Unit 1
Technology Curriculum 3ʳᵈ -5ᵗʰ
2017

Content Area:	Technology		Grade(s)	3ʳᵈ -5ᵗʰ
Unit Overview:	2ⁿᵈ Marking Period			
	2014 New Jersey Core Curriculum Content Technology Standards			

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.
A. Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
A. The Nature of Technology: Creativity and Innovation Technology systems impact every aspect of the world in which we live.

Standard(s) 8.1 Educational Technology

- **8.1.5.A.1** Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
- **8.1.5.A.2** Format a document using a word processing application to enhance text and include graphics, symbols and/ or pictures.
- **8.1.5.A.3** Use a graphic organizer to organize information about problem or issue.
- **8.1.5.A.4** Graph data using a spreadsheet, analyze and produce a report that explains the analysis of the data.
- **8.1.5.A.5** Create and use a database to answer basic questions.
- **8.1.5.A.6** Export data from a database into a spreadsheet; analyze and produce a report that explains the analysis of the data.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:

- **8.2.5.A.1** Compare and contrast how products made in nature differ from products that are human made in how they are produced and used.
- **8.2.5.A.2** Investigate and present factors that influence the development and function of a product and a system.
- **8.2.5.A.3** Investigate and present factors that influence the development and function of products and systems, e.g., resources, criteria and constraints.
- **8.2.5.A.4** Compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences.
- **8.2.5.A.5** Identify how improvement in the understanding of materials science impacts technologies.

Essential Question(s)	Enduring Understandings
- How do I choose which technological tools to use and when it is appropriate to use them? - How can I transfer what I know to new technological situations/experiences?	- Effective use of Internet sources and information for everyday tasks. - Effective use of technology competencies to reach a global audience.

- In a world of constant change, what skills should we learn? - What things should you do to stay safe online? - At what age is Typing Faster than Handwriting? - Why are correct keyboarding skills important in relation to productivity and accuracy? - How can I improve my keyboarding skills?	- Taking responsible measures when handling technology equipment and when using software and applications. - Being safe online is essential. - Digital tools help create and share ideas. - Lifelong learners use technology effectively. Students develop an awareness of the part technology plays in supporting their educational goals.

Interdisciplinary Connections		
Common Core Literacy	**Common Core Math**	**Career Ready Practices**
CCSS.ELA-Literacy.CCRA.R.7	CCSS.MATH.PRACTICE.MP1	CRP1
CCSS.ELA-Literacy.CCRA.W.6	CCSS.MATH.PRACTICE.MP2	CRP4
CCSS.ELA-Literacy.RI.1.5	CCSS.MATH.PRACTICE.MP3	CRP6
CCSS.ELA-Literacy.RI.1.10	CCSS.MATH.PRACTICE.MP5	CRP8
CCSS.ELA-Literacy.RF.1.4a	CCSS.MATH.PRACTICE.MP6	CRP11
CCSS.ELA-Literacy.W.1.6	CCSS.MATH.PRACTICE.MP7	
CCSS.ELA-Literacy.SL.1.1		
CCSS.ELA-Literacy.SL.1.1c		
CCSS.ELA-Literacy.SL.1.2		

Learning Plan	Suggested Activities				
Suggested Time Frame	Topic	Skills	Computational Thinking	Core Instructional Materials	Benchmarks
Week 1 **Week 2**	Introduction Asking Questions and Defining Problems Integrating Technology with Student Self Centered Learning	Hardware Software Devices and Compatibility Desktop Windows and Controls Toolbars and Menus Software Computer Navigation Technology Devices Troubleshooting Edit	Digital learners will understand the vital concept of personalized learning: A guide for engageing students with technology to gather, organize and evaluate information from a variety of sources to answer questions and learn useful technology skills for college, work and life. Digital learners may select appropriate digital tool to complete task to problem solve a computer conflict or troubleshooting issue.(For example: Choose Google slides or another Presentation app, Wiki, StoryBird.com). to present their solution to class. Digital learners must prepare a plan of action to research a problem. Conduct the research needed to isolate the problem. Use a structured approach to identify a problem.	Learning.com Lesson Discussion Computer Basics: Games, Flash cards, and Concentration http://www.quia.com/jg/65620.html Inside a Computer http://www.kids-online.net/learn/c_n_1.html Taking care of your computer http://www.schooltube.com/video/e7c3d170fedf99a14d4a/Extreme-Turtle-Taking-Care-of-Your-Computer-PSA Demo Builder http://www.demo-builder.com/ How to an animated presentation in 5 easy steps. https://www.powtoon.com/blog/how-to-create-an-animated-presentation-in-5-easy-steps/ Three Easy Methods to Create eLearning Videos https://elearningindustry.com/3-easy-methods-create-elearning-videos Google Slides Video Tutorial https://www.youtube.com/watch?v=qg916OPTmWs	**Common Core State Standards Rubrics** http://www.schrockguide.net/assessment-and-rubrics.html Multimedia and Apps Rubrics http://www.schrockguide.net/assessment-and-rubrics.html New Jersey Project and Assessment Examples http://www.nj.gov/education/aps/cccs/tech/assessment/ **Links on Exit/Admit Slips** Readingrockets: Exit Slips http://www.readingrockets.org/strategies/exit_slips AdLit.org: Exit Slips http://www.adlit.org/strategies/19805 Writing Across the Curriculum: Entry/Exit Slips http://writing2.richmond.edu/wac/entrexit.html Exit Slips: Effective Bell-Ringer Activities http://www.teachhub.com/news/article/cat/14/item/377 Admit Slips and Exit Slips http://literacy.kent.edu/eureka/strategies/admit_slips09.pdf

