Grade, Subject/Course: 2nd Grade, Technology	
Unit: Computational Thinker	**__X__ Essential _____ Important _____ Compact**
Big Idea: *Solve It!* How can I construct code to complete a task?	

PA Core Content Standards/Anchors (or National Standards):

PA STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards:

- 3.5.K-2.A: Identify and use everyday symbols.
- 3.5.K-2.F: Investigate the use of technology in the home and community.
- 3.5.K-S.W: Apply concepts and skills from technology and engineering activities that reinforce concepts and skills across multiple content areas.
- 3.5.K-2.AA: Demonstrate that creating can be done by anyone.
- 3.5.K-2.CC: Discuss the roles of scientists, engineers, technologists and others who work with technology.

PA Academic Standards for BCIT (Business, Computer, and Information Technology):

- 15.3.2.J: Reproduce active listening techniques modeled by familiar adults.
- 15.3.2.N: Identify positive work habits in the classroom.
- 15.4.2.B: Demonstrate responsible use of technology and equipment.
- 15.4.2.G: With help and support, select and use various software/applications for an intended purpose.
- 15.4.2.M: With help and support, identify various technologies used in the workplace.

CSTA (Computer Science Teachers Association) Standards:

- 1A-CS-01: Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.
- 1A-AP-08: Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks.
- 1A-AP-09: Model the way programs store and manipulate data by using numbers or other symbols to represent information.
- 1A-AP-10: Develop programs with sequences and simple loops, to express ideas or address a problem.
- 1A-AP-11: Decompose (break down) the steps needed to solve a problem in a precise sequence of instructions.
- 1A-AP-12: Develop plans that describe a program's sequence of events, goals, and expected outcomes.
- 1A-AP-14: Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops.

ISTE (International Society for Technology in Education) Standards for Students:

- Computational Thinker: Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Interdisciplinary Standards (if applicable):

PA Core Standards for ELA (English Language Arts):

- ELA CC.1.2.2.C: Describe the connection between a series of events, concepts, or steps in a procedure within a text.
- ELA CC.1.2.2.F: Determine the meaning of words and phrases as they are used in grade-level text including multiple-meaning words.

- ELA CC.1.2.2.J: Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.
- ELA CC.1.5.2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
- ELA CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- ELA CC.1.5.2.C: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- ELA CC.1.5.2.E: Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- ELA CC.1.5.2.G: Demonstrate command of the conventions of standard English when speaking, based on Grade 2 level and content.

PA Core Standards for Math:

- Math CC.2.2.3.A.4: Solve problems involving the four operations, identify and explain patterns in arithmetic. *(3rd Grade standard)*

Essential Questions:

- How can I construct code to complete a task?

Understandings:

Students will know that…

- code can be constructed to complete a puzzle, move an object, and create unique work.

Knowledge:

- code is the basis of all technology
- problem-solving is necessary to construct and debug code
- robotic devices are controlled by code and make tasks easier
- robotic devices contribute to society in numerous and varied ways
- many careers utilize technology and/or coding skills

Do/Skills:

Students will be able to…

- choose and place single and looped commands to construct an algorithm
- employ problem solving strategies to construct and debug code
- identify uses of robotic devices in the real world
- identify careers that use technology and/or coding

Vocabulary:

- *code* - the language that programmers create and use to tell a computer what to do
- *algorithm* - a list of steps to finish a task
- *program* - an algorithm that has been coded into something that can be run by a machine
- *programming* - the art of creating a program, another word for writing code
- *persistence* - trying again and again even when something is very hard
- *sequence* - a set of related events, movements or items that follow each other in a particular order
- *run program* - telling the computer to execute the commands that have been written in a program
- *bug* - an error in a program that prevents the program from running as expected
- *debugging* - finding and fixing problems in an algorithm or program
- *loop* - the action of doing something over and over again

Core Resources:

- device (ex. Chromebook)
- digital learning platform (ex. Clever)
- coding program (ex. Code.org)
- Hour of Code event
    - As time and schedules permit, collaboration with community member(s), EAHS coding classes, and the EASD Tech Department

