter.org/aboutudl/udlguidelines/principle2</a>		
	<b>Celebration of Cultures:</b> <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=54">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=54</a> <b>Self Portrait:</b> <a href="https://www.teachervision.com/multiculturalism/lesson-plan/5.html?detoured=1">https://www.teachervision.com/multiculturalism/lesson-plan/5.html?detoured=1</a>		
	<b>Google Drive: Customizing the experience – when working online students can highlight and change the size of text:</b> <a href="https://support.google.com/docs/answer/1663349?hl=en">https://support.google.com/docs/answer/1663349?hl=en</a> <b>Podomatic:</b> <a href="https://www.podomatic.com/login">https://www.podomatic.com/login</a> <b>Wikispaces Classroom:</b> <a href="https://www.wikispaces.com/content/classroom">https://www.wikispaces.com/content/classroom</a> <b>Wise Mapping:</b> <a href="http://www.wisemapping.com">http://www.wisemapping.com</a>		

Standard 8: Technology  
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**Strand B: Creativity and Innovation:** Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.

**Rationale:** Digital tools offer opportunities for new experiences and means of outreach and collaboration that support creative and innovative approaches to problem solving and product development.

**Technology CPI**

**8.1.8.B.1**  
Synthesize and publish information about a local or global issue or event (ex. telecollaborative project, blog, school web).




**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Action and Expression:** When working memory is limited results can be disorganized. It is important to provide a variety of internal scaffolds so focus can be returned to the intended content rather than the process. Online resources like to do lists, mind mapping, Voice Thread, may be used to reduce misplaced or lost resources returning time and focus to the intended topic.

**Sample Activity**

Produce and publish a clear and coherent written community announcement informing readers about a local or global issue. Gather and synthesize relevant information from multiple print and digital resources, use search terms effectively, assess the credibility and accuracy of each source. Quote or paraphrase the data and conclusions of others while avoiding plagiarism and following standard format for citations. Develop this announcement in a style appropriate to the task and the community served.

[Live Binder](#) is an online replacement for a three ring binder.



**Content Area CPI**


**CAREER READY PRACTICES CRP8**  
Employ valid and reliable research strategies.

**CCSS.ELA-LITERACY.CCRA.W.8**  
Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

**Technology Options**

- **C-Span Classroom:** Free resources for teaching government and civics. Watch video clips, download podcasts, read current news articles.
- **Newser:** Constantly updated news presented in a pictorial grid.









- **Newseum:** Today's Front Pages. Compare the same news item from different regions.
- **Weebly :** Create a free class website to store the announcements and share with community members.








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	<p><b>CCSS. Career Practice:</b><a href="http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf">http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf</a></p> <p><b>CCSS.ELA-LITERACY.W.8.8:</b> <a href="http://www.corestandards.org/ELA-Literacy/W/8/#CCSS.ELA-Literacy.W.8.8">http://www.corestandards.org/ELA-Literacy/W/8/#CCSS.ELA-Literacy.W.8.8</a></p> <p><b>Technology 8.1.8.B.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a></p>
  	<p><b>Multiple Means of Action and Expression:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle2">http://www.udlcenter.org/aboutudl/udlguidelines/principle2</a></p> <p><b>Live Binder:</b> is an online three ring binder. Organize links to external documents, files and evidence for evaluation. Compatible with multiple platforms and devices. <a href="http://www.livebinders.com/welcome/education?showsubtab=education">http://www.livebinders.com/welcome/education?showsubtab=education</a></p> <p><b>Live Binders Tips and Tricks:</b> <a href="http://www.livebinders.com/play/play?present=true&amp;id=3342">http://www.livebinders.com/play/play?present=true&amp;id=3342</a></p>
	<p><b>Digital Video Interviews:</b> <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=2206">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=2206</a></p> <p><b>Interview with Ben Franklin:</b> <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=7557">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=7557</a></p> <p><b>Weekly Current Event Podcast:</b> video or text version are alternatives to podcast - <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=230">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=230</a></p>
	<p><b>C-Span Classroom:</b> <a href="http://www.c-spanclassroom.org/">http://www.c-spanclassroom.org/</a></p> <p><b>Newser:</b> <a href="http://www.newser.com">http://www.newser.com</a></p> <p><b>Newseum:</b> <a href="http://www.newseum.org/todaysfrontpages/">http://www.newseum.org/todaysfrontpages/</a></p> <p><b>Weebly:</b> online classroom to enhance onsite lessons <a href="https://education.weebly.com/">https://education.weebly.com/</a></p>

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 12**

**Strand B: Creativity and Innovation:** Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.

**Rationale:** Digital tools offer opportunities for new experiences and means of outreach and collaboration that support creative and innovative approaches to problem solving and product development.

**Technology CPI**

**8.1.12.B.2**

Apply previous content knowledge by creating and piloting a digital learning game or tutorial.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Engagement:** Students have choices of planning and expressing their results in various formats. The method used to achieve the end result will vary for each participant. Offer additional

tools to students such as: graphic organizers to create an outline and organize thoughts when writing information and explanatory text.



**Sample Activity**

Challenge students to create an outline for a video game to teach equations and inequalities in one variable or encompass any curriculum-based, teacher-approved concept. Create a digital version of this game and a written informative/ explanatory text including user directions on how to use the game to examine and analyze in detail the complex ideas presented. Use peer review to examine the directions, confirming organization and accuracy. Debug and repeat as needed.

(See the Build a World Lesson)



**Technology Options**

- **Alice:** Is educational software that teaches students programming in a 3D environment.
- **Scratch:** Enables students to make and share games. There are multiple levels of proficiency and resources for lesson planning and delivery.

**Content Area CPI**

**Math/Content/HSA/CED/A/1/**  
Create equations and inequalities in one variable and use them to solve problems.

**CCSS.ELA-LITERACY.CCRA.W.2**

Write informative/ explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.











- **Classcraft:** Embed your learning objectives into a role-playing game.
- **GameSalad:** Works on a variety of platforms. No coding required.
- **Game Salad Cookbook Tutorial:** An interactive tutorial which can be used as a classroom resource.
- **Sploder:** A collaborative environment to play, create and test games to submit for feedback. No programming skills are required.
- **Wise Mapping:** A graphic organizer for brainstorming. The file is stored online, can be shared and embedded into other programs.







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	<p><b>Math: Content HSA/CED/A/1/:</b> <a href="http://www.corestandards.org/ELA-Literacy/W/11-12/2/CCSS.MATH.CONTENT.HSF.LE.A.1.B">http://www.corestandards.org/ELA-Literacy/W/11-12/2/CCSS.MATH.CONTENT.HSF.LE.A.1.B:</a>  <a href="http://www.corestandards.org/Math/Content/HSA/CED/A/1/">http://www.corestandards.org/Math/Content/HSA/CED/A/1/</a></p> <p><b>Research Spotlight on Project Based Learning:</b> <a href="http://www.nea.org/tools/16963.htm">http://www.nea.org/tools/16963.htm</a></p> <p><b>Technology 8.1.12.B.2:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a></p>
	<p><b>Lesson 4: Build a World: Putting It All Together:</b>  <a href="http://www.scholastic.com/browse/lessonplan.jsp?id=1421">http://www.scholastic.com/browse/lessonplan.jsp?id=1421</a> NOTE: Scholarship opportunity provided by Scholastic Awards program. There are additional lessons provided for lower and higher skill levels.</p>
  	<p><b>Alice:</b> <a href="http://www.alice.org/index.php?page=what_is_alice/what_is_alice">http://www.alice.org/index.php?page=what_is_alice/what_is_alice</a></p> <p><b>Activate:</b> <a href="http://www.activategames.org/resources">http://www.activategames.org/resources</a></p> <p><b>Classcraft:</b> <a href="http://www.classcraft.com">www.classcraft.com</a></p> <p><b>GameSalad:</b> Works on a variety of platforms. No coding required.  <a href="https://help.gamesalad.com/hc/en-us/articles/201824316">https://help.gamesalad.com/hc/en-us/articles/201824316</a></p> <p><b>Game Salad Cookbook Tutorial:</b> <a href="https://help.gamesalad.com/hc/en-us/categories/200134158/">https://help.gamesalad.com/hc/en-us/categories/200134158/</a></p> <p><b>Spolder:</b> <a href="http://www.spolder.com">http://www.spolder.com</a></p> <p><b>Wise Mapping:</b> A graphic organizer for brainstorming. <a href="http://www.wisemapping.com">http://www.wisemapping.com</a></p>



Standard 8: Technology  
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**By the end of Grade 2**

**Strand C: Communication and Collaboration:** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

**Rationale:** Students’ ability to communicate and collaborate both locally and globally is enhanced by the use of technology tools.