			Identify the severity of a problem based on its initial symptoms. Ex.no sound, computer screen won't turn on. etc.	Google Slides Cheat Sheet http://www.shakeuplearning.com/blog/google-slides-cheat-sheet-free-download/	
Week 3 **Week 4**	Digital Citizenship	Digital learners will demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media. Communication Touch Typing ***Aditional Activities** What are digital learners digital rights and responsibilities? Help digital learners underst and this includes many of the privileges they enjoy in the physical world as well as the obligations to play fair, be polite, and respect the rights of others. Create a pamphlet explaining appropriate and responsible use of computers, including copyright and cyberbullying.	How do task, purpose, and audience influence how speakers craft and deliver a message? Digital Learners can develop their own scenarios related to online safety and role-play them for the class. After each scenario, the class discusses whether the students in the scenario practiced being safe online. Digital Learners can create posters to hang in their classrooms or in the computer lab to remind other students to practice online safety. Students can use mobile devices to record videos of oral book reports. Have students use mobile devices to type a list of their spelling words and practice using them in sentences.	http://newtech.coe.uh.edu/ Internet safety video http://bit.ly/1SUYvha Learning.com Practicing Online Safety Journal Resources: **Worksheet** http://platform.learning.com/content/Partner/LCOM/Journals/Are_These_Students_Practicing_Online_Safety.pdf **Guide** http://platform.learning.com/content/Partner/LCOM/Journals/Journal_Entry_Scoring_Guide.pdf Read from I am a Good Citizen: Building Character and/or I Heard the Willow Weep. Online Communication Resources: Password Rap http://www.netsmartzkids.org/tunes/index.htm Brainpop Online Safety Quiz http://www.brainpop.com/technology/com	

				putersandinternet/onl inesafety/quiz/ Internet Island – Sailing the Cyber Seas. http://www.computer lab.kids.new.net/inter net.htm FBI Internet Safety Tips - http://www.fbi.gov/ki ds/k5th/safety2.htm
Week 5 **Week 6**	Keyboarding and Posture	Keyboarding Speed and Accuracy Touch Typing Try and Error Health Awareness Figer Placement Home Row Key	Digital learners will understand the vital role keyboarding skills apply in their lives and other classes. They will be able to identify techniques and methods as the most effective for improving their own keyboarding skills. As well as the correct keyboarding skills important in relation to productivity and accuracy. Finally, Digital learners will create their own personal goal and plan to improve their keyboarding skills on google docs.	keyboard Program, Hardware keyboarding key assessments. https://www.typing.c om/ Learning.com Keyboarding Lessons, Games and Test Typing Practice Sites: https://www.abcya.co m/third_grade_comp uters.htm http://www.netrover. com/~kingskid/typin g_spell/typing.htm Review Correct Keyboarding Sitting Position http://keyboarding.cc sd.edu/help-for-students/typing-position Personal Plan http://www.mindofwi nner.com/create-personal-development-plan/

Week 7	Online Research Effective use of digital tools assists in gathering and managing information.	Biography Research. Spreadsheet Table Graph Using language symbols, and text.	Conduct short research projects that build knowledge about a topic. Digital learners can use a graphic organizer to organize information about a problem or issue. (Venn Diagram) Cube creator is another planning tool that digital learners can use to organize their research to outline the lives they' researched before writing their own biographies.	Cube Creator http://www.readwrite think.org/files/resour ces/interactives/cube _creator/ Independently access and use online learning tools (For example: FactCite Biography for Beginners. http://www.favimp.c om/BioBeginners.ht ml Biography research, Wonderopolis.org for inquiry research. Newsela.com for current events.	
Week 8	Digital Tools in the Classroom	Blogging Survey Templates Tools Collaboration	How Can Bloggers Learn What Their Readers Want? Have digital learners create a survey for which digital tool they think they'll use most. SurveyMonkey is an online tool that will allow digital learners to easily design surveys, collect responses, and analyze results. Finally, Digital learners will realize that by using these tools they will be captivating an audience where you can get immediate results from your students and then you can discuss the results of the survey with the	Survey Monkey Tutorial https://www.surveym onkey.com/blog/2013 /08/21/video- tutorials-grovo/ Create a Survey https://www.surveym onkey.com/survey- thanks/?sm=T7mpxg 3rJTfXT8OSJFBpz_ 2BtrTSQMPnDIRJZ 8SM4y_2BHHBA V Z8uITGLbV1ZPs07f FZ Sample Survey https://www.surveym onkey.com/r/SZW37 YD	

			class, if you so desire.	
Week 9 **Week 10**	Problem Solving Investigate factors that influence the development and function of technology products and systems.	Investigate how the cell phone was developed and its impact on society and other technologies. Digital learners can investigate and share with classmates how other inventions and innovations came to be and develop a list of technologies intended to make life easier (e.g., human assistive devices, such as crutches, wheelchairs, prosthetics).	Discuss student technology goals in terms of blended learning, how technology supports education and life. What are digital learners' goals and where can they find answers when they're stuck? Digital learners will create a graph data using a spreadsheet and produce a report that analyzes the results. (For example: Take survey information of a previous class, enter information into a spreadsheet, graph the information and analyze the data).	www.edheads.org Google Docs Table Graph Video recording NewTech http://newtech.coe.uh.edu/ Flow Chart http://newtech.coe.uh.edu/tool-name.cfm?toolid=174&toolname=Flowchart Museum Box http://newtech.coe.uh.edu/tool-name.cfm?toolid=182&toolname=Museum%20Box
Week 11	Technology products and systems impact every aspect of the world in which we live.	Collaborate with others. Create and format documents with the purpose of enhancing text and including graphics (For example: Writing / ELA piece, presentation, or Google Doc). Presentations	Digital learners will identify products that require special care when disposed. Summarize the benefits to recycling products over disposing of them in a landfill. Design an electronic brochure to inform your class and school of what recycling	My Brochure Maker https://www.mycreativeshop.com/template-designs-library.aspx Brochure Online Creator https://www.jukeboxprint.com/editor/brochure_creator.php Digital learners can use Word processor Search Engines Spreadsheets

			they can do (e.g., paper, garbage, leaves, electronics, etc.), how and where to do it and the impact of recycling on the environment. Urge use of green products, reuse and proper disposal of recyclables.	Google Docs to gather information for a multimedia presentation.	
Week 12	Hour of Code	Problem solving Coding Programming Technology Education, Engineering, Design, and Computational Thinking Programming Algorithms Critical Thinking Problem Solving	Digital learners will be introduced to the hour of code and programming. Designed to demystify code and show that anyone can learn to be a maker, a creator, and an innovator.	Scratch Animate your name https://scratch.mit.edu/scratchr2/static/pdfs/help/AnimateYourNameGuide.pdf My Robot Friend https://csedweek.org/unplugged/thinkersmith Coding links, memberships in onsite program (i.e., Code.org) **studio.code.org.**	