● *repeat* - to do something again ● Code.org terms: ○ *workspace* - the white area on the right side of Code.org's online learning system where the user drags and drops commands to build a program ○ *toolbox* - the tall gray bar in the middle section of Code.org's online learning system that contains all of the commands used to write a program ○ *block-based coding* - any programming language that lets users create programs by manipulating "blocks" or graphical programing elements rather than writing code using text (Examples include Code Studio, Scratch, Blockly, and Swift. Sometimes called visual coding, drag and drop programming, or graphical programming blocks.) ○ *Blockly* - the visual programming language used in Code.org's online learning system for K-5 students	
Common Assessment(s): ● Students demonstrate progress with their coding skills through the completion of a coding course (ex. Course B in Code.org).	**Supplemental Resources:** ● coding programs (ex. Kodable, codeSpark Academy, and Tynker) ● STEAM Career Bulletin Board/Poster Set (publisher: Carson Dellosa) ● Literature: "What Can I Be? STEM Careers from A to Z" by Tiffani Teachey

Grade, Subject/Course: 2nd Grade, Technology	
Unit: Creative Communicator	_____ **Essential** __X__ **Important** _____ **Compact**
Big Idea: *Share It!* How can I use digital tools to communicate with others?	

PA Core Content Standards/Anchors (or National Standards):

PA STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards:

- 3.5.K-2.C: Explain ways that technology helps with everyday tasks.

PA Academic Standards for BCIT (Business, Computer, and Information Technology):

- 15.3.2.J: Reproduce active listening techniques modeled by familiar adults.
- 15.3.2.M: With prompting and support, demonstrate proper etiquette while using technology.
- 15.3.2.N: Identify positive work habits in the classroom.
- 15.3.2.O: With prompting and support, ask and answer questions about various communication strategies used in diverse settings (classroom, home, or social event).
- 15.3.2.S: With prompting and support, ask and answer questions about electronic communication.
- 15.3.2.T: With prompting and support, answer questions related to digital citizenship.
- 15.4.2.B: Demonstrate responsible use of technology and equipment.
- 15.4.2.G: With help and support, select and use various software/applications for an intended purpose.
- 15.4.2.M: With help and support, identify various technologies used in the workplace.

**These standards are covered in Chapter 339 and ELA curriculum.*

- 15.3.2.K: Reference student Interpersonal Skills 16.3.K.B
- 15.3.2.X: Reference Student Interpersonal Skills 16.2.K.B

CSTA (Computer Science Teachers Association) Standards:

- 1A-CS-01: Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.
- 1A-IC-17: Work respectfully and responsibly with others online.

ISTE (International Society for Technology in Education) Standards for Students:

- Creative Communicator: Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats, and digital media appropriate to their goals.

Interdisciplinary Standards (if applicable):

PA Core Standards for ELA (English Language Arts):

- ELA CC.1.2.2.F: Determine the meaning of words and phrases as they are used in grade-level text including multiple-meaning words.
- ELA CC.1.2.2.J: Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.
- ELA CC.1.4.2.A: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- ELA CC.1.4.2.F: Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.

- ELA CC.1.4.2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.
- ELA CC.1.5.2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
- ELA CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- ELA CC.1.5.2.C: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- ELA CC.1.5.2.E: Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- ELA CC.1.5.2.F: Add drawings or other visual displays to presentations when appropriate to clarify ideas, thoughts, and feelings.
- ELA CC.1.5.2.G: Demonstrate command of the conventions of standard English when speaking, based on Grade 2 level and content.

Essential Questions:

- How can I use digital tools to communicate with others?

Understandings:

Students will know that…
- there are various options for communicating through digital tools.