**Technology CPI**

**8.1.2.C.1**

Engage in a variety of developmentally appropriate learning activities with students in other classes, schools, or countries using various media formats such as online collaborative tools, and social media.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Action and Expression:** It has been said that a picture says a thousand words. Use pictures to supplement text giving multiple ways to gain knowledge and experience the

lesson. Empower students giving them the opportunity to use multiple resources (draw, collect pictures, print digital images) to demonstrate understanding.



**Sample Activity**

Collect rock samples from the surrounding area. Classify the rocks by size, shape, etc. to observe the similarities and differences of the materials they are made of. Capture an image of a rock sample; develop a description to share online. Recall your experiences to collaborate with students in other classes, schools, or countries to compare rock classifications in different areas. (See Rock Hunter lesson link.)



**Content Area CPI**

**NEXT GENERATION SCIENCE 2-PS1-1**

Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

**CCSS.ELA-LITERACY.CCRA.W.6**

Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

**Technology Options**

- **Digital device:** A means to capture images (phone, tablet, camera).
- **Google Drive:** Use forms for collaborative data input and the ability to manipulate and share the data.
















- **Wise Mapping:** A graphic organizer for brainstorming. The file is stored online, can be shared and embedded into other programs.
- **ooVoo:** Synchronous conferencing or video recorder.
- **Google Drive:** Documents can be collaboratively developed and shared online.

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	<b>Multiple Means of Representation:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle1">http://www.udlcenter.org/aboutudl/udlguidelines/principle1</a>
	<b>Rock Hunter:</b> <a href="http://sciencenetlinks.com/lessons/rock-hunters/">http://sciencenetlinks.com/lessons/rock-hunters/</a> <b>Square of Life Project: Studies in Local and Global Environment:</b> The lesson plans include links to games, interactive sites, extension activities and standards alignment: <a href="http://ciese.org/curriculum/squareproj/">http://ciese.org/curriculum/squareproj/</a>
	<b>There's a Nightmare in My Closet:</b> <a href="http://www.monsterexchange.org/teacher_parent/lesson2.htm#resources">http://www.monsterexchange.org/teacher_parent/lesson2.htm#resources</a>
	<b>Google Drive: Forms:</b> <a href="https://support.google.com/docs/answer/2839737?hl=en">https://support.google.com/docs/answer/2839737?hl=en</a> <b>Google Drive: Docs:</b> Overview of docs, sheets and slides: <a href="https://support.google.com/docs/answer/49008?hl=en">https://support.google.com/docs/answer/49008?hl=en</a> <b>ooVoo:</b> Synchronous video chat or video recording: <a href="http://www.oovoo.com/home.aspx">http://www.oovoo.com/home.aspx</a> <b>Wise Mapping:</b> A graphic organizer for brainstorming: <a href="http://www.wisemapping.com">http://www.wisemapping.com</a>

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**By the end of Grade 5**

**Strand C: Communication and Collaboration:**

**Rationale:** Students' ability to communicate and collaborate both locally and globally is enhanced by the use of technology tools.

**Technology CPI**

**8.1.5.C.1**

Engage in online discussions with learners of other cultures to investigate a worldwide issue from multiple perspectives and sources, evaluate findings and present possible solutions, using digital tools and online resources for all steps.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
  - **Multiple Means of Engagement:** Technology is one component useful in overcoming hurdles which may block access to content. Students are provided with options for writing their opinions such as spell check, prediction software, and/or a graphic organizer to organize thoughts.



**Sample Activity**

If you were offered the ability to address world leaders, what would you tell them? Write an opinion piece expressing your point of view about a global issue. Include reasons and information to support your view. Post the opinion piece in an online discussion forum with learners in the U.S. and other countries to explore alternative opinions and multiple perspectives. Write a reflective opinion piece using the online discussion as a resource.



**Content Area CPI**

**Social Studies 6.1.4.A.15**

Explain how and why it is important that people from diverse cultures collaborate to find solutions to community, state, national, and global challenges.

**CCSS.ELA-LITERACY.CCRA.W.1**

Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
















**Technology Options**

- **ePals:** Offers students projects to join and participate in, or the ability to submit their own project looking for participants.
- **Google Drive:** Offers tools to create, collaborate, share, and store documents that are compatible with a variety of operating systems. Documents can be accessed from any internet connection.
- **ooVoo:** Synchronous conferencing or video recorder – supports real time oral discussions.
- **The Global Classroom Project:** Offers projects from around the globe, seeking collaborators.
- **Thunder:** A free screen reader that helps to close reading level gaps and vision impairments (translates text to audio).



Standard 8: Technology  
Classroom Application Document

<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.		<b>By the end of Grade 5</b>	
<b>Strand C: Communication and Collaboration:</b> Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.			
<b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.			
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	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement
	<b>Social Studies 6.1.4.A.15 :</b> <a href="http://www.corestandards.org/ELA-Literacy/L/5/#CCSS.ELA-Literacy.L.5.2">http://www.corestandards.org/ELA-Literacy/L/5/#CCSS.ELA-Literacy.L.5.2</a> <b>CCSS.ELA-LITERACY.CCRA.W.1:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.1">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.1</a> <b>Technology 8.1.5.C.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>		
	<b>Multiple Means of Engagement:</b> Optimize relevance, value, and authenticity: <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle3">http://www.udlcenter.org/aboutudl/udlguidelines/principle3</a>		
	<b>Committee on Teaching about the United Nations (CTAUN)</b> has many resources, starter topics and opportunities to participate in global competitions: <a href="http://www.ctaun.org/">http://www.ctaun.org/</a> <b>Engineering Solutions:</b> <a href="http://sciencenetlinks.com/lessons/engineering-solutions/">http://sciencenetlinks.com/lessons/engineering-solutions/</a>		
 	<b>ePals:</b> Collaborative projects: <a href="http://www.epals.com/#!/main">http://www.epals.com/#!/main</a> <b>Google Drive:</b> <a href="https://www.google.com/drive/">https://www.google.com/drive/</a> <b>ooVoo:</b> Synchronous video chat or video recording- <a href="http://www.oovoo.com/home.aspx">http://www.oovoo.com/home.aspx</a> <b>The Global Classroom Project:</b> Collaborative projects: <a href="http://theglobalclassroomproject.wordpress.com/">http://theglobalclassroomproject.wordpress.com/</a> <b>Thunder:</b> <a href="http://www.screenreader.net/index.php?pageid=11">http://www.screenreader.net/index.php?pageid=11</a>		

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 8**

**Strand C: Communication and Collaboration:** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

**Rationale:** Students' ability to communicate and collaborate both locally and globally is enhanced by the use of technology tools.



**Technology CPI**

**8.1.8.C.1**

Collaborate to develop and publish work that provides perspectives on a global problem for discussions with learners from other countries.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Real world learning, not done in isolation.** Assignments can be evaluated by two different content area experts to score and give feedback, e.g. English for structure, Social Studies for content.
- **Multiple Means of Representation:** Scaffold layers of support to assist learners in processing information. Layers of support may be modeling the process, using mind maps or graphic organizers to identify relevant relationships and concepts and/or use video to illustrate concepts.  

**Sample Activity**

Collaborate with peers to investigate and analyze the power struggle among European countries to determine the impact on people living in Europe and the Americas during the Colonial period. Use Internet resources to produce and publish writing that clearly and effectively presents the relationship and how the struggle has impacted individuals then and today. Post the findings in an online forum to discuss with learners from other countries.




**Content Area CPI**



**Social Studies 6.1.8.D.2.a**

Analyze the power struggle among European countries, and determine its impact on people living in Europe and the Americas.

**CCSS.ELA-LITERACY.CCSS W.6**

Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others. 

**Technology Options**

- **Blurb:** Creations are stored online, increasing access and reducing the need for storage space.
- **BookWright:** Download and work offline. Files can be uploaded for publication if desired.
- **Google Drive –slides:** A free presentation tool where each slide represents a page. Collaborate and share with teachers, students or community as desired.
- **Classroom20:** Is an online community for educators to collaborate using technology. It is designed for teachers at different technology skill levels.  

Standard 8: Technology  
Classroom Application Document

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**By the end  
of Grade 12**

**Strand C: Communication and Collaboration:** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

**Rationale:** Students' ability to communicate and collaborate both locally and globally is enhanced by the use of technology tools.