Supportive Strategies

1. Special Education

- Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or screen magnification on Chromebook, or spoken text features).
- Graphic Organizers.
- Modifications on IEP.
- Provide written and oral directions, utilizing visuals and exemplars. (For example, teacher models on StarBoard how to login to Code.org and provides Step-by-Step instruction handout to student).
- Reduction in workload.
- Repetition and Reinforcement of classroom material.
- Strategic Grouping for all group work

2. ESL
• Employ assistive technology as needed (For example, online translation or Language text settings on technology device) . • For collaborative assignments, appropriate roles will be assigned. (For example, time-keeper, activity starter) . • Make content culturally relevant. • Partner English Learners with Strong English Speakers. • Provide written and oral directions for all lessons, utilizing visuals and exemplars. • Repeat classroom procedure and routines as much as possible to reinforce language learning. • Visual Aids
3. Student at risk of failure
•Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or screen magnification on devices, or spoken text features). • Flexible acceptance of missing/lost/incomplete assignment. • Strategic Grouping for all group work
4. Gifted and Talented
•Higher level learners will be provided with more intellectually demanding learning activities. (For example, students who complete lessons on Code.org can continue to the next levels at their own pace). • Higher Order Questioning. • Utilize different reading levels appropriate for students.
DOE Resources and Sample Activities 8.1.B, 8.2.B (Assessment) **DOE Resources and Sample Activities 8.1.C, 8.2.C (Assessment)**
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.   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. http://www.state.nj.us/education/cccs/2014/tech/cad/CADS81B.pdf http://www.state.nj.us/education/cccs/2014/tech/cad/CADS81C.pdf
Discuss the definition and purpose of intellectual property law. Make a list of circumstances of when this law would come into play. Look at examples to determine if text has been plagiarized or not. Write an informational text explaining when it is acceptable to use other people's work and how to give them credit for their work. Collaborate in a discussion examining a fuel source (i.e. gas, electric, wind, solar, fire). Investigate what influences its development and use. Identify the resources needed to produce the fuel and explain how availability of resources affects people both here and in areas around the world. Write an informational text examining how the fuel is produced and limited both here and abroad. http://www.state.nj.us/education/cccs/2014/tech/cad/CADS82B.pdf

http://www.state.nj.us/education/cccs/2014/tech/cad/CADS82C.pdf

Unit Vocabulary		
Sequencing	Patterns	Maximize
Loops	Abstraction	Controls
Conditionals	Algorithms	Checkbox
Functions	Decomposition	Windows
Variables	Structure file	Minimize
Button	Scroll bar	Desktop
Blog	Dialog box	Help zoom
Resize	Text box	Recycle bin
Dropdown menu	Radio	Delete folder
Symbols	Close	Trash
Toolbar	Select	Desktop file
Icon	Backspace	Cross -platform
Properties	Remove	Network
URL web browser	Text	WAN
Online safety	Cut	LAN
World Wide Web	Posture	Compatibility hardware
Hyperlinks Website	Paste	Internet safety
Author	Mouse	Command
Credibility	Toolbar	Troubleshoot function
Search engine	Desktop	Cyber bullying
File extension	Text word	Navigation
Bookmark	Processing	Operating system
Save	Button	Menu
Hardware	File menu	Document
Software	Open	Engineering
Cyber ethics	Internet domain	Devices
	Web page	Compatibility
	Home page	Cyber security
	Cyber safety	

Unit 2
Technology Curriculum 3rd -5th
2018

Content Area:	Technology		Grade(s)	3rd -5th
Unit Overview:	2nd Marking Period			
	2014 New Jersey Core Curriculum Content Technology Standards			

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

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:
All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
B. Technology and Society: Knowledge and understanding of human, cultural and societal values are fundamental when designing technological systems and products in the global society.
C. Design: The design process is a systematic approach to solving problems.

Standard(s) 8.1 Educational Technology

- **8.1.5.B.1** Collaborative to produce a digital story about a significant local event or issue based on first-person interviews.
- **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.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:

- **8.2.5.B.1** Examine ethical considerations in the development and production of a product through its life cycle.
- **8.2.5.B.2** Examine systems used for recycling and recommend simplification of the systems and share with product developers.
- **8.2.5.B.3** Investigate ways that various technologies are being developed and used to reduce improper use of resources.
- **8.2.5.B.4** Research technologies that have changed due to society's changing needs and wants.
- **8.2.5.B.5** Explain the purpose of intellectual property law.
- **8.2.5.B.6** Compare and discuss how technologies have influenced history in the past century.
- **8.2.5.C.1** Collaborate with peers to illustrate components of a designed system.
- **8.2.5.C.2** Explain how specifications and limitations can be used to direct a product's development.
- **8.2.5.C.3** Research how design modifications have led to new products.
- **8.2.5.C.4** Collaborate and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models.
- **8.2.5.C.5** Explain the functions of a system and subsystems.
- **8.2.5.C.6** Examine a malfunctioning tool and identify the process to troubleshoot and present options to repair the tool.

Essential Question(s)	Enduring Understandings

How do I apply existing knowledge to generate new ideas, products, or processes?	
How do I create original works as a means of personal or group expression?	The cultural, social, economic and political effects of technology.
How do I interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media.	The effects of technology on the environment.
	The role of society in the development and use of technology.
How can learners communicate information and ideas to multiple audiences using a variety of media and formats?	The influence of technology on history.
How can I develop cultural understanding and global awareness by engaging with learners of other cultures?	The attributes of design.
	The application of engineering design.
How can I contribute to project teams to produce original works or solve problems?	The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.