Knowledge:

- digital tools can improve communication and increase connectivity
- a variety of digital tools can be used in electronic work
- original digital works can be created and shared through the use of technology

Do/Skills:

Students will be able to…
- use digital tools to communicate with others
- select appropriate digital tools to create original works
- create and share original digital works through the use of technology

Vocabulary:

- *communication* - the act of giving, receiving, and sharing information
- *share* - procedure of creating and sending a link that contains digital work for others to view
- *digital tools* - online learning tools like websites, programs, or applications that can be accessed via the internet and used to collaborate and share with others
- *digital citizen* - someone who acts safely, responsibly, and respectfully online

Core Resources:

- device (ex. Chromebook)
- digital learning platform (ex. Clever)
- learning management system (ex. Seesaw)
- productivity software (ex. Google Workspace for Education: Google Drive, Google Slides, Google Drawings, Google Forms)

Common Assessment(s):

- Students share productivity software projects (ex. Google Slides and Google Drawings) through a learning management system (ex. Seesaw).

Supplemental Resources:

- online bulletin board (ex. Padlet)

Grade, Subject/Course: 2nd Grade, Technology	
Unit: Digital Citizen	**__X__ Essential _____ Important _____ Compact**
Big Idea: *Protect It!* How can I be a good digital citizen who uses technology correctly and responsibly?	

PA Core Content Standards/Anchors (or National Standards):

PA STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards:

- 3.5.K-2.E: Illustrate helpful and harmful effects of technology.
- 3.5.K-2.R: Draw connections between technology and human experiences.

PA Academic Standards for BCIT (Business, Computer, and Information Technology):

- 15.3.2.J: Reproduce active listening techniques modeled by familiar adults.
- 15.3.2.L: Identify role models in various contexts (real vs. fiction).
- 15.3.2.M: With prompting and support, demonstrate proper digital etiquette while using technology.
- 15.3.2.N: Identify positive work habits in the classroom.
- 15.3.2.O: With prompting and support, ask and answer questions about various communication strategies used in diverse settings (classroom, home or social event).
- 15.3.2.S: With prompting and support, ask and answer questions about electronic communication.
- 15.3.2.T: With prompting and support, answer questions related to digital citizenship.
- 15.4.2.B: Demonstrate responsible use of technology and equipment.

CSTA (Computer Science Teachers Association) Standards:

- 1A-NI-04: Explain what passwords are and why we use them, and use strong passwords to protect devices and information from unauthorized access.
- 1A-AP-13: Give attribution when using the ideas and creations of others while developing programs.
- 1A-IC-17: Work respectfully and responsibly with others online.
- 1A-IC-18: Keep login information private, and log off of devices appropriately.

ISTE (International Society for Technology in Education) Standards for Students:

- Digital Citizen: Students recognize the rights, responsibilities and opportunities of living, learning, and working in an interconnected digital world, and they act and model in ways that are safe, legal, and ethical.

Interdisciplinary Standards (if applicable):

PA Core Standards for ELA (English Language Arts):

- ELA CC.1.2.2.F: Determine the meaning of words and phrases as they are used in grade-level text including multiple-meaning words.
- ELA CC.1.2.2.J: Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.
- ELA CC.1.5.2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
- ELA CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- ELA CC.1.5.2.C: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

- ELA CC.1.5.2.E: Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- ELA CC.1.5.2.G: Demonstrate command of the conventions of standard English when speaking, based on Grade 2 level and content.

Essential Questions:

- How can I be a good digital citizen who uses technology correctly and responsibly?

Understandings:

Students will know that…

- good digital citizens use apps and websites approved by trusted adults, use their own ideas and words, evaluate websites for appropriateness, and keep personal information private.

Knowledge:

- traits of a good digital citizen
- ways to stay safe online
- characteristics of age appropriate websites
- definition of intellectual property
- definition of personal information
- definition of digital footprint

Do/Skills:

Students will be able to…

- demonstrate traits of a good digital citizen
- follow guidelines for safely using the internet
- identify and demonstrate use of age appropriate websites
- plan and create original work
- keep personal information (i.e. name, age, address, passwords) private
- identify information that is safe to share online

Vocabulary:

- *Acceptable Use Policy (AUP)* - the school district rules for accessing and using technology and the internet
- *personal information* - information that identifies who we are, where we live, and how family, friends, and others can contact us
- *intellectual property* - something that someone creates including written ideas, artwork, designs, photos, videos, music, inventions, etc.
- *appropriate* - acceptable and proper, follows the rules
- *trustworthy* - able to be relied on as honest or truthful
- *digital citizen* - someone who acts safely, responsibly, and respectfully online
- *internet safety* - staying safe online and protecting yourself against potential risks on the internet
- *privacy* - keeping personal information to yourself
- *digital footprint* - the information about someone that can be found on the internet, permanent record of internet activity

Core Resources:

- device (ex. Chromebook)
- digital learning platform (ex. Clever)
- learning management system (ex. Seesaw)
- digital citizenship resources (ex. Common Sense Media, Common Sense Education)

Common Assessment(s):	**Supplemental Resources:**
● Students demonstrate how to use tools (ex. internet traffic light) to make safe decisions about appropriate websites. ● Students identify what becomes a part of their digital footprint. ● Students identify qualities of a good digital citizen.	

Grade, Subject/Course: 2nd Grade, Technology	
Unit: Empowered Learner	**__X__ Essential _____ Important _____ Compact**
Big Idea: *Use It!* How can I choose, use, and troubleshoot technology to demonstrate my learning?	

PA Core Content Standards/Anchors (or National Standards):

PA STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards:

- 3.5.K-2.A: Identify and use everyday symbols.
- 3.5.K-2.C: Explain ways that technology helps with everyday tasks.
- 3.5.K-2.Y: Discuss how the way people live and work has changed throughout history because of technology.

PA Academic Standards for BCIT (Business, Computer, and Information Technology):

- 15.3.2.J: Reproduce active listening techniques modeled by familiar adults.
- 15.3.2.N: Identify positive work habits in the classroom.
- 15.4.2.A: Identify various technologies used in the classroom and at home.
- 15.4.2.B: Demonstrate responsible use of technology and equipment.
- 15.4.2.C: With prompting and support, identify peripheral devices of computer systems including input and output devices.
- 15.4.2.D: Demonstrate the correct use of simple input technologies (e.g., mouse, touch screen, microphone, etc.)
- 15.4.2.G: With help and support, select and use various software/applications for an intended purpose.
- 15.4.2.M: With help and support, identify various technologies used in the workplace.

CSTA (Computer Science Teachers Association) Standards:

- 1A-CS-01: Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.
- 1A-CS-02: Use appropriate terminology in identifying and describing the function of common physical components of computing systems (hardware).
- 1A-CS-03: Describe basic hardware and software problems using accurate terminology.
- 1A-DA-05: Store, copy, search, retrieve, modify, and delete information using a computing device and define the information stored as data.
- 1A-IC-16: Compare how people live and work before and after the implementation or adoption of new computing technology.

ISTE (International Society for Technology in Education) Standards for Students:

- Empowered Learner: Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning informed by the learning sciences.

Interdisciplinary Standards (if applicable):

PA Core Standards for ELA (English Language Arts):

- ELA CC.1.2.2.F: Determine the meaning of words and phrases as they are used in grade-level text including multiple-meaning words.
- ELA CC.1.2.2.J: Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.
- ELA CC.1.4.2.F: Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.

- ELA CC.1.5.2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
- ELA CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- ELA CC.1.5.2.C: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- ELA CC.1.5.2.E: Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- ELA CC.1.5.2.G: Demonstrate command of the conventions of standard English when speaking, based on Grade 2 level and content.

Essential Questions:

- How can I choose, use, and troubleshoot technology to demonstrate my learning?

Understandings:

Students will know that…

- they can choose technology to effectively and efficiently complete a task and troubleshoot issues that may arise.