**Technology CPI**

**8.1.12.C.1**

Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.



**Instructional Design Ideas**

- Content area curriculum is developed while using relevant technology applications and cultivating skills.
- Engage learners by using social media tools they commonly use.
- Multiple Means of Engagement: Foster a virtual, collaborative environment between peers through social media, Skype or other digital tool to increase availability of supports. Record collaborative peer activities and post online to repeat and review as needed.



**Sample Activity**

Design an innovative solution to the complex real world problem of plastics in the oceans. Collaborate with peers and/or experts to break down the problem into smaller more manageable problems that can be solved through engineering. Use technology to support collaboration and research and to publish and share solutions. Respond to and update your work from ongoing feedback, including new arguments and information.



**Content Area CPI**

**HS-ETS1-2**

Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering

**CCSS.ELA-LITERACY.CCRA.W.6**

Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.



**Technology Options**

- [Edublogs.org](http://Edublogs.org): An established secure school community supporting educational projects. Password protected or open for public viewing.
- [GlobalSchoolNet](http://GlobalSchoolNet): Linking students around the world.
- [International Projects or Partners Place](http://International Projects or Partners Place) (iPoPP): A place for educators and youth worldwide to find global learning projects and partners.
- [International Cyber Fair](http://International Cyber Fair) : An authentic learning program used by schools and youth organizations around the world.









**Tech Tip:** Fishing for menus can be time consuming and frustrating. An alternative is to point to the desired text or item with the cursor and “right” click to display related menu options.







Standard 8: Technology  
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<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 12</b>
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**Strand C: Communication and Collaboration:** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

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	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

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	<b>Multiple Means of Engagement:</b> Foster collaboration and communication: <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle3">http://www.udlcenter.org/aboutudl/udlguidelines/principle3</a>
	<b>Documenting our Senior Citizens Lives:</b> Can technology simplify tasks they struggle to perform?: <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=3073">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=3073</a> <b>Energy System and Solutions:</b> <a href="http://www.clarkson.edu/highschool/k12/project/energysystems.html">http://www.clarkson.edu/highschool/k12/project/energysystems.html</a>
	<b>Solutions for Real World Economic Problems in the Classroom:</b> <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=4671">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=4671</a>
	<b>Edublogs:</b> <a href="http://edublogs.org/">http://edublogs.org/</a> <b>Global Education Conference:</b> <a href="http://www.globaleducationconference.com/">http://www.globaleducationconference.com/</a> <b>International Cyber Fair:</b> <a href="http://www.globalschoolnet.org/gsnf/">http://www.globalschoolnet.org/gsnf/</a> <b>International Projects or Partners Place:</b> <a href="http://www.globalschoolnet.org/ipopp/index.html">http://www.globalschoolnet.org/ipopp/index.html</a>

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 2**

**Strand D: Digital Citizenship:** Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

**Rationale:** Students must practice digital citizenship which includes taking responsibility for their online activities and understanding the impacts of their actions.

**Technology CPI**

**8.1.2.D.1**

Develop an understanding of ownership of print and nonprint information.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Action and Expression:** Provide idea starters or open ended questions used to reinforce directions. Provide students with options to create their product by writing (word Processing), drawing (graphics application), creating a video, a Voice Thread or a social story.



**Sample Activity**

Gather print or digital images from any available resource depicting unfair or bullying actions. Create a caption and describe solutions or ways they could help resolve the bullying or unfair action being depicted in the image. Identify and include the source and ownership of the image used and share.



**Content Area CPI**

**Social Studies**

**6.3.4.D.1**

Identify actions that are unfair or discriminatory, such as bullying and propose solutions to address such actions.

**Common Core English**

**CCSS.ELA-LITERACY.W.8**

Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

**Technology Options**

- **Apache Open Office:** A free, open productivity suite which can be installed on your devices and used offline.
- **Google Drive:** Offers tools to create, collaborate, share, and store documents that are compatible with a variety of operating systems. Documents can be accessed from any internet connection. Documents can be exported to compatible software programs or portfolios.
- **NeoOffice:** Office applications for Mac OS X.
- **The Story Creator:** “*Easy Story Book Maker for Kids*”

**Tech Tip:** A tip from the Federal Bureau of Investigation (FBI.gov) is to remember people online may not be who they say they are. Tell an adult if someone contacts you who you do not know. Games and lessons are included as part of this site.


















Standard 8: Technology  
Classroom Application Document

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	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<p><b>CCSS.ELA-Literacy.CCRA.W.8:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.8">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.8</a></p> <p><b>Social Studies 6.3.4.D.1:</b> <a href="http://www.state.nj.us/education/cccs/2014/ss/">http://www.state.nj.us/education/cccs/2014/ss/</a></p> <p><b>Technology 8.1.2.D.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a></p>
	<p><b>UDL and Idea Starters:</b> <a href="http://udl-toolkit.cast.org/demo/reading?5&amp;loc=features.xml_1123">http://udl-toolkit.cast.org/demo/reading?5&amp;loc=features.xml_1123</a></p>
	<p><b>Cathy Captions:</b> <a href="http://www.educationworld.com/a_lesson/00-2/lp2176.shtml">http://www.educationworld.com/a_lesson/00-2/lp2176.shtml</a></p> <p><b>No Bully Zone Lesson Plan: Responding to and Preventing Bullying:</b> <a href="http://www.brainpop.com/educators/community/lesson-plan/no-bully-zone-lesson-plan-responding-to-and-preventing-bullying/?bp-jr-topic=internet-safety">http://www.brainpop.com/educators/community/lesson-plan/no-bully-zone-lesson-plan-responding-to-and-preventing-bullying/?bp-jr-topic=internet-safety</a></p>
  	<p><b>Apache Open Office:</b> <a href="http://www.openoffice.org/">http://www.openoffice.org/</a></p> <p><b>Getting Started with Google Drive:</b> <a href="https://support.google.com/drive/answer/2424384?hl=en">https://support.google.com/drive/answer/2424384?hl=en</a></p> <p><b>Internet Safety for Kids</b> (includes video, lessons, images, interactive games): <a href="https://jr.brainpop.com/health/besafe/internetsafety/">https://jr.brainpop.com/health/besafe/internetsafety/</a></p> <p><b>NeoOffice: Office applications for Mac OS X:</b> <a href="http://www.neooffice.org/neojava/en/index.php">http://www.neooffice.org/neojava/en/index.php</a></p> <p><b>The Story Creator:</b> <a href="https://www.common sense media.org/app-reviews/the-story-creator-easy-story-book-maker-for-kids">https://www.common sense media.org/app-reviews/the-story-creator-easy-story-book-maker-for-kids</a></p> <p><b>Stopbullying.gov</b> (has images and strategies to implement to help students get along): <a href="http://www.stopbullying.gov/image-gallery/">http://www.stopbullying.gov/image-gallery/</a></p>

Standard 8: Technology  
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**By the end of Grade 5**

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**Rationale:** Students must practice digital citizenship which includes taking responsibility for their online activities and understanding the impacts of their actions.

**Technology CPI**

**8.1.5.D.3**

Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
  - **Jig-saw:** Allows students to move in and out of small groups to review, develop, strengthen, and present their knowledge.

**Multiple Means of Action and Expression:** Students can use different means of presenting i.e. actual puppets, a video or a presentation application.



**Sample Activity**

Research cyber safety, cyber security, and cyber ethics practices when using social media. Investigate several sources to build your knowledge. Present your findings clearly and effectively, sequencing ideas logically using appropriate facts to support the main idea. Express your knowledge through a speech where you speak clearly at an understandable pace or present a puppet show for a younger grade sharing your information.



**Content Area CPI**

**21<sup>st</sup> Century Life and Careers CPR 4**

Communicate clearly and effectively and with reason.

**CCSS.ELA-LITERACY.CCRA.W.7**

Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.



**Technology Options**

- Review the school's Acceptable Use Policy (AUP) online or in print. Interpret and apply the AUP and its relevancy to their work.
- **Cybersmart:** Offers lessons and interactive activities.

- **Carnegie Cyber Academy:** Parent and teacher resources, short animated clips, interactive games and assessments.
- **Digital Passport from Common Sense:** Printable resources and online interactive games are available on many different platforms.