Interdisciplinary Connections		
Common Core Literacy	**Common Core Math**	**Career Ready Practices**
CCSS.ELA-Literacy.CCRA.R.7	CCSS.MATH.PRACTICE.MP1	CRP1
CCSS.ELA-Literacy.CCRA.W.6	CCSS.MATH.PRACTICE.MP2	CRP4
CCSS.ELA-Literacy.RI.1.5	CCSS.MATH.PRACTICE.MP3	CRP6
CCSS.ELA-Literacy.RI.1.10	CCSS.MATH.PRACTICE.MP5	CRP8
CCSS.ELA-Literacy.RF.1.4a	CCSS.MATH.PRACTICE.MP6	CRP11
CCSS.ELA-Literacy.W.1.6	CCSS.MATH.PRACTICE.MP7	
CCSS.ELA-Literacy.SL.1.1		
CCSS.ELA-Literacy.SL.1.1c		
CCSS.ELA-Literacy.SL.1.2		
Learning Plan	**Suggested Activities**	

Suggested Time Frame	Topic	Skills	Computational Thinking	Core Instructional Materials	Suggested Formative/Summative Classroom Assessments
Week 13	Graphic Organizer I	Digital learners will create a basic timeline template with a title box, text boxes, arrows and date timeline.	Digital learners will demonstrate how they can enhance communication with Graphic Organizers. They will Investigate ways that various technologies are being developed and used to reduce improper use of resources by creating the evolution of technology devices timeline. Finally, digital learners will compare and discuss how technologies have influenced history in the past century.	Graphic Organizer Lessons from Read, Write, Think/Kidspiration http://www.readwritethink.org/lessons/index.asp?grade=1&strand=2&engagement=12&display.x http://www.pbs.org/wgbh/amex/telephone/timeline/ Download Timeline: https://app.box.com/shared/ggg4atbqmq Word processing program.	**Assessments and Rubric Common Core State Standards Rubrics** http://www.schrockguide.net/assessment-and-rubrics.html **Multimedia and Apps Rubrics** http://www.schrockguide.net/assessment-and-rubrics.html **New Jersey Project and Assessment Examples** http://www.nj.gov/education/aps/cccs/tech/assessment/ **Links on Exit/Admit Slips** Readingrockets: Exit Slips http://www.readingrockets.org/strategies/exit_slips AdLit.org: Exit Slips http://www.adlit.org/strategies/19805 Writing Across the Curriculum: Entry/Exit Slips http://writing2.richmond.edu/wac/entrexit.html Exit Slips: Effective Bell-Ringer Activities http://www.teachhub.com/news/article/cat/14/item/377 Admit Slips and Exit Slips http://literacy.kent.edu/eureka/strategies/admit_slips09.pdf http://www.ncsu.edu/midlink/ho.html
Week 14	Graphic Organizer II	Working with graphic organizers tools.	Digital learners will collectively construct an illustrated a timeline of a historic event and people they have studied.	**Sites:** http://www.bringinghistoryhome.org/ **Templates:** https://www.template.net/business/timeline-templates/blank-timeline-template/	
Week 15	Spreadsheets I	Cells Borders Data Graph Insert Columns Edit Add Rows Autosum	Digital learners will realize that information can be organized neatly and effectively by means of a spreadsheet. Digital learners can create a list of items they will need for a party.	Excel tutorial video https://www.youtube.com/watch?v=lwhSRbkUZeE&feature=youtu.be Vocabulary http://www.primaryresources.co.uk/ict/pdfs/15post-spread.pdf Party Budget Templates http://www.primaryresources.co.uk/ict/ict2.htm	

Week 16	Spreadsheets II	Digital learners will use the sum function to calculate total expenses from a column of values (clothing expenses).	Real world Problem Digital learners will use a simple formula to calculate money left over (allowance - total clothing expenses).Additionally, they can Create and Format a Clothes Shopping Budget with a Chart.	MS Excell Template https://app.box.com/s/uomn2x4foq0fzhxq2wgn63y3t1h4e416	
Week 17	Greeting Cards	Digital learners will be able to alter font type, size and colour for emphasis and effect. Examine ethical considerations in the development and production of a greeting cards through it's life cycle.	Digital learners will apply their experience of materials and processes, including drawing, developing their control of tools and techniques to help them develop a product. Digital learners will create their own greeting card.	History of Greeting cards video. https://www.youtube.com/watch?v=QPwnhrurxuM Microsoft Publisher Greeting card Templates. http://www.dltk-cards.com/custom.htm	
Week 18	Google Earth	Latitude and longitude. Digital learners will become familiar with google earth's tools for moving around the world and how to get to and from any locations.	Digital learners will understand that they can utilize technology to visit the world. Instructor can post directions to one of the digital learners' favorite destinations,such as: a famous theme park, or museum etc.	Google Earth video https://www.youtube.com/watch?v=NT7YpblBsF0 Virtual tour instructions. https://corinastechspot.wikispaces.com/file/view/GoogleEarthHowToVFT.pdf Google Earth sites. http://www.educationworld.com/a_tech/tech/tech071.shtml Google Earth's virtual field trips. http://www.theteachersguide.com/virtualtours.html#Museums	

				Google Earth App.	
Week 19	Internet Research	Digital note-taking Plagiarism Short-Cuts Ex. Control-L Control-C	Digital learners need to learn how to get the most out of internet research by utilizing shortcuts and tools. Digital learners will research their favorite planet. Subsequently, they will take notes on the planet's location, distance from the sun, gravity, and other characteristics.	Favorite Planet Template https://www.superteacherworksheets.com/space/planet-report.pdf?up=1466611200 Research Topics http://www.kathimitchell.com/studtopi.html https://www.pebblego.com/login/ http://www.infobaselearning.com/	
Week 20	Digital Storytelling	How to make a digital magazines DTP Keyboarding Skills Speaking and Listening Skills Enhance communication skills through asking questions, expressing opinions, constructing narratives, and writing for an audience	There are many predictions that computer based education will accelerate dramatically in the next decade. What do digital learners think? How can they connect ideas so they make sense to readers? In this lesson, digital learners can create original stories that include text, drawings, photos, animation, audio,	Microsoft Publisher http://desktoppub.about.com/cs/beginners/f/what_dtp.htm Family interview form. (Modify according to digital learners needs). http://www.scholastic.com/teachers/sites/default/files/asset/file/july05_about_my_family.pdf http://digitalstorytelling.coe.uh.edu/ http://www.storycenter.org/books/	

| | | Digital learners will Collaborative to produce a digital story about a significant local event or issue based on first-person interviews. | and video. They use technology tools, such as digital cameras and computers, to bring their stories to life. Story ideas can come from personal and family experiences, connections to other cultures, and real or imaginary people, places, or events. | http://www.microsoft.com/education/Storytelling.mspx

 http://www.edutopia.org/use-digital-storytelling-classroom

 http://www.infotoday.com/MMSchools/jan02/banaszewski.htm | |

Supportive Strategies

1. Special Education

- Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or screen
- magnification on Chromebook, or spoken text features).
- Graphic Organizers.
- Modifications on IEP.
- Provide written and oral directions, utilizing visuals and exemplars. (For example, teacher models
- on StarBoard how to login to Code.org and provides Step-by-Step instruction handout to student).
- Reduction in workload.
- Repetition and Reinforcement of classroom material.
- Strategic Grouping for all group work.

