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.

Content Area CPI

21st 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.

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.

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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.

Technology Options

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

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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

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

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

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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.

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.

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.

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 8.1 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

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

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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.
- 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.

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?

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

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 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.

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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 8.1 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**

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	21st Century Life & Career 9.1.12.E.10: http://www.state.nj.us/education/cccs/2014/career/91.pdf **CCSS.ELA- Literacy.CCRA.W.6**: http://www.corestandards.org/ELA-Literacy/CCRA/W/#CCSS.ELA-Literacy.CCRA.W.6 **Technology 8.1.12.E.2**: http://www.state.nj.us/education/aps/cccs/tech/
	Multiple Means of Actions: http://www.udlcenter.org/aboutudl/udlguidelines/principle2 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
	United States Patent and Trademark Office Lesson Plan with supporting resources: http://www.uspto.gov/kids/index.html
	Audacity: http://sourceforge.net/projects/audacity/ **Dragon Dictation**: http://www.nuance.com/for-individuals/mobile-applications/dragon-dictation/index.htm **Google Drive**: https://www.google.com/drive/ **Internet Archive Wayback Machine**: https://archive.org/web/ **ooVoo**: synchronous video chat or video recording - http://www.oovoo.com/home.aspx **Wikispaces Classroom**: https://www.wikispaces.com/content/classroom