Knowledge:

- rules and procedures for proper use of devices
- digital devices have many parts and functions
- steps of logging in and out of devices and programs
- benefits of proper keyboarding technique
- steps for accessing work
- methods for basic troubleshooting
- technology changes over time

Do/Skills:

Students will be able to…

- name rules and procedures for proper use of devices
- identify parts and functions of digital devices
- demonstrate independence logging in and out of devices and programs
- utilize proper keyboarding technique including use of home row position
- independently complete steps for accessing work
- propose and apply methods for basic troubleshooting
- identify examples of how technology has changed and advanced

Vocabulary:

- *username* - a special name given to a user on a computer network
- *password* - a secret combination of letters, numbers, and symbols to identify the user and keep their information safe
- *log in* - accessing a device or program using a username/password
- *log out* - signing out of a device or program at the end of a session
- *login* - username and password combination
- *click* - press the mouse button/touchpad one time
- *double-click* - press the mouse button/touchpad very quickly two times
- *two finger click* - pressing 2 fingers on the touchpad at once, same as right click on a mouse
- *drag and drop* - click to select an object, hold, move, and release
- *scroll* - moving windows up, down, left, and right
- *tab* - a clickable area at the top of the screen that lets the user switch to other pages
- *window* - the viewing area on a computer
- *full screen* - shortcut to view what's on the screen in its largest size

- *shortcut* - a special key or combination of keys used to quickly perform a

Core Resources:

- device (ex. Chromebook)
- digital learning platform (ex. Clever)
- learning management system (ex. Seesaw)
- keyboarding program (ex. Keyboarding Without Tears)
- productivity software (ex. Google Workspace for Education: Google Drive, Google Slides, Google Drawings)
- class website (ex. Google Sites) with linked resources for students

task
    - *copy* - control/c
    - *paste* - control/v
    - *duplicate* - control/d
    - *cut* - control/x
    - *undo* - control/z
    - *logout* - control/shift/q/q
- *input* - a way to give information to a computer
- *output* - a way to get information out of a computer
- *troubleshoot* - find and fix problems
- *icon* - a small symbol or picture that represents a program, file, or action for a program to perform when clicked
- *link* - an item like a word or icon that links to another page or file
- *app* - a type of software that allows the user perform certain tasks
- *program* - an application or a piece of software
- *web browser* - a program used to access the internet
- *web page* - a document that can be viewed on the internet using a browser
- *website* - a collection of linked web pages
- *data* - any information stored by a computer; for example: files, emails, apps, video games, songs, and pictures
- *shut down* - the process of turning off a device
- *restart* - the processing of turning on a device
- keyboarding terms
    - *keyboarding* - the action of typing information into a device
    - *home row* - the row on a computer or typewriter keyboard that contains the keys (home keys - *asdf jkl;*) and where four fingers of each hand return as a base
    - *cursor* - a blinking line that shows where the user is working and where the next letter or number will display
    - *shift key* - the key that is used to make uppercase letters and other characters
    - *space bar* - the long key above the touchpad that is pressed to make spaces
    - *backspace key* - click to move the cursor backwards, deletes mistakes
    - *delete* - erase mistakes
- *laptop computer* - portable computer that opens and closes and has a keyboard and a screen
- *desktop computer* - a computer that has multiple connected parts and must be plugged in to work
- parts of the computer terms
    - *hardware* - the physical parts of the computer that can be seen and touched
    - *software* - the programs or instructions that make a device run properly and allow the user to perform tasks

○ *input device*- the hardware that allows the user to put information into the computer (ex. keyboard, mouse, etc.) ○ *output device* - the hardware that displays/shares the information (ex. printer, screen, speakers, etc.) ○ *keyboard* - a board that has keys to enter letters, numbers, and other symbols ○ *touchpad* - a flat surface that allows the user to control the device with finger movements and clicks, also known as a *trackpad* ○ *central processing unit* - the part that controls all functions of the computer, the "brain" of the computer ○ *screen* - the part that displays pictures and information the user can see	
Common Assessment(s): ● Students demonstrate their ability to independently log in and log out of devices and programs. ● Students demonstrate their ability to find, navigate, and use various apps, programs, and websites. ● Students demonstrate their ability to troubleshoot basic technology issues. ● Students name computer parts and functions. ● Students match new forms of technology with old forms of technology. ● Students demonstrate progress with their keyboarding skills through the use of a keyboarding program (ex. Keyboarding Without Tears).	**Supplemental Resources:** ● online typing activities (ex. ABCya.com and Digipuzzle.net)

Grade, Subject/Course: 2nd Grade, Technology	
Unit: Global Collaborator	**_____ Essential _____ Important __X__ Compact**
Big Idea: *Connect It!* How can collaboration with digital tools improve learning?	