2. ESL

• Employ assistive technology as needed (For example, online translation or Language text settings on technology device) .
• For collaborative assignments, appropriate roles will be assigned. (For example, time-keeper, activity starter) .
• Make content culturally relevant.
• Partner English Learners with Strong English Speakers.
• Provide written and oral directions for all lessons, utilizing visuals and exemplars.
• Repeat classroom procedure and routines as much as possible to reinforce language learning.
• Visual Aids

3. Student at risk of failure

•Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or screen magnification on devices, or spoken text features).
• Flexible acceptance of missing/lost/incomplete assignment.
• Strategic Grouping for all group work

4. Gifted and Talented

•Higher level learners will be provided with more intellectually demanding learning activities. (For example, students who complete lessons on Code.org can continue to the next levels at their own pace).
• Higher Order Questioning.
• Utilize different reading levels appropriate for students.

DOE Resources and Sample Activities 8.1.B, 8.2.B
DOE Resources and Sample Activities 8.1.C, 8.2.C

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.

 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.

http://www.state.nj.us/education/cccs/2014/tech/cad/CADS81B.pdf
http://www.state.nj.us/education/cccs/2014/tech/cad/CADS81C.pdf

Discuss the definition and purpose of intellectual property law. Make a list of circumstances of when this law would come into play. Look at examples to determine if text has been plagiarized or not. Write an informational text explaining when it is acceptable to use other people's work and how to give them credit for their work.

Collaborate in a discussion examining a fuel source (i.e. gas, electric, wind, solar, fire). Investigate what influences its development and use. Identify the resources needed to produce the fuel and explain how availability of resources affects people both here and in areas around the world. Write an informational text examining how the fuel is produced and limited both here and abroad.

http://www.state.nj.us/education/cccs/2014/tech/cad/CADS82B.pdf
http://www.state.nj.us/education/cccs/2014/tech/cad/CADS82C.pdf

Unit Vocabulary		
Graphics	Storage device	Bold
Bullets	Flash drive	Center
Audience	Write optical drive	Copy
Word processing	USB	Cut
Draft	Graphics	Desktop

Writing process	Bullets	Document
Insert	Audience	Drag
Save	Word keyboarding	Dropdown
Scan	Accuracy keyboard speed	Edit File
Scanner	Keyboarding	Font
Screen	File management	Format
Screenshot	Color	Highlight
Script	Symbols	Insert
Scroll	Font style	Italic
Scroll bar	Format	Left align
Search engine	Font size	Paste
Security	Word processing	Right align
Server	Text wrap	Spell check
Pictures	Revise	Table tools
Numbered	Move text	Underline
List organize	Programming	Undo
Spacing	Languages	View
Font	Virtual environments	Window
Alignment	Online help	Word
Move	Feature	Wrap zoom
Pictures	Property	Website
Page	Open	Hyperlinks
Break	Source	Latitude
Font	Software	Longitude
		Coordinates

Unit 3
Technology Curriculum 3rd -5th
2018

Content Area:	Technology		Grade(s)	3rd -5th
Unit Overview:	3rd Marking Period			
	2014 New Jersey Core Curriculum Content Technology Standards			

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.
D. Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
E: Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:
All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
D. Abilities for a Technological World: The designed world is the product of a design process that provides the means to convert resources into products and systems.
E. Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.

Standard(s) 8.1 Educational Technology

- **8.1.5.D.1** Understand the need for and use of copyrights.
- **8.1.5.D.2** Analyze the resource citations in online materials for proper use.
- **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.
- **8.1.5.D.4** Understand digital citizenship and demonstrate an understanding of the personal consequences of inappropriate use of technology and social media.
- **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.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:

- **8.2.5.D.1** Identify and collect information about a problem that can be solved by technology, generate ideas to solve the problem, and identify constraints and trade-offs to be considered.
- **8.2.5.D.2** Evaluate and test alternative solutions to a problem using the constraints and trade-offs identified in the design process to evaluate potential solutions.
- **8.2.5.D.3** Follow step by step directions to assemble a product or solve a problem.
- **8.2.5.D.4** Explain why human-designed systems, products, and environments need to be constantly monitored, maintained, and improved.
- **8.2.5.D.5** Describe how resources such as material, energy, information, time, tools, people and capital are used in products or systems.
- **8.2.5.D.6** Explain the positive and negative effect of products and systems on humans, other species and the environment, and when the product or system should be used.
- **8.2.5.D.7** Explain the impact that resources such as energy and materials used in a process to produce products or system have on the environment.
- **8.2.5.E.1** Identify how computer programming impacts our everyday lives.
- **8.2.5.E.2** Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information.
- **8.2.5.E.3** Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.
- **8.2.2.E.4** Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).

Essential Question(s)	Enduring Understandings
- In order to keep information private, one must secure their profile with a username and password and log off when finished. - How can I keep my computer and password safe? - What are graphs used for? - How is a central idea developed and maintained throughout a presentation? - Why should worksheets be formatted? - What are data management options in spreadsheet software? - What is a probability?	- Advocate and practice safe, legal, and responsible use of information and technology. - Demonstrate personal responsibility for lifelong learning. - Exhibit leadership for digital citizenship. - Plan strategies to guide inquiry. - Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. - Evaluate and select information sources and digital tools based on the appropriateness for specific tasks. - Apply the design process. - Use and maintain technological products and systems. - Assess the impact of products and systems. - Computational thinking and computer programming as tools used in design and engineering.