**Tech Tip:** Bullying may not be what was said, but how it was "stated." CAPITAL LETTERS are yelling online.

**BIGGER IS LOUDER.**
















Standard 8: Technology  
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	<p><b>Multiple Means of Expression:</b> Checkpoint 4.1- Vary the methods for response and navigation: <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle2">http://www.udlcenter.org/aboutudl/udlguidelines/principle2</a></p>
	<p><b>Digital Passport from Common Sense:</b> <a href="https://www.digitalpassport.org/educator-registration#registration-title">https://www.digitalpassport.org/educator-registration#registration-title</a>  <b>Reader’s Theatre:</b> <a href="http://www.readwritethink.org/classroom-resources/lesson-plans/readers-theatre-172.html">http://www.readwritethink.org/classroom-resources/lesson-plans/readers-theatre-172.html</a></p>
 	<p><b>Cybersmart:</b> <a href="http://cybersmart.org/">http://cybersmart.org/</a>: Printable and online resources, curriculum, interactive activities and professional development.  <b>Carnegie Cyber Academy:</b> Parent and teacher resources, animated clips, interactive games and assessments. The Carnegie Cadets “MySecureCyberspace” Game is designed to teach fourth and fifth graders about Internet safety and computer security:  <a href="http://www.carnegicyberacademy.com/">http://www.carnegicyberacademy.com/</a>  <b>Digital Passport from Common Sense:</b> <a href="https://www.digitalpassport.org/educator-registration#registration-title">https://www.digitalpassport.org/educator-registration#registration-title</a>  <b>Jig-saw:</b> <a href="https://www.jigsaw.org/">https://www.jigsaw.org/</a></p>

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**Technology CPI**

**8.1.8.D.1**

Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.



**Instructional Design Ideas**

- Interdisciplinary Learning: Content area curriculum is developed while using relevant technology applications and cultivating skills.
- Flipped Classroom Design engages students while repurposing contact time onsite.

**Sample Activity**

Research and discuss cyber safety, security and ethics when using technology and social media. If a friend at work or school asked for inappropriate pictures for use, what would be the consequences for both people involved from both perspectives. Use relevant, well-chosen facts, identify appropriate behaviors, details, and examples of how to increase safety and security online. Present your claims and findings to peers clearly and accurately with effective selection, organization and analysis of this issue.



- Multiple Means of Action and Expression: Students may choose the digital format that is comfortable to present their findings and claims, i.e. presentation software, Voice Thread, blog, or Mindmapping.



**Content Area CPI**

**21<sup>st</sup> Century Life and Careers CPR 1**

Act as a responsible and contributing citizen and employee.

**CCSS.ELA-LITERACY.CCRA.W.2**

Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.



**Technology Options**

- [AndroVid](#): Video editor for Android devices.
- [Audacity](#): An audio editor to create “radio” presentations.
- [Google Slides](#): Create a presentation using this Google product to reduce the need for data storage and enable sharing and editing by individual users or groups.
- [Visme](#): Create interactive online presentations.
- [Mindmapping](#): Graphic organizer

**Tech Tip:** It is easy to copy and paste images and content into the presentation. [Copyright and Creative Commons](#) video clips may be used free for educational purposes to discover how to avoid copyright issues.
















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	<p><b>Flipped Classroom:</b> <a href="https://net.educause.edu/ir/library/pdf/ELI7081.pdf">https://net.educause.edu/ir/library/pdf/ELI7081.pdf</a></p> <p>The flipped classroom pedagogical model can be used where presentations are observed outside of the classroom; and students prepare questions for the group. Classroom time is used for questions and answers to increase understanding. This benefits students and provides time for review as needed.</p>
	<p><b>Copyright Law: From Digital reprints to downloads:</b> <a href="http://www.readwritethink.org/classroom-resources/lesson-plans/copyright-from-digital-reprints-1067.html">http://www.readwritethink.org/classroom-resources/lesson-plans/copyright-from-digital-reprints-1067.html</a></p> <p><b>Using TED to Develop Presentation Skills:</b> <a href="http://www.thetechclassroom.com/home/usingtedtodeveloppresentationskills">http://www.thetechclassroom.com/home/usingtedtodeveloppresentationskills</a></p>
	<p><b>AndroVid:</b> <a href="https://play.google.com/store/apps/details?id=com.androvid">https://play.google.com/store/apps/details?id=com.androvid</a></p> <p><b>Audacity:</b> <a href="http://audacity.sourceforge.net/">http://audacity.sourceforge.net/</a></p> <p><b>Common Sense Media:</b> <a href="https://www.common Sense Media.org/educators/curriculum">https://www.common Sense Media.org/educators/curriculum</a></p> <p><b>Google Slides:</b> <a href="http://www.google.com/slides/about/">http://www.google.com/slides/about/</a></p> <p><b>Visme:</b> <a href="http://www.visme.co/">http://www.visme.co/</a></p>
	

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 12**

**Strand D: Digital Citizenship:** Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

**Rationale:** Students must practice digital citizenship which includes taking responsibility for their online activities and understanding the impacts of their actions.

**Technology CPI**

**8.1.12.D.3**

Compare and contrast policies on filtering and censorship both locally and globally.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Representation:** Begin transitioning roles from teacher-centered to student –Centered instruction by encouraging students to choose products and resources compatible to their learning styles. Provide them with options to customize the view on screen, to use digital highlighters and/or screen readers to support their learning.



**Sample Activity**

Censorship on the Internet may differ in other states and/or countries. Read and research [How Internet Censorship Actually Works in China](#). Compare and contrast policies and their impacts on cultures and values. Write an argument that supports your perspective on this issue using valid reasoning and relevant and sufficient evidence.



**Content Area CPI**

**Social Studies**

**6.2.12.D.6.a**

Assess the role of increased personal and business electronic communications in creating a “global” culture, and evaluate the impact on traditional cultures and values.

**CCSS.ELA-LITERACY.CCRA.W.1**

Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.

**Technology Options**

- **Bibme.org:** A citation tool to format resources.
- **Centre for International Governance:** “*Governing the Internet: Chaos, Control and Consensus.*”
- **The Centre for Internet and Society:** Blog, publication and resource links.
- **Purdue Owl:** Online Writing Lab with general rules for writing, standards for formatting, samples and exercises with solutions.
- **The Global Classroom Project:** Offers projects from around the globe seeking collaborators.
- **US Department of State; Internet Freedom:** <http://www.state.gov/e/eb/cip/netfreedom/index.htm>

**Tech Tip:** Text to speech readers are built into operating systems (IOS: Accessibility; Windows: Ease of Access). They help reduce learning gaps and accommodate individual needs.
















Standard 8: Technology  
Classroom Application Document

<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 12</b>
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**Strand D: Digital Citizenship:** Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

**Legend** Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.

	Time Tips That Transform Practice		Supporting Research and Resources
	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<p><b>CCSS.ELA-Literacy.CCRA.W.1:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.1">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.1</a></p> <p><b>Social Studies 6.2.12.D.6.a:</b> <a href="http://www.state.nj.us/education/cccs/2014/ss/">http://www.state.nj.us/education/cccs/2014/ss/</a></p> <p><b>Technology 6.1.12.A.2.a:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a></p> <p><i>How the Internet Actually Works in China</i> <a href="http://www.theatlantic.com/china/archive/2013/10/how-internet-censorship-actually-works-in-china/280188/">http://www.theatlantic.com/china/archive/2013/10/how-internet-censorship-actually-works-in-china/280188/</a></p>
	<p><b>Multiple Means of Representation :</b> Offer alternatives for visual information. Learning is impossible when there are barriers blocking access to the content. Supplying and supporting the use of screen readers, highlighters and digital post-it notes can increase access to the content: <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle1">www.udlcenter.org/aboutudl/udlguidelines/principle1</a></p>
	<p><b>Cyberbullying and the Law:</b> <a href="http://mediasmarts.ca/lessonplan/cyberbullying-and-law-grades-9-12-lesson">http://mediasmarts.ca/lessonplan/cyberbullying-and-law-grades-9-12-lesson</a></p> <p><b>Be Safe Online:</b> <a href="http://lifesmarts.org/wp-content/uploads/2014/02/Lesson-Plan-Be-Safe-Online.pdf">http://lifesmarts.org/wp-content/uploads/2014/02/Lesson-Plan-Be-Safe-Online.pdf</a></p>
	<p><b>Bibme.org</b> (bibliography maker): <a href="http://www.bibme.org">www.bibme.org</a></p> <p><b>Centre for International Governance Innovation (CIGI):</b> <a href="https://www.cigionline.org">https://www.cigionline.org</a></p> <p><b>The Centre for Internet and Society:</b> <a href="http://cis-india.org/internet-governance/blog/yojana-april-2014-sunil-abraham-who-governs-the-internet-implications-for-freedom-and-national-security">http://cis-india.org/internet-governance/blog/yojana-april-2014-sunil-abraham-who-governs-the-internet-implications-for-freedom-and-national-security</a></p> <p><b>Purdue Owl:</b> <a href="https://owl.english.purdue.edu/owl/">https://owl.english.purdue.edu/owl/</a></p>
	<p><b>The Global Classroom Project:</b> Collaborative projects: <a href="http://theglobalclassroomproject.wordpress.com/">http://theglobalclassroomproject.wordpress.com/</a></p> <p><b>US Department of State; Internet Freedom:</b> <a href="http://www.state.gov/e/eb/cip/netfreedom/index.htm">http://www.state.gov/e/eb/cip/netfreedom/index.htm</a></p>

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 2**

**Strand E: Research and Information Fluency**

**Rationale:** Information spreads worldwide within seconds due to technological advancements and has an immediate impact. The ability to find, evaluate and use accurate information is more important than ever in the technological age.

**Technology CPI**



**8.1.2.E.1**

Use digital tools and online resources to explore a problem or issue.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.

- **Multiple Means of Action and Expression:** Give students choices of how to acquire the images they will share with the class. Students can choose to do one or more of the following: capture an image with a digital camera, find an image online, and draw a picture to scan and save in a digital format, or use images from a stored picture gallery.  

**Sample Activity**

Digital Show and Tell – Students locate or create a digital image based on the topic assigned. The students then will present the image to the class demonstrating the conventions of Standard English grammar when recounting information about their picture with appropriate facts and relevant descriptive details, making sure to speak audibly in coherent sentences. Students can input their sentences to develop a class album.



**Technology Options**


- **CAST Bookbuilding:** A free resource to create, save, print and publish if desired.
- **My Cute Graphics:** A clipart gallery organized by categories

**Content Area CPI**

**21<sup>st</sup> Century Life and Careers CPR 11**

Use technology to enhance productivity.

**CCSS.ELA-LITERACY.CCRA.W.2**

Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences. 

- **Pics4Learning:** A free gallery of photos and clipart,
- **PicGrid-Photo Collage:** A free app to make collages (Android OS)
- Digital device to capture original images (phone, tablet, and camera).


















Standard 8: Technology  
Classroom Application Document

<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 2</b>
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**Strand E: Research and Information Fluency**

<b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.			
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	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<b>21<sup>st</sup> Century Life and Careers CPR 11:</b> <a href="http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf">http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf</a> Use technology to enhance productivity.  <b>CCSS.ELA- Literacy.SL.2.4:</b> <a href="http://www.corestandards.org/ELA-Literacy/SL/2/4/">http://www.corestandards.org/ELA-Literacy/SL/2/4/</a>  <b>Technology 8.1.2.E.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>
	<b>Multiple Means of Action and Expression: Optimize individual choice and autonomy:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle3">http://www.udlcenter.org/aboutudl/udlguidelines/principle3</a>
	<b>“Dear Zoo” Plan to Make Your Own Flap Book:</b> <a href="http://www.sharemylesson.com/teaching-resource/-and-quot-dear-zoo-and-quot-plan-and-amp-make-your-own-lift-the-flap-book-3003366/">http://www.sharemylesson.com/teaching-resource/-and-quot-dear-zoo-and-quot-plan-and-amp-make-your-own-lift-the-flap-book-3003366/</a>  <b>The Five Senses:</b> <a href="http://teachers.net/lessons/posts/4253.html">http://teachers.net/lessons/posts/4253.html</a> <b>NOTE:</b> Students could demonstrate understanding by using vocabulary words, sharing topic related images and describing them.
	<b>What’s up with the water cycle:</b> <a href="http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=4360">http://www.digitalwish.com/dw/digitalwish/view_lesson_plans?id=4360</a>
	<b>CAST Bookbuilding:</b> <a href="http://www.cast.org/learningtools/book_builder/">http://www.cast.org/learningtools/book_builder/</a> <b>My Cute Graphics:</b> <a href="http://www.mycutegraphics.com/graphics/graphics.html">http://www.mycutegraphics.com/graphics/graphics.html</a> <b>Pics4Learning:</b> <a href="http://www.pics4learning.com/">Pics4Learning</a> <b>PicGrid-Photo Collage:</b> <a href="https://play.google.com/store/apps/details?id=com.rcplatform.photocollage&amp;hl=en">https://play.google.com/store/apps/details?id=com.rcplatform.photocollage&amp;hl=en</a>

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 5**

**Strand E: Research and Information Fluency**

**Rationale:** Information spreads worldwide within seconds due to technological advancements and has an immediate impact. The ability to find, evaluate and use accurate information is more important than ever in the technological age.

**Technology CPI**  
[8.1.5.E.1](#)  
Use digital tools to research and evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Representation:** Scaffolding layers of support to assist learners in developing cognitive skills may include modeling the process, using mind maps or graphic organizers to identify relevant concepts, and providing frequent feedback to students to redirect and validate.



**Sample Activity**  
Is that a fact? Provide a [playlist of sites](#) for students to research using digital tools to confirm accuracy or inaccuracy of information provided. Read with sufficient accuracy and fluency to comprehend and support your position. Demonstrate knowledge by quoting accurately from the text and explaining what the text says explicitly to support your position.



**Content Area CPI**  
[CRP7.](#)  
Employ valid and reliable research strategies.

[CCSS.ELA-LITERACY.CCRA.W.8](#)  
Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.



**Technology Options**

- [ABC's of Web Literacy](#): Contains interactive tutorials to help develop skills in authenticating resources.
- [Noodle Tools](#): Search tools are categorized with a brief description of the type of content searched.
- [Wise Mapping](#): A graphic organizer for brainstorming. The file is stored online and can be shared and embedded into other programs.









**Tech Tip:** There are many different search tools for locating information on the Internet. Different search engines can have different results for the same search. Some kid friendly search tools provide filtered, age appropriate results.








Standard 8: Technology  
Classroom Application Document

<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 5</b>
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**Strand E: Research and Information Fluency**

<b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.			
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	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<p><b>Career Ready Practices 7:</b> Employ valid and reliable research strategies. <a href="http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf">http://www.state.nj.us/education/cccs/2014/career/CareerReadyPractices.pdf</a></p> <p><b>CCSS.ELA- Literacy.CCRA.W.8:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.8">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.8</a></p> <p><b>Technology 8.1.5.E.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a></p>
 	<p><b>Multiple Means of Representation:</b> Guide information processing, visualization, and manipulation: <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle1">http://www.udlcenter.org/aboutudl/udlguidelines/principle1</a></p> <p><b>CAST Free Learning Tools:</b> <a href="http://www.cast.org/our-work/learning-tools.html#.VT2OUiHBzGc">http://www.cast.org/our-work/learning-tools.html#.VT2OUiHBzGc</a></p> <p><b>Evaluating Internet Resources:</b> <a href="http://eduscapes.com/tap/topic32.htm">http://eduscapes.com/tap/topic32.htm</a></p>
	<p><b>Can You Convince Me? Developing Persuasive Writing:</b> <a href="http://www.readwritethink.org/classroom-resources/lesson-plans/convince-developing-persuasive-writing-56.html?tab=4#tabs">http://www.readwritethink.org/classroom-resources/lesson-plans/convince-developing-persuasive-writing-56.html?tab=4#tabs</a></p> <p><b>Cite Credibility:</b> <a href="http://www.cerias.purdue.edu/education/k-12/teaching_resources/lessons_presentations/SITECREDIBILITY2.pdf">http://www.cerias.purdue.edu/education/k-12/teaching_resources/lessons_presentations/SITECREDIBILITY2.pdf</a></p>
	<p><b>ABC's of Web Literacy:</b> <a href="http://webliteracy.weebly.com/">http://webliteracy.weebly.com/</a></p> <p><b>Noodle Tools:</b> <a href="http://www.noodletools.com/debbie/literacies/information/5locate/adviceengine.html">http://www.noodletools.com/debbie/literacies/information/5locate/adviceengine.html</a></p> <p><b>Wise Mapping:</b> <a href="http://www.wisemapping.com">http://www.wisemapping.com</a></p>

Standard 8: Technology  
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**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 8**

**Strand E: Research and Information Fluency**

**Rationale:** Information spreads worldwide within seconds due to technological advancements and has an immediate impact. The ability to find, evaluate and use accurate information is more important than ever in the technological age.

**Technology CPI**

**8.1.8.E.1**

Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.



**Content Area CPI**

**CCSS.ELA-LITERACY .CCRA.W.2**

Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

**Science NGSS-STS-2.6-8**

All human activities draw on natural resources and has both short and long-term consequences, positive as well as negative, for the health of people and the natural environment.



**Instructional Design Ideas**

- Interdisciplinary Learning: Content area curriculum is developed while using relevant technology applications and cultivating skills.

**Sample Activity**

Use public databases like the [EPA](#) to understand the impact of human use of natural resources on the environment. Write an informative/explanatory text to examine how the use of natural resources will impact the health of people and the environment, both positively and negatively. Consider both the short and long term impacts. Convey the information found in the databases through the selection, organization and analysis of facts regarding the consumption of resources and the impact on the individual, the community and the global world.

What can you do?



- Multiple Means of Action and Expression: Students are provided options to demonstrate their knowledge such as writing by hand, using a word processor, creating drawings, creating a script and acting or directing other students.



**Technology Options**

- **Advanced Search Techniques:** A video clip showing and describing methods to implement increasing effectiveness.
- **Common Craft:** A video repository which can be used in training, developing or reinforcing methods.

- **Live Binder:** An online three ring binder. Organize links to external documents, files and evidence for evaluation. Compatible with multiple platforms and devices.
- **NaturalReader:** Text to speech used to close reading gaps, language barriers and other unique needs, reducing the barrier to the content.









**Tech Tip:** There are converters which can change the file format and increase access to documents. [Zamzar](#) is one example of a tool that converts documents, sounds and pictures.









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**Strand E: Research and Information Fluency**

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	<b>CCSS.ELA-Literacy.CCRA.W.2:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.2">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.2</a> <b>Next Generation Science NGSS-STS-2.6-8:</b> <a href="http://www.nextgenscience.org/sites/ngss/files/APPENDIX%20J_0.pdf">http://www.nextgenscience.org/sites/ngss/files/APPENDIX%20J_0.pdf</a> <b>Technology 8.1.8.E.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>
	<b>Multiple Means of Action and Expression:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle2">http://www.udlcenter.org/aboutudl/udlguidelines/principle2</a>
	Learning methods to improve search efficiency will save time and provide better results. <a href="https://support.google.com/websearch/answer/134479?hl=en">https://support.google.com/websearch/answer/134479?hl=en</a> <a href="http://www.tutorialspoint.com/articles/effective-google-search-techniques">http://www.tutorialspoint.com/articles/effective-google-search-techniques</a>
	<b>Clean Air: OurHealth Matters:</b> <a href="http://learningtogive.org/lessons/unit379/lesson1.html">http://learningtogive.org/lessons/unit379/lesson1.html</a> <b>Read to Feed:</b> Free print and online resources, lesson plans and project suggestions focused on ending world hunger: <a href="http://www.heifer.org/education/index.html">http://www.heifer.org/education/index.html</a>
	<b>Advanced Search Techniques:</b> <a href="https://www.commoncraft.com/video/web-search-strategies">https://www.commoncraft.com/video/web-search-strategies</a> <b>Live Binder:</b> <a href="http://www.livebinders.com/welcome/education?showsctab=education">http://www.livebinders.com/welcome/education?showsctab=education</a> <b>Live Binders Tips and Tricks:</b> <a href="http://www.livebinders.com/play/play?present=true&amp;id=3342">http://www.livebinders.com/play/play?present=true&amp;id=3342</a> <b>NaturalReader:</b> <a href="http://www.naturalreaders.com/">http://www.naturalreaders.com/</a> <b>Zamzar:</b> <a href="http://www.zamzar.com/convert/mp4-to-wmv/">http://www.zamzar.com/convert/mp4-to-wmv/</a>
	

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**By the end of Grade 12**

**Strand E: Research and Information Fluency**

**Rationale:** Information spreads worldwide within seconds due to technological advancements and has an immediate impact. The ability to find, evaluate and use accurate information is more important than ever in the technological age.

**Technology CPI**

**8.1.12.E.2**

Research and evaluate the impact on society of the unethical use of digital tools and present your research to peers.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area curriculum is developed while using relevant technology applications and cultivating skills.
- **Multiple Means of Action and Expression:** Students may use a word processor, create a play, or act in a play, draw or use any other means to demonstrate understanding. They may be provided options for publishing research such as: writing, create a video and posting to social media, Tweets, or other tools that adjust for students who struggle with writing.

**Sample Activity**

Investigate and evaluate incidences of computer hacking or scams. Analyze the impact on society of this unethical use of digital tools. Determine the reasons for the increase in identity theft worldwide and evaluate the extent to which victims are successful in restoring their personal identities. Create a document to publish your research for feedback and update the information in response to ongoing feedback, including new arguments or information. Presentations may be a pamphlet, video, audio or text shared online for peer interaction.



**Content Area CPI**

**21st Century Life & Career 9.1.12.E.10**

Determine reasons for the increase of identity theft worldwide and evaluate the extent to which victims of identity theft are successful in fully restoring their personal identities.

**CCSS.ELA-LITERACY. CCRA.W.6**

Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others..



**Technology Options**

- **Audacity** : Creates audio files to share online
- **Dragon Dictation**: Speech to text by Nuance
- **Google Drive**: Tools to create, collaborate, share, and store, documents online that are accessible from any internet connection.
- **ooVoo**: Synchronous conferencing or video recorder.
- **Wikispaces Classroom**: Create a class page shared with all learners. Students can see entries of their classmates. Individual pages can be created too where students may draft a response and copy it to the shared page. The creator and/or instructor can see all pages and historical entries.









**Tech Tip:** The content of the Internet changes. Research today references a page which may be gone tomorrow. You can capture the page as it appears now for reference using the [Internet Archive Wayback Machine](#).







Standard 8: Technology  
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**Strand E: Research and Information Fluency**

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	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<p><b>21st Century Life &amp; Career 9.1.12.E.10:</b>  <a href="http://www.state.nj.us/education/cccs/2014/career/91.pdf">http://www.state.nj.us/education/cccs/2014/career/91.pdf</a></p> <p><b>CCSS.ELA- Literacy.CCRA.W.6:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.6">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.6</a></p> <p><b>Technology 8.1.12.E.2:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a></p>
	<p><b>Multiple Means of Actions:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle2">http://www.udlcenter.org/aboutudl/udlguidelines/principle2</a>          Student input is not limited to keyboards; there are alternatives means to achieve the desired results, i.e. voice to text and handwriting to text</p>
	<p><b>United States Patent and Trademark Office Lesson Plan with supporting resources:</b>  <a href="http://www.uspto.gov/kids/index.html">http://www.uspto.gov/kids/index.html</a></p>
	<p><b>Audacity:</b> <a href="http://sourceforge.net/projects/audacity/">http://sourceforge.net/projects/audacity/</a></p> <p><b>Dragon Dictation:</b> <a href="http://www.nuance.com/for-individuals/mobile-applications/dragon-dictation/index.htm">http://www.nuance.com/for-individuals/mobile-applications/dragon-dictation/index.htm</a></p> <p><b>Google Drive:</b> <a href="https://www.google.com/drive/">https://www.google.com/drive/</a></p> <p><b>Internet Archive Wayback Machine:</b> <a href="https://archive.org/web/">https://archive.org/web/</a></p> <p><b>ooVoo:</b> synchronous video chat or video recording - <a href="http://www.oovoo.com/home.aspx">http://www.oovoo.com/home.aspx</a></p> <p><b>Wikispaces Classroom:</b> <a href="https://www.wikispaces.com/content/classroom">https://www.wikispaces.com/content/classroom</a></p>

Standard 8: Technology  
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
<p><b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.</p>		<p><b>By the end of Grade 2</b></p>
<p><b>Strand F: Critical Thinking, Problem Solving, and Decision Making:</b> Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.</p>		
<p><b>Rationale:</b> Each of us can have a global impact in today’s world, so filtering information and applying critical thinking to solve problems and make decisions is a foundational skill.</p>		
<p><b>Technology CPI</b></p> <p><u><a href="#">8.1.2.F.1</a></u></p> <p>Use geographic mapping tools to plan and solve problems.</p> 	<p><b>Instructional Design Ideas</b></p> <ul style="list-style-type: none"> <li>• Interdisciplinary Learning: Content area standards are developed while cultivating relevant technology applications and skills.</li> <li>• Multiple Means Representation : Engage the students in a discussion connecting their experiences with bus traffic at school or traffic when they are on the highway. The word problem may be graphically depicted with text or offered separately as only visual depictions to explain the concept. Discuss their experiences to construct knowledge.</li> </ul> <p><b>Sample Activity</b></p> <p>Provide a word problem about how road construction may result in traffic being rerouted around the school. Use addition and subtraction to solve the problem involving lengths given in the same units. Use an online mapping tool to look at the features of your community. Use the tool to draw and show the routes with and without construction and measure the distances for each. Show an equation representing each problem with a symbol for the unknown number. Calculate the differences for the routes.</p> 	<p><b>Technology Options</b></p> <p><u><a href="#">Geocaching.com</a></u>: an anytime, anywhere real world adventure. This site has a database identifying geocaches near you. It includes links for free downloads to use on phones, tablets and other technology tools.</p>
<p><b>Content Area CPI</b></p> <p><u><a href="#">CCSS.MATH.PRACTICE.MP.1</a></u></p> <p>Make sense of problems and persevere in solving them.</p> <p><u><a href="#">Social Studies 6.1.4.B.1</a></u></p> <p>Compare and contrast information that can be found on different types of maps and determine how the information may be useful.</p>	<p><b>Technology Options</b></p> <ul style="list-style-type: none"> <li>• <u><a href="#">Geocaching Adventure Kits</a></u>: An educator resource to learn about Geocaching and ignite ideas to create geocaches of your own using the resources available to you. This site includes resources to introduce geocaching to the learners.</li> <li>• <u><a href="#">Google Maps</a></u>: Useful to pinpoint locations, calculate distances between two points and choose alternative paths.</li> <li>• <u><a href="#">Quik Maps</a></u>: Creates maps on which you can add markers and text.</li> </ul>  	








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<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 2</b>
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**Strand F: Critical Thinking, Problem Solving, and Decision Making**

<b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.			
	Time Tips That Transform Practice		Supporting Research and Resources
	Professional Development and/or Classroom Resources		Multiple Means of Representation
	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<b>Social Studies:</b> <a href="http://www.state.nj.us/education/cccs/2014/ss/standards.pdf">http://www.state.nj.us/education/cccs/2014/ss/standards.pdf</a> <b>CCSS.Math.Practice.MP1:</b> <a href="http://www.corestandards.org/Math/Practice/MP1/">http://www.corestandards.org/Math/Practice/MP1/</a> <b>Technology 8.1.2.F.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a>
	<b>Multiple Means of Representation: Activate or supply background knowledge:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle1">http://www.udlcenter.org/aboutudl/udlguidelines/principle1</a>
	<b>Passport To Learning Fun: A Geocaching Activity:</b> <a href="http://www.tcea.org/documents/tots/Sample%20Gocaching%20Project%20Lesson%20Plan.pdf">http://www.tcea.org/documents/tots/Sample%20Gocaching%20Project%20Lesson%20Plan.pdf</a> <b>Transportation:</b> <a href="http://www.atozteacherstuff.com/pages/448.shtml">http://www.atozteacherstuff.com/pages/448.shtml</a> <b>Where am I?:</b> <a href="http://alex.state.al.us/lesson_view.php?id=29928">http://alex.state.al.us/lesson_view.php?id=29928</a>
  	<b>Geocaching Adventure Kit:</b> <a href="http://www.geocaching.com/articles/education/Adventure_Kit_Boy_Scouts.pdf">http://www.geocaching.com/articles/education/Adventure_Kit_Boy_Scouts.pdf</a> <b>Geocaching.com:</b> <a href="https://www.geocaching.com/play">https://www.geocaching.com/play</a> <b>Google Maps:</b> <a href="https://maps.google.com/">https://maps.google.com/</a> <b>Quik Maps:</b> <a href="http://quikmaps.com/">http://quikmaps.com/</a> <b>The Official Government Global Positioning:</b> <a href="http://www.gps.gov/students/">http://www.gps.gov/students/</a>

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 5**

**Strand F: Critical Thinking, Problem Solving, and Decision Making:** Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

**Rationale:** Each of us can have a global impact in today’s world, so filtering information and applying critical thinking to solve problems and make decisions is a foundational skill.

**Technology CPI**

**8.1.5.F.1**

Apply digital tools to collect, organize, and analyze data that support a scientific finding.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area standards are developed while cultivating relevant technology applications and skills.
- **Multiple Means of Engagement:** Peer collaboration can significantly increase support for sustained engagement.

**Sample Activity**

Investigate how a [potato](#), much like a battery, can generate electrical current. Use online tools to collect data on voltage produced from potatoes, lemons and oranges. Use digital tools to organize the data logically and format with assigned fields/headings. Develop illustrations, photos or videos of the work to aid comprehension. Individually record observations in a shared file creating a group sampling from the class including number and type of “batteries” and amount of voltage they can produce. Interpret the results to suggest which item works best and what they could power. . Clearly identify needs or wants that include specified criteria for success and constraints, i.e. materials, time, or cost.



[Think, Pair Share](#) activities can be incorporated promoting individual and group thinking which provides scaffolding support and builds confidence.



**Content Area CPI**

**CCSS.ELA-LITERACY.CCRA.W.2**

Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

**Science 3-5-ETS1-1**

Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.



**Technology Options**














[Google Drive – Forms](#): Use forms for collaborative data input and the ability to manipulate and share the data.

- [Quickoffice APP](#): Provides documents, spreadsheets, and presentations for android devices
- [Spell Checker](#): Standard in word processing programs.
- [Wise Mapping](#): An online graphic organizer for brainstorming. The file can be stored or shared as well as embedded into other programs.

**Tech Tip:** If you have difficulty using the cursor to select text, use the left click mouse button as an alternative. Point the cursor to a word and left click the mouse: one click puts the cursor at the current location, two clicks selects the word and three left clicks selects the paragraph.



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<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.		<b>By the end of Grade 5</b>	
<b>Strand F: Critical Thinking, Problem Solving, and Decision Making</b>			
<b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.			
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	<b>CCSS.ELA-Literacy.CCRA.W.2:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.2">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.2</a> <b>Next Generation Science – 3-5-ETS1-1:</b> <a href="http://www.nextgenscience.org/3-5ets-engineering-design">http://www.nextgenscience.org/3-5ets-engineering-design</a> <b>Technology 8.1.5.F.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a> <b>Hands-on Activity: Potato Power-</b> <a href="https://www.teachengineering.org/view_activity.php?url=collection/cub_/activities/cub_energy2/cub_energy2_lesson04_activity2.xml">https://www.teachengineering.org/view_activity.php?url=collection/cub_/activities/cub_energy2/cub_energy2_lesson04_activity2.xml</a>		
	<b>Multiple Means of Engagement:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle3">http://www.udlcenter.org/aboutudl/udlguidelines/principle3</a> <b>Think, Pair Share:</b> <a href="http://www.ecu.edu/cs-educ/SecondaryISLES/upload/ISLES-S-Grouping-Declarative-051514.pdf">http://www.ecu.edu/cs-educ/SecondaryISLES/upload/ISLES-S-Grouping-Declarative-051514.pdf</a>		
	<b>An Era of Innovation:</b> <a href="http://www.discoveryeducation.com/teachers/free-lesson-plans/an-era-of-innovation.cfm">http://www.discoveryeducation.com/teachers/free-lesson-plans/an-era-of-innovation.cfm</a> <b>Bias Sampling:</b> <a href="http://sciencenetlinks.com/lessons/bias-sampling/">http://sciencenetlinks.com/lessons/bias-sampling/</a>		
 	<b>Google Drive – Forms:</b> <a href="https://support.google.com/docs/answer/2839737?hl=en">https://support.google.com/docs/answer/2839737?hl=en</a> <b>Quickoffice APP</b> for android devices: <a href="http://quickoffice.en.softonic.com/android">http://quickoffice.en.softonic.com/android</a> <b>The Top 10 computer mouse tips everyone should know:</b> <a href="http://www.computerhope.com/tips/tip32.htm">http://www.computerhope.com/tips/tip32.htm</a> <b>Wise Mapping:</b> A graphic organizer for brainstorming <a href="http://www.wisemapping.com">http://www.wisemapping.com</a>		

Standard 8: Technology  
Classroom Application Document

**Standard 8.1 Educational Technology:** All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

**By the end of Grade 8**

**Strand F: Critical Thinking, Problem Solving, and Decision Making:** Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

**Rationale:** Each of us can have a global impact in today’s world, so filtering information and applying critical thinking to solve problems and make decisions is a foundational skill.

**Technology CPI**

**8.1.8.F.1**

Explore a local issue, by using digital tools to collect and analyze data to identify a solution and make an informed decision.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area standards are developed while cultivating relevant technology applications and skills.

**Sample Activity**

Develop a personal budget and explain how your income affects your spending decisions. Broaden your budgetary perspective by using digital tools to examine, collect and analyze data about your town or county’s local budget. Next, look at the perspectives of stakeholders in the town’s budget (obtaining information and discussing their priorities). Identify how the town’s income affects spending decisions in their budget. Interact with others to produce and publish an explanation of the budget while identifying the relationships and needs among the various stakeholders and this budget.



- **Multiple Means of Representation:** Educate and encourage learners to locate resources in varied forms that best accommodate their learning styles, i.e. screen readers to hear text, a screen magnifier to enlarge text or visual support by locating video news reports.



**Content Area CPI**

**21st Century Life & Career 9.1.8.A.6**

Explain how income affects spending decisions

**CCSS.ELA-LITERACY.CCRA.W.6**

Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

**Social Studies 6.3.8.C.1**

Examine the perspectives of multiple stakeholders involved in the local budget process (e.g., obtaining information, discussion priorities).



**Technology Options**

- **Bibme.org:** A citation tool to format resources
- **Live Binder:** An online three ring binder. Organize links to external documents and files. Compatible with multiple platforms and devices.
- **NaturalReader:** text to speech tool used to help close reading gaps and reduce barriers to content
- **Newser:** Constantly updated news presented in a pictorial grid
- **Purdue Owl:** an online Writing Lab with general rules for writing, standards for formatting, samples and exercises with solutions.









**Tech Tip:** Does the mouse jump too quickly when attempting to select text? As an alternative, place the cursor at the beginning OR end of the desired word or section. You can use the mouse and left click once or use the arrow keys to navigate the screen. Next, press and hold the “SHIFT” key and use the arrows to move the cursor.



Standard 8: Technology  
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<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.	<b>By the end of Grade 8</b>
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**Strand F: Critical Thinking, Problem Solving, and Decision Making**

<b>Legend</b> Symbols used are a quick reference to indicate additional resources have been included. Additional information to locate resources is provided on a supplemental page.			
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	Lessons		Multiple Means of Actions and Expressions
	Technology Resources		Multiple Means of Engagement

	<p><b>21st Century Life &amp; Career 9.1.8.A.6:</b> <a href="http://www.state.nj.us/education/cccs/2014/career/91.pdf">http://www.state.nj.us/education/cccs/2014/career/91.pdf</a></p> <p><b>Social Studies 6.3.8.C.1:</b> <a href="http://www.state.nj.us/education/cccs/2014/ss/">http://www.state.nj.us/education/cccs/2014/ss/</a></p> <p><b>CCSS.ELA-LITERACY.CCRA.W.6:</b> <a href="http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.6">http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.6</a></p> <p><b>Technology 8.1.8.F.1:</b> <a href="http://www.state.nj.us/education/aps/cccs/tech/">http://www.state.nj.us/education/aps/cccs/tech/</a></p>
  	<p><b>Provide Multiple Means of Representation: Offer Ways of Customizing the Display of Information-</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle1">http://www.udlcenter.org/aboutudl/udlguidelines/principle1</a></p> <p>Through the use of technology many accommodations can be made to meet student needs:</p> <ul style="list-style-type: none"> <li>• Visual content: font, layout, size, contrast and color.</li> <li>• Sound: volume and/or rate of speech</li> </ul>
	<p><b>The Mystery of Is it Mine or Ours?:</b> <a href="http://www.econedlink.org/lessons/index.php?lid=462&amp;type=educator#">http://www.econedlink.org/lessons/index.php?lid=462&amp;type=educator#</a></p>
	<p><b>Bibme.org:</b> <a href="http://www.bibme.org">www.bibme.org</a></p> <p><b>Live Binder:</b> <a href="http://www.livebinders.com/welcome/education?showsubtab=education">http://www.livebinders.com/welcome/education?showsubtab=education</a></p> <p><b>Live Binders Tips and Tricks:</b> <a href="http://www.livebinders.com/play/play?present=true&amp;id=3342">http://www.livebinders.com/play/play?present=true&amp;id=3342</a></p> <p><b>NaturalReader:</b> <a href="http://www.naturalreaders.com/">http://www.naturalreaders.com/</a></p> <p><b>Newser:</b> <a href="http://www.newser.com">http://www.newser.com</a></p> <p><b>Purdue Owl:</b> <a href="https://owl.english.purdue.edu/owl/">https://owl.english.purdue.edu/owl/</a></p>

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<p><b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.</p>	<p><b>By the end of Grade 12</b></p>
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**Strand F: Critical Thinking, Problem Solving, and Decision Making:** Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

**Rationale:** Each of us can have a global impact in today’s world, so filtering information and applying critical thinking to solve problems and make decisions is a foundational skill.

**Technology CPI**  
**8.1.12.F.1**  
Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.



**Instructional Design Ideas**

- **Interdisciplinary Learning:** Content area standards are developed while cultivating relevant technology applications and skills.
- **Multiple Means of Action and Expression:** Include opportunities for students to choose the digital tools they are familiar with and have access to, with the requirement that the product must be viewable for feedback and sharing. Encourage the use of video and audio (both can be done with smart phones and tablets), supplementing the text to increase access for end users. Use voice recognition to create documents that convey information and ideas.

**Sample Activity**

Research an emerging technology (i.e. drones, self driving cars, electric cars, GPS) and new and advanced techniques and its ability to provide solutions for transportation, distribution and logistics problems. Describe the application and use of this technology. Write an informative/ explanatory text to convey this concept and impacts clearly and accurately through the effective selection, organization and analysis of the technology. Evaluate the further impacts on education, career, personal or social needs.



**Content Area CPI**  
**CCSS.ELA-LITERACY.CCRA.W.2**  
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

**Career & Technical Education**  
**9.3.12.TD.2**  
Describe the application and use of new and emerging advanced techniques to provide solutions for transportation, distribution and logistics problems.
















**Technology Options**

**Google Drive:** Provides tools to create, collaborate, share and store documents that are compatible with a wide variety of operating systems. Documents can be accessed from any internet connection.

- **Prezi:** cloud-based presentation software which is compatible with multiple types of hardware for creating and sharing
- **Purdue Owl:** an online writing lab with general rules for writing, standards for formatting, samples and exercises with solutions.
- **Teachertube:** a collection of resources
- **Wikispaces Classroom:** Create a class page shared with all learners, where students can see entries of their classmates. Individual pages can also be created where students may draft a response and copy it to the shared page.



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<b>Standard 8.1 Educational Technology:</b> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.		<b>By the end of Grade 12</b>	
<b>Strand F: Critical Thinking, Problem Solving, and Decision Making</b>			
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	<b>Multiple Means of Action and Expression:</b> <a href="http://www.udlcenter.org/aboutudl/udlguidelines/principle2">http://www.udlcenter.org/aboutudl/udlguidelines/principle2</a>		
	<b>Buy, Use Toss:</b> <a href="http://www.nea.org/tools/lessons/60370.htm">http://www.nea.org/tools/lessons/60370.htm</a> <b>Energy and Cars: What does the future hold?:</b> <a href="http://www.discoveryeducation.com/teachers/free-lesson-plans/energy-and-cars-what-does-the-future-hold.cfm">http://www.discoveryeducation.com/teachers/free-lesson-plans/energy-and-cars-what-does-the-future-hold.cfm</a> <b>Robotics and Future Technology:</b> <a href="http://www.navystemfortheclasseom.com/lesson-plans">http://www.navystemfortheclasseom.com/lesson-plans</a>		
  	<b>Google Drive: Documents:</b> <a href="https://www.google.com/docs/about/">https://www.google.com/docs/about/</a> <b>Google Drive: Presentations:</b> <a href="https://www.google.com/slides/about/index.html">https://www.google.com/slides/about/index.html</a> <b>Prezi:</b> <a href="http://prezi.com/">http://prezi.com/</a> <b>Purdue Owl:</b> <a href="https://owl.english.purdue.edu/owl/">https://owl.english.purdue.edu/owl/</a> <b>Teachertube:</b> <a href="http://www.teachertube.com/">http://www.teachertube.com/</a> <b>Wikispaces Classroom:</b> <a href="https://www.wikispaces.com/content/classroom">https://www.wikispaces.com/content/classroom</a>		