PA Core Content Standards/Anchors (or National Standards):

PA STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards:

- 3.5.K-2.C: Explain ways that technology helps with everyday tasks.
- 3.5.K-2.R: Draw connections between technology and human experiences.

PA Academic Standards for BCIT (Business, Computer, and Information Technology):

- 15.3.2.J: Reproduce active listening techniques modeled by familiar adults.
- 15.3.2.M: With prompting and support, demonstrate proper etiquette while using technology.
- 15.3.2.N: Identify positive work habits in the classroom.
- 15.3.2.O: With prompting and support, ask and answer questions about various communication strategies used in diverse settings (classroom, home, or social event).
- 15.4.2.B: Demonstrate responsible use of technology and equipment.
- 15.4.2.G: With help and support, select and use various software/applications for an intended purpose.
- 15.4.2.M: With help and support, identify various technologies used in the workplace.

CSTA (Computer Science Teachers Association) Standards:

- 1A-CS-01: Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.
- 1A-IC-17: Work respectfully and responsibly with others online.

ISTE (International Society for Technology in Education) Standards for Students:

- Global Collaborator: Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Interdisciplinary Standards (if applicable):

PA Core Standards for ELA (English Language Arts):

- ELA CC.1.2.2.F: Determine the meaning of words and phrases as they are used in grade-level text including multiple-meaning words.
- ELA CC.1.2.2.J: Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.
- ELA CC.1.4.2.F: Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.
- ELA CC.1.4.2.U: With guidance and support use a variety of digital tools to produce and publish writing including in collaboration with peers.
- ELA CC.1.5.2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
- ELA CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- ELA CC.1.5.2.C: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

- ELA CC.1.5.2.E: Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- ELA CC.1.5.2.G: Demonstrate command of the conventions of standard English when speaking, based on Grade 2 level and content.

Essential Questions:

- How can collaboration with digital tools improve learning?

Understandings:

Students will know that…

- digital tools can be used to work with others and create a unique product.

Knowledge:

- digital tools can improve collaboration
- collaborative technologies can be used to work with others, including peers, experts, or community members

Do/Skills:

Students will be able to…

- use digital tools to complete a collaborative task
- use collaborative technologies to work with others

Vocabulary:

- *collaboration* - working together to complete a task
- *digital tools* - online learning tools like websites, programs, or applications that can be accessed via the internet and used to collaborate and share with others

Core Resources:

- device (ex. Chromebook)
- digital learning platform (ex. Clever)
- learning management system (ex. Seesaw)
- productivity software (ex. Google Workspace for Education: Google Drive, Google Slides, Google Drawings)
- coding program (ex. Code.org)
- Hour of Code event
    - As time and schedules permit, collaboration with community member(s), EAHS coding classes, and the EASD Tech Department

Common Assessment(s):

- Students participate in "How Tech is Used to Create Art" *(crossover lesson with STEAM -- Sphero team painting)*.
- Students collaborate with their peers and others to solve coding puzzles (ex. use of "pair programming" feature in Code.org.).
- Students complete a collaborative task using productivity software (ex. Google Slides, Google Drawings).

Supplemental Resources:

- coding programs (Kodable, codeSpark Academy, and Tynker)

Grade, Subject/Course: 2nd Grade, Technology	
Unit: Innovative Designer	**__X__ Essential _____ Important _____ Compact**
Big Idea: *Make It!* How can I use text, graphics, and multimedia tools to create original works?	

PA Core Content Standards/Anchors (or National Standards):

PA STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards:

- 3.5.K-2.A: Identify and use everyday symbols.
- 3.5.K-2.C: Explain ways that technology helps with everyday tasks.