Interdisciplinary Connections		
Common Core Literacy	**Common Core Math**	**Career Ready Practices**

CCSS.ELA-Literacy.CCRA.R.7	CCSS.MATH.PRACTICE.MP1	CRP1
CCSS.ELA-Literacy.CCRA.W.6	CCSS.MATH.PRACTICE.MP2	CRP4
CCSS.ELA-Literacy.RI.1.5	CCSS.MATH.PRACTICE.MP3	CRP6
CCSS.ELA-Literacy.RI.1.10	CCSS.MATH.PRACTICE.MP5	CRP8
CCSS.ELA-Literacy.RF.1.4a	CCSS.MATH.PRACTICE.MP6	CRP11
CCSS.ELA-Literacy.W.1.6	CCSS.MATH.PRACTICE.MP7	
CCSS.ELA-Literacy.SL.1.1		
CCSS.ELA-Literacy.SL.1.1c		
CCSS.ELA-Literacy.SL.1.2		

Learning Plan	Suggested Activities				
Suggested Time Frame	**Topic**	**Skills**	**Computational Thinking**	**Core Instructional Materials**	**Suggested Formative/ Summative Classroom Assessment**
Week 21	Creating Floor Plans in Excel or Google Sheets I	Digital learners will measure each room in their home using the measuring tape To create a perfectly square grid in Excel, do the following:	Digital learners will identify geometric patterns, practice measuring and drawing to scale, find perimeters and areas, improve business application technology skills,	Google Sheets Tutorial https://www.youtube.com/watch?v=QTgvX5MLPC8 Google Apps Learning Center https://apps.google.com/learning-center/products/sheets/get-started/ Measuring tape Microsoft Excel Google Sheets	**Common Core State Standards Rubrics** http://www.schrockguide.net/assessment-and-rubrics.html Multimedia and Apps Rubrics http://www.schrockguide.net/assessment-and-rubrics.html New Jersey Project and Assessment Examples

Week 22	Creating Floor Plans in Excel or Google Sheets II	Click on the box to the left of Column A to select all cells. Click on any of the vertical lines	incorporate algebra and geometry skills and learn to appreciate a variety of home types.	Measuring tape Microsoft Excel Google Sheets	http://www.nj.gov/education/aps/cccs/tech/assessment/ **Links on Exit/Admit Slips** Readingrockets: Exit Slips http://www.readingrockets.org/strategies/exit_slips AdLit.org: Exit Slips http://www.adlit.org/strategies/19805 Writing Across the Curriculum: Entry/Exit Slips http://writing2.richmond.edu/wac/entrexit.html Exit Slips: Effective Bell-Ringer Activities http://www.teachhub.com/news/article/cat/14/item/377 Admit Slips and Exit Slips http://literacy.kent.edu/eureka/strategies/admit_slips09.pdf Exit Tickets for Formative Assessments
Week 23 Week 24	Digital learners will make a chart to show the probability of a particular outcome.	Digital Tools Skills Intro to Analytics Outcome	Digital learners will first play a coin toss probability game. Followed by creating a graph to illustrate the results. The purpose of this activity is for digital learners to compare data using bar graphs to display information.	Create a Bar Graph Video https://www.youtube.com/watch?v=YXYLFl0_ODo Creating Bars http://www.readingrockets.org/pdfs/edextras/43814-en.pdf Graph Generator http://nces.ed.gov/nceskids/createAgraph/default.aspx Probability Game: Two Players 1. Click here to download game in Word. 2. Print Frequency Chart. 3. Click here to use virtual dice or roll two real dice. 4. Go to Chartgo.com to create a graph displaying the Frequency.	
Week 25 Week 26	Stop Bullying: Speak Up Comic Challenge.	Digital Tools	Digital learners will understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.	Stay Safe Online Sites http://www.mcgruff.org/ http://www.nsteens.org/ Makebelief Comics http://www.makebeliefscomix.com/	

			Digital learners will also identify behaviors that are considered cyberbullying and evaluate their own personal responsibility to be a responsible digital citizen in a comic strip that will be later presented to the class.	Bitstrips https://www.bitstrips.com	
Week 27 **Week 28**	Weather	Review chart Wizard Features and Formulas in EXCEL Column Pie Line Scatter	Digital learners will look up weather information in the chart provided on the Excel spreadsheet. Digital learners will also look up the actual average monthly high temperature and actual monthly rainfall for the past year for their geographical area. Go to http://www.weather.com/, type in the zip code at the top of the page and click search, click on the blue	Weather WizKids http://www.usclimatedata.com/ https://weather.com/ Weather Spreadsheet U.S Climate Data http://www.usclimatedata.com/ Weather Chart Samples http://www.kudotest.com/worksheet/temperature-chart-worksheets-for-kids World Temperature around the world https://www.timeanddate.com/weather/ Air Quality Conditions Generator	

			'Month' tab, and get the 'average high' temperature and 'month to date' rainfall from the graphic that is located below the month calendar. Demonstrate to digital learners how to read the graphic and where to put the numerical data in their spreadsheet. Finally, digital learners can visit AirNow to discuss the local air quality of the town and city they are living in.	https://www.airnow.gov/index.cfm?action=airnow.main	

Supportive Strategies
1. Special Education
- Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or   - screen. magnification on Chromebook, or spoken text features).   - Graphic Organizers.   - Modifications on IEP.   - Provide written and oral directions, utilizing visuals and exemplars. (For example, teacher   - models on StarBoard how to login to Code.org and provides Step-by-Step instruction handout to   - student).   - Reduction in workload.   - Repetition and Reinforcement of classroom material.   - Strategic Grouping for all group work.
2. ESL

• Employ assistive technology as needed (For example, online translation or Language text settings on technology device) .
• For collaborative assignments, appropriate roles will be assigned. (For example, time-keeper, activity starter) .
• Make content culturally relevant.
• Partner English Learners with Strong English Speakers.
• Provide written and oral directions for all lessons, utilizing visuals and exemplars.
• Repeat classroom procedure and routines as much as possible to reinforce language learning.
• Visual Aids
http://www.cal.org/resource-center/briefs-digests/digests

3. Student at risk of failure

• Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or screen magnification on devices, or spoken text features).
• Flexible acceptance of missing/lost/incomplete assignment.
• Strategic Grouping for all group work

4. Gifted and Talented

• Higher level learners will be provided with more intellectually demanding learning activities. (For example, students who complete lessons on Code.org can continue to the next levels at their own pace).
• Higher Order Questioning.
• Utilize different reading levels appropriate for students.

DOE Resources and Sample Activities 8.1.D, 8.2.D (Assessment)
DOE Resources and Sample Activities 8.1.E, 8.2.E (Assessment)

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.

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.
http://www.state.nj.us/education/cccs/2014/tech/cad/CADS81D.pdf
http://www.state.nj.us/education/cccs/2014/tech/cad/CADS81E.pdf

Identify a commonly used human designed product or system, (i.e., car, baby carriage, bicycle; a pencil); and guide a discussion with peers that examines how the product was created and used. With guidance from adults research the product's history reviewing changes made to increase safety. Identify the reasons why this product/ system needs to be monitored, maintained and improved. Develop and publish a two-page news release with images and text identifying the changes, explaining factors which influenced the design and how the user can contribute to product safety.

Discuss how computer programming impacts our daily lives. The New York Times states that 8-18 year olds are online more than 7.5 hours a day. Identify the impacts of excessive time spent online and develop criteria to categorize their impacts such as costs, time, and/or the social, cultural or health impacts on people's lives. Create a graphic organizer to identify the issues and their possible constraints/ solutions in response to questions raised

in discussions. Can you make better use of time spent online? Extension: Create an online resource about this to share with others.

http://www.state.nj.us/education/cccs/2014/tech/cad/CADS82D.pdf
http://www.state.nj.us/education/cccs/2014/tech/cad/CADS82E.pdf

Unit Vocabulary

Slide show presentation	Proofreading	Page orientation
Slide background	Punctuation	Format
Image	Review chart	Margins
Text design	Formulas in EXCEL	Columns
Element template	Column	publish
Layout	Pie	Data Tables
Space	Line	Spreadsheet
Design	Scatter	Outcome
Color palette	Analytics	
Graphics effect	Visualization	
Data	Java	
Audio	Axes	
Animation	Horizontal Axis	
Video transition	Vertical Axis	
Slide sorter	Axes Labels	
Toolbar transition effects	Scale	
	Pollution	

Unit 4
Technology Curriculum 3rd -5th
2018

Content Area:	Technology	Grade(s)	3rd - 5th
Unit Overview:	4th Marking Period		
	2014 New Jersey Core Curriculum Content Technology Standards		

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.
   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.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
E. Computational Thinking: Programming: Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.

Standard(s) 8.1 Educational Technology

- **8.1.2.F.1** Apply digital tools to collect, organize, and analyze data that support a scientific finding.

8.2 Technology Education, Engineering, Design, and Computational Thinking - Programming:

- **8.2.5.E.1** Identify how computer programming impacts our everyday lives.
- **8.2.5.E.2** Demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information.
- **8.2.5.E.3** Using a simple, visual programming language, create a program using loops, events and procedures to generate specific output.
- **8.2.2.E.4** Use appropriate terms in conversation (e.g., algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).

Essential Question(s)	Enduring Understandings
What is the impact of technology on research and communication? What are the benefits and limitations of using technology? How can people use this technology in different situations? How can people use this software to create original, innovative works, ideas, and solutions?	Technology is a tool that can be used for collecting, organizing, creating, and presenting information. Identify and define authentic problems and significant questions for investigation. Plan and manage activities to develop a solution or complete a project. Collect and analyze data to identify solutions and/or make informed decisions. Use multiple processes and diverse perspectives to explore alternative solutions.

	Computational thinking and computer programming as tools used in design and engineering.

Interdisciplinary Connections		
Common Core Literacy	**Common Core Math**	**Career Ready Practices**
CCSS.ELA-Literacy.CCRA.R.7	CCSS.MATH.PRACTICE.MP1	CRP1
CCSS.ELA-Literacy.CCRA.W.6	CCSS.MATH.PRACTICE.MP2	CRP4
CCSS.ELA-Literacy.RI.1.5	CCSS.MATH.PRACTICE.MP3	CRP6
CCSS.ELA-Literacy.RI.1.10	CCSS.MATH.PRACTICE.MP5	CRP8
CCSS.ELA-Literacy.RF.1.4.A	CCSS.MATH.PRACTICE.MP6	CRP11
CCSS.ELA-Literacy.W.1.6	CCSS.MATH.PRACTICE.MP7	
CCSS.ELA-Literacy.SL.1.1		
CCSS.ELA-Literacy.SL.1.1.C		
CCSS.ELA-Literacy.SL.1.2		

Learning Plan	Suggested Activities				
Suggested Time Frame	**Topic**	**Skills**	**Computational Thinking**	**Core Instructional Materials**	**Suggested Formative/Summative Classroom Assessments**

| Week 29 Week 30 | Animal Adaptation Multimedia Project | Multimedia Tools | Digital learners will compare and contrast features of children's search sites and explain why it is best to utilize two or more sites when searching for information.

Students will research a specific animal and the adaptations that help it survive. Students will take notes on the animal using a packet to assist them in gathering the information needed. Students will create a multimedia presentation which will describe the adaptations and how each adaptation helps it survive in its environment. | CyberSmart - "Choosing a Search Site" http://cybersmartcurriculum.org/researchinfo/lessons/4-5/choosing_a_search_site/

Notes Packet http://moodle.northport.k12.ny.us/mod/resource/view.php?id=3722

Time Line http://moodle.northport.k12.ny.us/mod/page/view.php?id=8264

Multimedia Presentation Notes http://moodle.northport.k12.ny.us/mod/resource/view.php?id=9561

Sample Project http://moodle.northport.k12.ny.us/mod/resource/view.php?id=10924

Powerpoint Instructions http://moodle.northport.k12.ny.us/mod/resource/view.php?id=698640 | **Assessments and Rubric Common Core State Standards Rubrics** http://www.schrockguide.net/assessment-and-rubrics.html **Multimedia and Apps Rubrics** http://www.schrockguide.net/assessment-and-rubrics.html **New Jersey Project and Assessment Examples** http://www.nj.gov/education/aps/cccs/tech/assessment/

Links on Exit/Admit Slips Readingrockets: Exit Slips http://www.readingrockets.org/strategies/exit_slips AdLit.org: Exit Slips http://www.adlit.org/strategies/19805 Writing Across the Curriculum: Entry/Exit Slips http://writing2.richmond.edu/wac/entrexit.html Exit Slips: Effective Bell-Ringer Activities http://www.teachhub.com/news/article/cat/14/item/377 |
| **Week 31 Week 32** | Plagiarism | Plagiarism Tools Word Processor | Digital learners will explore how to correctly site images and other | Noodle Tools http://www.noodletools.com/

www.cybersmartcurriculum.org | |

| | | | information further the definition plagiarism and practice using resources from the Internet appropriately. Digital learners will read a paragraph on cybersmart curriculum and minimize it on their computer. Then, digital learners will write the information found in the paragraph in their own words using a word processor. Allow time for digital learners to compare the differences between the online paragraph and their own paragraph. Finally, digital learners will copy and paste their paragraph in a plagiarizing finder engine site and publish their cited final work on the class webpage or blog. | Choosing a Search Site http://www.squirrelnet.com/search/Google_SafeSearch.asp

Plagiarismfinder.com | Admit Slips and Exit Slips http://literacy.kent.edu/eureka/strategies/admit_slips09.pdf |

Week 33 **Week 34**	Build A Rollercoaster	Engineering Mapping Software	Digital learners will take on the role of engineers who need to design a roller coaster. They will learn about the history of roller coasters, the different types, and the many things that affect roller coaster success. Finally they will use a variety of Internet resources to guide them as they design their own roller coaster and test it for success.	Amusement Park Phisics http://www.learner.org/interactives/parkphysics/ Type of rollercoasters http://science.howstuffworks.com/engineering/structural/roller-coaster8.htm Design a Rollercoaster http://www.learner.org/interactives/parkphysics/coaster/ Safety and Inspection Sheet http://www.learner.org/interactives/parkphysics/coaster/result.php3 Rollercoaster Simulator http://www.funderstanding.com/educators/coaster/	
Week 35 **Week 36**	Together we can make this world a better place! Video Project	Edit a video and learn how to use Windows Movie Maker	In this lesson, Digital Learners will type in a word proces ing program, a descriptive paragraph about a person they would like to meet and how together they can solve a global issue such as: The Global Water Crisis or the Consumption	Kids Go Global Site http://www.kidsgoglobal.net/the-issues/ Storyboard Ideas http://storyboardsecrets.com/blog/storyboard-portfolio-sample-story-ideas-comics/ Techno Kids http://www.technokids.com/Store/Elementary-School/TechnoDrama/digital-storytelling-in-the-classroom.aspx Video Making Sites	

| | | | of plastic goods. After, they can make a video with images. | https://animoto.com/ Smilebox http://www.smilebox.com/lp/slideshows-var1.html?partner=msnee&campaign=search_us_slideshow~video_maker~nofree&utm_source=bing&utm_medium=cpc&utm_campaign=search_us_slideshow&url=smilebox.com&utm_term=video%20making&utm_content=Video%20Maker&gclid=CNmP7I7yms8CFYhKNwodamEFig&gclsrc=ds Wevideo.com https://www.wevideo.com/ | |

Supportive Strategies

1. Special Education

- Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or screen magnification on Chromebook, or spoken text features).
- Graphic Organizers.
- Modifications on IEP.
- Provide written and oral directions, utilizing visuals and exemplars. (For example, teacher models on StarBoard how to login to Code.org and provides Step-by-Step instruction handout to student).
- Reduction in workload.
- Repetition and Reinforcement of classroom material.
- Strategic Grouping for all group work.

2. ESL

- Employ assistive technology as needed (For example, online translation or Language text settings on technology device) .
- For collaborative assignments, appropriate roles will be assigned. (For example, time-keeper, activity starter) .
- Make content culturally relevant.
- Partner English Learners with Strong English Speakers.
- Provide written and oral directions for all lessons, utilizing visuals and exemplars.
- Repeat classroom procedure and routines as much as possible to reinforce language learning.
- Visual Aids

3. Student at risk of failure

- Employ assistive technology as needed (For example, use of Dyslexic font, high contrast or screen magnification on devices, or spoken text features).
- Flexible acceptance of missing/lost/incomplete assignment.
- Strategic Grouping for all group work

4. Gifted and Talented
•Higher level learners will be provided with more intellectually demanding learning activities. (For example, students who complete lessons on Code.org can continue to the next levels at their own pace).   • Higher Order Questioning.   • Utilize different reading levels appropriate for students.

DOE Resources and Sample Activities 8.1.F, 8.2.E
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.   http://www.state.nj.us/education/cccs/2014/tech/cad/CADS81F.pdf   Discuss how computer programming impacts our daily lives. The New York Times states that 8-18 year olds are online more than 7.5 hours a day. Identify the impacts of excessive time spent online and develop criteria to categorize their impacts such as costs, time, and/or the social, cultural or health impacts on people's lives. Create a graphic organizer to identify the issues and their possible constraints/ solutions in response to questions raised in discussions. Can you make better use of time spent online? Extension: Create an online resource about this to share with others.   http://www.state.nj.us/education/cccs/2014/tech/cad/CADS82E.pdf

Unit Vocabulary		
Template	Graphics	Data Tables
Layout	Drag and Drop	Record
Space	Drawing	Datasheet Form
Design	Software	Communities
Color palette	Graphics	Compare and Contrast
Digital book	Software	Grammar salutation
CyberSmart	Drawing area	Author writing
Time Line	Tool box	Letter
Multimedia	Fill color shape tool	Body
Plagiarism	Slide show presentation	Signature
Citations	Background text	Tag
Engineer	Design element	Order
Edit	Spelling Check	Filter
Cut	Formatting	Ascending order
Render	Word Processing	Sort database
Global Issues	Software Hyperlink	