PA Academic Standards for BCIT (Business, Computer, and Information Technology):

- 15.3.2.E: With prompting and support, use digital tools for guided research projects.
- 15.3.2.J: Reproduce active listening techniques modeled by familiar adults.
- 15.3.2.N: Identify positive work habits in the classroom.
- 15.4.2.B: Demonstrate responsible use of technology and equipment.
- 15.4.2.G: With help and support, select and use various software/applications for an intended purpose.
- 15.4.2.K: With help and support, identify similarities and differences between text, graphics, audio, animation, and video.
- 15.4.2.M: With help and support, identify various technologies used in the workplace.

CSTA (Computer Science Teachers Association) Standards:

- 1A-CS-01: Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.
- 1A-DA-05: Store, copy, search, retrieve, modify, and delete information using a computing device and define the information stored as data.
- 1A-AP-13: Give attribution when using the ideas and creations of others while developing programs.

ISTE (International Society for Technology in Education) Standards for Students:

- Innovative Designer: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful, or imaginative solutions.

Interdisciplinary Standards (if applicable):

PA Core Standards for ELA (English Language Arts):

- ELA CC.1.2.2.F: Determine the meaning of words and phrases as they are used in grade-level text including multiple-meaning words.
- ELA CC.1.2.2.J: Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.
- ELA CC.1.4.2.A: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- ELA CC.1.4.2.F: Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.
- ELA CC.1.4.2.U: With guidance and support use a variety of digital tools to produce and publish writing including in collaboration with peers.
- ELA CC.1.5.2.A: Participate in collaborative conversations with peers and adults in small and larger groups.
- ELA CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- ELA CC.1.5.2.C: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

- ELA CC.1.5.2.E: Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- ELA CC.1.5.2.F: Add drawings or other visual displays to presentations when appropriate to clarify ideas, thoughts, and feelings.
- ELA CC.1.5.2.G: Demonstrate command of the conventions of standard English when speaking, based on Grade 2 level and content.

Essential Questions:

- How can I use text, graphics, and multimedia tools to create original works?

Understandings:

Students will know that…

- text, graphics, and multimedia tools can be used to creatively share information and ideas.

Knowledge:

- skills and tools used in word processing
- text design varies based on the purpose of the work
- graphics can enhance and clarify ideas
- design elements enhance presentations
- design tools allow for the creation of unique products
- tools are organized within toolbars

Do/Skills:

Students will be able to…

- choose and utilize word processing tools
- choose font style, color, and size for an intended purpose
- find, insert, and resize related graphics
- effectively use contrast and repetition in presentations
- choose and use design tools within multimedia apps and programs
- select specific tools from toolbars

Vocabulary:

- *word processor* - a program that allows a user to use text and other features to create, edit, and save documents
- word processing terms
  - *characters* - letters, numbers, punctuation marks, symbols, and spaces that can be entered on a computer
  - *text* - words and characters displayed on a device
  - *font style* - the way characters look (size, design, thickness, etc.)
  - *font size* - the size of characters
  - *font color* - the color of characters
- *shortcut* - a special key or combination of keys used to quickly perform a task
  - *copy* - control/c
  - *paste* - control/v
  - *duplicate* - control/d
  - *cut* - control/x
  - *undo* - control/z
- *text box* - a section or object on a page that allows a user to enter text
- *graphic* - a picture or image
- *toolbar* - a set of icons or buttons that are part of a software program and allow the user to complete tasks
- *tools* - text, design, graphics, and other features used to create digital works

Core Resources:

- device (ex. Chromebook)
- digital learning platform (ex. Clever)
- learning management system (ex. Seesaw)
- productivity software (ex. Google Workspace for Education: Google Drive, Google Slides, Google Drawings)
- image search (ex. Google Explore)

• *insert* - add to project • *resize* - make an object bigger or smaller • *rotate* - turn an object in a clockwise or counterclockwise direction • *arrange objects* - change the layering of objects (ex. move to back or front) • *design tools* - software programs that allow users to create digital works for a variety of purposes • *slide* - a single page of an electronic presentation	
Common Assessment(s): • Students create original word processing works and digital designs using productivity software (ex. Googles Slides and Google Drawings).	**Supplemental Resources:**

Grade, Subject/Course: 2nd Grade, Technology	
Unit: Knowledge Constructor	**__X__ Essential _____ Important _____ Compact**
Big Idea: *Find It!* How can I navigate and use web resources in my learning?	

PA Core Content Standards/Anchors (or National Standards):

PA STEELS (Science, Technology & Engineering, and Environmental Literacy & Sustainability) Standards:

- 3.5.K-2.A: Identify and use everyday symbols.
- 3.5.K-2.C: Explain ways that technology helps with everyday tasks.

PA Academic Standards for BCIT (Business, Computer, and Information Technology):

- 15.3.2.E: With prompting and support, use digital tools for guided research projects.
- 15.3.2.J: Reproduce active listening techniques modeled by familiar adults.
- 15.3.2.N: Identify positive work habits in the classroom.
- 15.4.2.B: Demonstrate responsible use of technology and equipment.
- 15.4.2.G: With help and support, select and use various software/applications for an intended purpose.
- 15.4.2.L: With help and support, use web browser to locate content-specific websites.
- 15.4.2.M: With help and support, identify various technologies used in the workplace.

CSTA (Computer Science Teachers Association) Standards:

- 1A-CS-01: Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.
- 1A-DA-05: Store, copy, search, retrieve, modify, and delete information using a computing device and define the information stored as data.
- 1A-AP-13: Give attribution when using the ideas and creations of others while developing programs.

ISTE (International Society for Technology in Education) Standards for Students:

- Knowledge Constructor: Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

Interdisciplinary Standards (if applicable):

PA Core Standards for ELA (English Language Arts):

- ELA CC.1.2.2.F: Determine the meaning of words and phrases as they are used in grade-level text including multiple-meaning words.
- ELA CC.1.2.2.J: Acquire and use grade-appropriate conversational, general academic, and domain-specific words and phrases.
- ELA CC.1.4.2.A: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- ELA CC.1.4.2.F: Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling.
- ELA CC.1.4.2.U: With guidance and support, use a variety of digital tools to produce and publish writing including in collaboration with peers.
- ELA CC.1.4.2.V: Participate in individual or shared research and writing projects.
- ELA CC.1.5.2.A Participate in collaborative conversations with peers and adults in small and larger groups.
- ELA CC.1.5.2.B: Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

- ELA CC.1.5.2.C: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
- ELA CC.1.5.2.E: Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
- ELA CC.1.5.2.G: Demonstrate command of the conventions of standard English when speaking, based on Grade 2 level and content.

Essential Questions:

- How can I navigate and use web resources in my learning?

Understandings:

Students will know that…

- the internet is a valuable resource where factual information can be found and applied to learning.

Knowledge:

- web browsers allow users to navigate web resources
- web resources can be useful tools in learning and contain information
- unique products can be created to report information

Do/Skills:

Students will be able to…

- independently navigate selected web resources
- select information from credible web resources
- create a unique product using selected information

Vocabulary:

- *internet* - what we connect to when we go online, a group of computers and servers that are connected to each other
- *web browser* - a program used to access the internet
- *web page* - a document that can be viewed on the internet using a browser
- *website* - a collection of linked web pages
- *tab* - a clickable area at the top of the screen that lets the user switch to other pages
- *window* - the viewing area on a computer
- *app* - a type of software that allows the user perform certain tasks
- *program* - an application or a piece of software
- *icon* - a small symbol or picture that represents a program, file, or action for a program to perform when clicked
- *link* - an item like a word or icon that links to another page or file
- *data* - any information stored by a computer; for example: files, emails, apps, video games, songs, and pictures
- *graphic* - a picture or image

Core Resources:

- device (ex. Chromebook)
- digital learning platform (ex. Clever)
- learning management system (ex. Seesaw)
- productivity software (ex. Google Workspace for Education: Google Drive, Google Slides)
- class website (ex. Google Sites) with linked resources for students
- image search (ex. Google Explore))

Common Assessment(s):

- Students demonstrate ability to access and independently use web resources.
- Students use tools (ex. Google Explore) to search for and insert images into a presentation (ex. Google Slides).

Supplemental Resources: