BRIGANTINE PUBLIC SCHOOLS
TECHNOLOGY CURRICULUM
GRADES PRESCHOOL – GRADE FOUR

Date Revised: August 2015

Board Approved: August 27, 2015

Overview of Technology Literacy

In Preschool, technology offers versatile learning tools that can support children's development in all domains. For example, electronic storybooks can —read stories to children in multiple languages; adventure games foster problem-solving skills; story-making programs encourage literacy and creativity; math-related games can help children count and classify; and science activities promote inquiry and an understanding of the world through the eyes of a child. When preschoolers are encouraged to work together with electronic devices and computers, social skills are tapped as children negotiate turn-taking. However, technology should not replace the concrete, real-life experiences that are critical to a young child's learning; it must always be used in balance with other meaningful activities and routines. Technology should be embedded into children's learning centers and should enhance their learning and development during choice time as well as in small-group experiences. In grades

K-2, students are formally introduced to the basic features and functions of computers and demonstrate understanding that technology enables them to communicate beyond the classroom on a variety of topics. K-2 students are also exposed to elements of the design process, design systems, and a variety of technology resources, and understand the importance of safety when using technological tools.

In grades 3-4, students understand the purpose of, and are able to use, various computer applications. They continue to develop information-literacy skills and increasingly use technology to communicate with others in support of learning, while also recognizing the need for cyber safety and acceptable use policies. Students in grades 3-4 also investigate the impact of technology systems, understand the design process, and use it for problem solving.

Students in grades PK-2 will be exposed to the following components of Technology:

BASIC TECHNOLOGY TERMS

Basic technology terms for preschool: Examples digital camera, battery, screen, computer, Internet, mouse, keyboard, and printer.

CONTROVERSIAL ISSUE

Controversial issue: For example, global warming, scarcity of water, alternative energy sources, election campaigns.

CURRENT AND EMERGING TECHNOLOGY RESOURCES

Current and emerging technology resources: For example, cell phones, GPS, online communities using wikis, blogs, vlogs, and/or Nings.

DATA COLLECTION TECHNOLOGY

Data-collection technology: For example, probes, handheld devices, and geographic mapping systems.

DEVELOPMENTALLY APPROPRIATE

Developmentally appropriate: Students' developmental levels prescribe the learning environment and activities that are used.

DIGITAL TOOLS

Digital tools for grade 2: For example, computers, digital cameras, software. Digital tools for grade 4: For example, computers, digital cameras, probing devices, software, cell phones, GPS, online communities, VOIP, and virtual conferences.

ELECTRONIC AUTHORING TOOL

Electronic authoring tools: Software that facilitates online book development (e.g., multimedia electronic book).

MAPPING TOOLS

Mapping tools: For example, Google earth, Yahoo maps, and Google maps.

MEDIA-RICH RESOURCES

Media-rich: Multiple forms of digital applications in one product (e.g., graphic design, word processing, and spreadsheet).

MULTIMEDIA PRESENTATION

Multimedia presentation: For example, movie, podcast, vlog.

ONLINE DISCUSSIONS

Online discussion: blogs, wikis.

ONLINE LEARNING COMMUNITY

Online learning community: For example, Ning, blogs, wikis.

OPERATIONS AND RELATED APPLICATIONS

Operations and related applications: For example, saving a word processing file to a network drive, printing a spreadsheet.

REVERSE-ENGINEER

Reverse engineer: To isolate the components of a completed system.

SHARED HOSTED SERVICE

Shared hosted services: For example, podcasts, videos, or vlogs.

TECHNOLOGIES

Medical, agricultural, and related biotechnologies, energy and power technologies, information and communications technologies, transportation technologies, manufacturing technologies, and construction technologies.

VIRTUAL ENVIRONMENTS

Virtual environments: For example, games, simulations, websites, blogs.

WEB-BASED PUBLICATION

Web-based publication: For example, web pages, wikis, blogs, and e-zines.

Subject: Technology Information and Literacy
Grade Level: PK
Unit: Introduction to Technology
Pacing Guide: 26 Days
Standards:
Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.P.A.1, 8.1.P.A.2, 8.1.P.A.3, 8.1.P.A.4, 8.1.P.A.5 **B. Creativity and Innovation** 8.1.P.B.1 **C. Collaboration, Teamwork, and Leadership** 8.1.P.C.1 **E. Research and Information Fluency** 8.1.P.E.1
Interdisciplinary Connection:
Standard 0.5: Children exhibit pro-social behaviors. 0.5.P.A.1, 0.5.P.A.4, 0.5.P.A.5 **English Language Arts Standards:** SL.PK.1.a,b, SL.PK.2, SL.PK.3 **Standard 9.1: Children demonstrate initiative, engagement, and persistence.** 9.1.2, 9.1.4, 9.1.5 **Standard 9.3: Children identify and solve problems.** 9.3.2, 9.3.3, 9.3.4 **Standard 9.4: Children apply what they have learned to new situations** 9.4.2
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Technology is always changing and we need to be life-long learners. We should use technology based on our personal and/or career needs. A tool is only as good as the person using it. Digital tools allow for communication and collaboration anytime/anyplace worldwide
Essential Questions to be Answered
How do I choose the right digital tools and when do I use them? How can I use my digital tools and skills in new situations? How do I navigate a screen on a digital Device? How do I take a picture with a Digital Device? How do I use a Digital Device to collaborate and communicate? How do I use a digital device to get information?
Student should be able to:

Use the mouse to negotiate a simple menu on the screen.
Know the "power keys" on a keyboard (e.g., ENTER, spacebar).
Be familiar with how to work frequently used, high quality interactive games or activities, in either screen or toy-based formats.
Have a basic working vocabulary of common technology terms, such as digital camera, battery, screen, computer, Internet, mouse, keyboard, and printer.
Take a digital picture using different devices.
Recognize that the number keys are in their own row on the keyboard.
Access a printer.
Type their name on a QWERTY keyboard.
Turn electronic devices on and/or off.
Be aware of power sources for different devices.
Understand the basic functions of a browser, including how to open or close windows, tabs, and use the "back" key
Begin to understand how concrete investigations can be explored further through the use of the internet with teacher's support Explain how an author uses reasons and evidence to support particular points in a text.
Understand using a Digital Device for communication and collaboration.
Introduction to student friendly search engines.

Assessment/Benchmark:

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics

Materials/Resources

Computers
iPad
Digital Camera
Internet
www.kidtopia.info
www.google.com
http://www.gogooligans.com/
http://www.kidrex.org/

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: Kindergarten
Unit: Introduction to Technology
Pacing Guide: 26 Days
Standards:
Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.   **A. Technology Operations and Concepts**   8.1.2.A.1, 8.1.2.A.2, 8.1.2.A.3, 8.1.2.A.4, 8.1.2.A.5, 8.1.2.A.6, 8.1.2.A.7   **B. Creativity and Innovation**   8.1.P.B.1   **C. Collaboration, Teamwork, and Leadership**   8.1.P.C.1   **E. Research and Information Fluency**   8.1.P.E.1
Interdisciplinary Connection:
English Language Arts   RF.K.1.a-d, RF.K.2 a-e, RL.K.5, RL.K.7, W.K.1, SL.K.1, SL.K.3
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1)   CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Technology is always changing and we need to be life-long learners.   We should use technology based on our personal and/or career needs. A tool is only as good as the person using it.   Digital tools allow for communication and collaboration anytime/anyplace worldwide
Essential Questions to be Answered
How do I choose the right digital tools and when do I use them?   How can I use my digital tools and skills in new situations?   How do I navigate a screen on a digital Device?   How do I take a picture with a Digital Device?   How do I use a Digital Device to collaborate and communicate?   How do I use a digital device to get information?   What is a QWERTY keyboard?   What is a cursor?   How hoes my cursor change?   How do I create or illustrate original ideas in electronic format?   What do I use a spreadsheet for?   What is a graphic organizer?
Student should be able to:

Use the mouse to negotiate a simple menu on the screen.
Know the "power keys" on a keyboard (e.g., ENTER, spacebar).
Be familiar with how to work frequently used, high quality interactive games or activities, in either screen or toy-based formats.
Have a basic working vocabulary of common technology terms, such as digital camera, battery, screen, computer, Internet, mouse, keyboard, and printer.
Take a digital picture using different devices.
Recognize that the number keys are in their own row on the keyboard.
Access a printer.
Type their name on a QWERTY keyboard.
Turn electronic devices on and/or off.
Be aware of power sources for different devices.
Understand the basic functions of a browser, including how to open or close windows, tabs, and use the "back" key
Begin to understand how concrete investigations can be explored further through the use of the internet with teacher's support Explain how an author uses reasons and evidence to support particular points in a text.
Understand using a Digital Device for communication and collaboration.
Introduction to student friendly search engines.
Age appropriate vocabulary when communicating about technology.
Use age appropriate tools for communication.
Enter data into a spreadsheet.
Create and use a graphic organizer.

Assessment/Benchmark:

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics

Materials/Resources

Computers
iPad
Digital Devices
Alphabet Resource Handouts
Internet Google
www.brainpopjr.com
www.starfall.com
www.abcya.com

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: Kindergarten
Unit: Digital Citizenship
Pacing Guide: 10 Days
Standards:
Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.   **A. Technology Operations and Concepts**   8.1.2.A.1, 8.1.2.A.2, 8.1.2.A.3, 8.1.2.A.4, 8.1.2.A.5, 8.1.2.A.6, 8.1.2.A.7   **B. Creativity and Innovation**   8.1.P.B.1   **C. Collaboration, Teamwork, and Leadership**   8.1.P.C.1   **D. Digital Citizenship**   8.1.2.D.1   **E. Research and Information Fluency**   8.1.P.E.1
Interdisciplinary Connection:
English Language Arts   RF.K.1.a-d, W.K.1, W.K.2, W.K.3
21ˢᵗ Century Themes and Skills (Life and Career):
21ˢᵗ Century Life & Career Skills (9.1)   CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Introduce students to Digital Citizenship through a series of lessons on ownership of print and non-print items. Internet Safety will also be emphasized during Digital Citizenship lessons.
Essential Questions to be Answered
What does the word copyright mean in basic form?   Who owns websites and other digital materials?   What can we use and can't we use when doing projects?   Who can I communicate with online?   Who do I tell if something is seems not right?   What information is ok to share with people?
Student should be able to:
Identify ownership of websites and logos.   Start to understand digital ownership.   Learn the basics of copyrights and ownership.   Identify different ways of communication via technology.   Basic Internet Safety and be able to discuss with class and peers.   Illustrate Internet Safety Skills and answer basic questions.
Assessment/Benchmark:

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Materials/Resources
Computers
iPad
Digital Camera
Internet
www.brianpopjr.com
www.iste.og
Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: Kindergarten
Unit: Using Technology to Improve our World and Green Technology
Pacing Guide: 10 Days
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment. **A. Nature of Technology: Creativity and Innovation** 8.2.2.A.1, 8.2.2.A.2, 8.2.2.A.3, 8.2.2.A.5 **B. Technology and Society** 8.2.2.B.1, 8.2.5.B.2, 8.2.5.B.3, 8.2.2.B.4 **C. Design** 8.2.2.C.1, 8.2.2.C.2, 8.2.2.C.3, 8.2.2.C.4, 8.2.2.C.5, 8.2.2.C.6 **D. Abilities for the Technological World** 8.2.2.D.1, 8.2.2.D.2, 8.2.2.D.3, 8.2.2.D.4, 8.2.2.D.5 **E. Computational Thinking: Programing** 8.2.2.E.1, 8.2.2.E.2, 8.2.2.E.3, 8.2.2.E.4, 8.2.2.E.5
Interdisciplinary Connection:
English Language Arts RF.K.1.a-d, W.K.1, W.K.2, W.K.3 Science 5.1.P.B.3, 5.1.P.D.1,
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
To have students use technology to help improve their world and for future generations. Understand how technology and science work hands on.
Essential Questions to be Answered
How can technology be used to help the environment? What in technology can we use to reuse, re-purpose or recycle? How can we use technology to help improve our community and environment? How do I use data collected from technology to help improve the environment? How does the computer know how to use interpret my data?
Instructional Activities
Students will collaborate together to discuss the environment and the ways to help improve situations. Students will learn about the differences between reuse, recycle or re-purpose. Students will discuss different technologies available to help improve the environment and their community. Students will use graphic organizers to organize data and present results and solutions on how they can help the environment. Students will be introduced to algorithms, and how they impact our world. Students will be introduced to bugs in algorithms, and how the computer can make a mistake. Students will be able to discuss and brainstorm different algorithms with peers.

Assessment/Benchmarks
Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Research Log Books
Graphic Organizers
Student Presentations

Materials/Resources
Computers
Chrome Books
Hands-on Activities Materials
Age Appropriate Apps
Age Appropriate Software
Graphic Organizers
https://www.khanacademy.org/computing/computer-science/algorithms/intro-to-algorithms/v/what-are-algorithms

Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 01
Unit: What is Technology
Pacing Guide: 26 Days
Standards:
Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge.   **A. Technology Operations and Concepts**   8.1.2.A.1, 8.1.2.A.2, 8.1.2.A.3, 8.1.2.A.4, 8.1.2.A.5, 8.1.2.A.6, 8.1.2.A.7   **B. Creativity and Innovation**   8.1.P.B.1   **C. Collaboration, Teamwork, and Leadership**   8.1.P.C.1   **E. Research and Information Fluency**   8.1.P.E.1   **8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.**   **A. Nature of Technology: Creativity and Innovation**   8.2.2.A.2   **B. Technology and Society**   8.2.2.B.1, 8.2.2.B.3
Interdisciplinary Connection:
English Language Arts   SL.1.1, SL.1.2, SL.1.5, W.1.3   **Mathematics**   1.MD.C.4   **Science**   5.1.4.B.1, 5.1.4.B.2, 5.1.4.B.3
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1)   CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Technology is always changing and we need to be life-long learners.   We should use technology based on our personal and/or career needs. A tool is only as good as the person using it.   Digital tools allow for communication and collaboration anytime/anyplace worldwide   How Technology has emerged through our world.
Essential Questions to be Answered
How do I choose the right digital tools and when do I use them?   How can I use my digital tools and skills in new situations?   How do I navigate a screen on a digital Device?   How do I take a picture with a Digital Device?   How do I use a Digital Device to collaborate and communicate?   How do I use a digital device to get information?

How have devices changed over time?
What is a QWERTY keyboard?
What is a cursor?
How hoes my cursor change?
How do I create or illustrate original ideas in electronic format?
What do I use a spreadsheet for?
What is a graphic organizer?
What is an algorithm?

Student should be able to:

Use the mouse to negotiate a simple menu on the screen.

Know the "power keys" on a keyboard (e.g., ENTER, spacebar).

Be familiar with how to work frequently used, high quality interactive games or activities, in either screen or toy-based formats.

Have a basic working vocabulary of common technology terms, such as digital camera, battery, screen, computer, Internet, mouse, keyboard, and printer.

Take a digital picture using different devices.

Recognize that the number keys are in their own row on the keyboard.

Access a printer.

Be aware of power sources for different devices.

Understand the basic functions of a browser, including how to open or close windows, tabs, and use the "back" key

Begin to understand how concrete investigations can be explored further through the use of the internet with teacher's support Explain how an author uses reasons and evidence to support particular points in a text.

Understand using a Digital Device for communication and collaboration.

Introduction to student friendly search engines.

Age appropriate vocabulary when communicating about technology.

Use age appropriate tools for communication.

Make a timeline about technology inventions.

Enter data into a spreadsheet.

Create and use a graphic organizer.

Basics of Code.org

Assessment/Benchmark:

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics

Materials/Resources

Computers
iPad
Digital Devices
Internet
www.brainpopjr.com
Typing Pals
Code.org
ISTE.org

Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 01
Unit: Digital Citizenship
Pacing Guide: 10 Days
Standards:
Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.2.A.1, 8.1.2.A.2, 8.1.2.A.3, 8.1.2.A.4, 8.1.2.A.5, 8.1.2.A.6, 8.1.2.A.7 **B. Creativity and Innovation** 8.1.P.B.1 **C. Collaboration, Teamwork, and Leadership** 8.1.P.C.1 **D. Digital Citizenship** 8.1.2.D.1 **E. Research and Information Fluency** 8.1.P.E.1
Interdisciplinary Connection:
English Language Arts W.1.1, W.1.2, W.1.3
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Introduce students to Digital Citizenship through a series of lessons on ownership of print and non-print items. Internet Safety will also be emphasized during Digital Citizenship lessons.
Essential Questions to be Answered
What does the word copyright mean? Who owns websites and other digital materials? What can we use and can't we use when doing projects? Who can I communicate with online?
Student should be able to:
Identify ownership of websites and logos. Start to understand digital ownership. Learn the basics of copyrights and ownership. Identify different ways of communication via technology. Basic Internet Safety and be able to discuss with class and peers. Illustrate Internet Safety Skills and answer basic questions.
Assessment/Benchmark:
Exit Tickets Class Discussions Teacher Discussions Student Work Examples Rubrics

Materials/Resources
Computers
iPad
Digital Camera
Internet
www.brainpopjr.com
www.iste.og

Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 01
Unit: Using Technology to Improve our World and Green Technology
Pacing Guide: 10 Days
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment. **A. Nature of Technology: Creativity and Innovation** 8.2.2.A.1, 8.2.2.A.2, 8.2.2.A.3, 8.2.2.A.5 **B. Technology and Society** 8.2.2.B.1, 8.2.5.B.2, 8.2.5.B.3, 8.2.2.B.4 **C. Design** 8.2.2.C.1, 8.2.2.C.2, 8.2.2.C.3, 8.2.2.C.4, 8.2.2.C.5, 8.2.2.C.6 **D. Abilities for the Technological World** 8.2.2.D.1, 8.2.2.D.2, 8.2.2.D.3, 8.2.2.D.4, 8.2.2.D.5 **E. Computational Thinking: Programing** 8.2.2.E.1, 8.2.2.E.2, 8.2.2.E.3, 8.2.2.E.4, 8.2.2.E.5
Interdisciplinary Connection:
English Language Arts W.1.1, W.1.2, W.1.3 **Science** 5.1.4.B.1, 5.1.4.B.3, 5.1.4.D.1, 5.1.4.D.2, 5.1.4.D.3 **Math** 1.MD.C.4
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
To have students use technology to help improve their world and for future generations. Understand how technology and science work hands on.
Essential Questions to be Answered
How can technology be used to help the environment? What in technology can we use to reuse, re-purpose or recycle? How can we use technology to help improve our community and environment? How do I use data collected from technology to help improve the environment? How does the computer know how to use interpret my data?
Instructional Activities
Students will collaborate together to discuss the environment and the ways to help improve situations. Students will learn about the differences between reuse, recycle or re-purpose. Students will discuss different technologies available to help improve the environment and their community. Students will use graphic organizers to organize data and present results and solutions on how they can help the environment. Students will be introduced to algorithms, and how they impact our world.

Students will be introduced to bugs in algorithms, and how the computer can make a mistake.
Students will be able to discuss and brainstorm different algorithms with peers.
Students will be able to use age appropriate vocabulary when discussing lessons.

Assessment/Benchmarks
Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Research Log Books
Graphic Organizers
Student Presentations

Materials/Resources
Computers
Chrome Books
Hands-on Activities Materials
Age Appropriate Apps
Age Appropriate Software
Graphic Organizers
https://www.khanacademy.org/computing/computer-science/algorithms/intro-to-algorithms/v/what-are-algorithms

Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 01
Unit: Exploring Technology Around us
Pacing Guide: 10 Days
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment. **A. Nature of Technology: Creativity and Innovation** 8.2.2.A.1, 8.2.2.A.2, 8.2.2.A.3, 8.2.2.A.4, 8.2.2.A.5 **B. Technology and Society** 8.2.2.B.1, 8.2.2.B.2, 8.2.2.B.3, 8.2.2.B.4 **C. Design** 8.2.2.C.1, 8.2.2.C.2, 8.2.2.C.3, 8.2.2.C.4, 8.2.2.C.5, 8.2.2.C.6 **D. Abilities for the Technological World** 8.2.2.D.1, 8.2.2.D.2, 8.2.2.D.3, 8.2.2.D.4 **E. Computational Thinking: Programing** 8.2.2.E.1, 8.2.2.E.2, 8.2.2.E.3, 8.2.2.E.4, 8.2.2.E.4
Interdisciplinary Connection:
English Language Arts SL.1.1, SL.1.2, SL.1.5, W.1.3 **Mathematics** 1.MD.C.4 **Science** 5.1.4.B.1, 5.1.4.B.2, 5.1.4.B.3
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Technology is always changing and we need to be life-long learners. We should use technology based on our personal and/or career needs. Digital tools allow for communication and collaboration anytime/anyplace worldwide How Technology has emerged through our world.
Essential Questions to be Answered
How does technology work? What is weight and mass? Can there be multiple solutions to one problem?
Student should be able to:
Follow directions Assemble and disassemble projects or algorithms based on a set of directions Brainstorm ways to improve on inventions and projects Use prior knowledge from other content areas to proof theories. Organize thoughts and materials Collect and use data to solve tasks assigned Design hands-on activities to solve problems and explain results Communicate results to peers and teachers

Assessment/Benchmark:
Exit Tickets Class Discussions Teacher Discussions Student Work Examples Rubrics
Materials/Resources
Computers iPad Digital Devices Internet Materials assigned to projects Typing Pals Code.org ISTE.org
Modifications
Per student's needs/ IEP Choice Boards, Cards Screen Modification Mouse Modification Sound Modification Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 02
Unit: What is Technology
Pacing Guide: 26 Days
Standards:
Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.2.A.1, 8.1.2.A.2, 8.1.2.A.3, 8.1.2.A.4, 8.1.2.A.5, 8.1.2.A.6, 8.1.2.A.7 **B. Creativity and Innovation** 8.1.P.B.1 **C. Collaboration, Teamwork, and Leadership** 8.1.P.C.1 **E. Research and Information Fluency** 8.1.P.E.1 **8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.** **A. Nature of Technology: Creativity and Innovation** 8.2.2.A.2 **B. Technology and Society** 8.2.2.B.1, 8.2.2.B.3
Interdisciplinary Connection:
English Language Arts SL.2.1, SL.2.2, SL.2.5, W.2.3 **Mathematics** 1.MD.C.4 **Science** 5.1.4.B.1, 5.1.4.B.2, 5.1.4.B.3
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Technology is always changing and we need to be life-long learners. We should use technology based on our personal and/or career needs. A tool is only as good as the person using it. Digital tools allow for communication and collaboration anytime/anyplace worldwide How Technology has emerged through our world.
Essential Questions to be Answered
How do I choose the right digital tools and when do I use them? How can I use my digital tools and skills in new situations? How do I navigate a screen on a digital Device? How do I take a picture with a Digital Device? How do I use a Digital Device to collaborate and communicate? How do I use a digital device to get information?

How have devices changed over time?
What is a QWERTY keyboard?
How do I correctly type using home rows?
What is a cursor?
How hoes my cursor change?
How do I create or illustrate original ideas in electronic format?
What do I use a spreadsheet for?
What is a graphic organizer?

Student should be able to:

Use the mouse to negotiate a simple menu on the screen.
Know the "power keys" on a keyboard (e.g., ENTER, spacebar).
Be familiar with how to work frequently used, high quality interactive games or activities, in either screen or toy-based formats.
Have a basic working vocabulary of common technology terms, such as digital camera, battery, screen, computer, Internet, mouse, keyboard, and printer.
Take a digital picture using different devices.
Recognize that the number keys are in their own row on the keyboard.
Access a printer.
Be aware of power sources for different devices.
Understand the basic functions of a browser, including how to open or close windows, tabs, and use the "back" key
Begin to understand how concrete investigations can be explored further through the use of the internet with teacher's support Explain how an author uses reasons and evidence to support particular points in a text.
Understand using a Digital Device for communication and collaboration.
Introduction to student friendly search engines.
Age appropriate vocabulary when communicating about technology.
Use age appropriate tools for communication.
Make a timeline about technology inventions.
Enter data into a spreadsheet.
Create and use a graphic organizer.

Assessment/Benchmark:

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics

Materials/Resources

Computers
iPad
Digital Devices
Internet
www.brainpopjr.com

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification

Mouse Modification

Sound Modification

Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 02
Unit: Digital Citizenship
Pacing Guide: 10 Days
Standards:
Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.2.A.1, 8.1.2.A.2, 8.1.2.A.3, 8.1.2.A.4, 8.1.2.A.5, 8.1.2.A.6, 8.1.2.A.7 **B. Creativity and Innovation** 8.1.P.B.1 **C. Collaboration, Teamwork, and Leadership** 8.1.P.C.1 **D. Digital Citizenship** 8.1.2.D.1 **E. Research and Information Fluency** 8.1.P.E.1
Interdisciplinary Connection:
English Language Arts W.1.1, W.1.2, W.1.3
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Introduce students to Digital Citizenship through a series of lessons on ownership of print and non-print items. Internet Safety will also be emphasized during Digital Citizenship lessons.
Essential Questions to be Answered
What does the word copyright mean? Who owns websites and other digital materials? What can we use and can't we use when doing projects? Who can I communicate with online? What is the right/wrong/ consequence of internet safety?
Student should be able to:
Identify ownership of websites and logos. Start to understand digital ownership. Learn the basics of copyrights and ownership. Identify different ways of communication via technology. Basic Internet Safety and be able to discuss with class and peers. Illustrate Internet Safety Skills and answer basic questions. Students will be able to discuss certain age appropriate internet safety with peer and teachers.
Assessment/Benchmark:

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Materials/Resources
Computers
iPad Internet
www.brainpopjr.com
www.iste.og
Google.com
Google Apps
Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 02
Unit: Using Technology to Improve our World and Green Technology
Pacing Guide: 10 Days
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment. **A. Nature of Technology: Creativity and Innovation** 8.2.2.A.1, 8.2.2.A.2, 8.2.2.A.3, 8.2.2.A.5 **B. Technology and Society** 8.2.2.B.1, 8.2.5.B.2, 8.2.5.B.3, 8.2.2.B.4 **C. Design** 8.2.2.C.1, 8.2.2.C.2, 8.2.2.C.3, 8.2.2.C.4, 8.2.2.C.5, 8.2.2.C.6 **D. Abilities for the Technological World** 8.2.2.D.1, 8.2.2.D.2, 8.2.2.D.3, 8.2.2.D.4, 8.2.2.D.5 **E. Computational Thinking: Programing** 8.2.2.E.1, 8.2.2.E.2, 8.2.2.E.3, 8.2.2.E.4, 8.2.2.E.5
Interdisciplinary Connection:
English Language Arts W.2.1, W.2.2, W.2.3 **Science** 5.1.4.B.1, 5.1.4.B.3, 5.1.4.D.1, 5.1.4.D.2, 5.1.4.D.3 **Math** 2.MD.C.4
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
To have students use technology to help improve their world and for future generations. Understand how technology and science work hands on.
Essential Questions to be Answered
How can technology be used to help the environment? What in technology can we use to reuse, re-purpose or recycle? How can we use technology to help improve our community and environment? How do I use data collected from technology to help improve the environment? How does the computer know how to use interpret my data? How can I use my data to show a finished project?
Instructional Activities
Students will collaborate together to discuss the environment and the ways to help improve situations. Students will learn about the differences between reuse, recycle or re-purpose. Students will discuss different technologies available to help improve the environment and their community. Students will use graphic organizers to organize data and present results and solutions on how they can help the environment.

Students will be introduced to algorithms, and how they impact our world.

Students will be introduced to bugs in algorithms, and how the computer can make a mistake.

Students will be able to discuss and brainstorm different algorithms with peers.

Students will be able to visually communicate an algorithm.

Students will be able to use age appropriate vocabulary when discussing lessons.

Assessment/Benchmarks

Exit Tickets

Class Discussions

Teacher Discussions

Student Work Examples

Rubrics

Research Log Books

Graphic Organizers

Student Presentations

Materials/Resources

Computers

Chrome Books

Hands-on Activities Materials

Age Appropriate Apps

Age Appropriate Software

Graphic Organizers

https://www.khanacademy.org/computing/computer-science/algorithms/intro-to-algorithms/v/what-are-algorithms

http://www.sciencekids.co.nz/

Code.org

Modifications

Per student's needs/ IEP

Choice Boards, Cards

Screen Modification

Mouse Modification

Sound Modification

Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 02
Unit: Exploring Technology Around us
Pacing Guide: 10 Days
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment. **A. Nature of Technology: Creativity and Innovation** 8.2.2.A.1, 8.2.2.A.2, 8.2.2.A.3, 8.2.2.A.4, 8.2.2.A.5 **B. Technology and Society** 8.2.2.B.1, 8.2.2.B.2, 8.2.2.B.3, 8.2.2.B.4 **C. Design** 8.2.2.C.1, 8.2.2.C.2, 8.2.2.C.3, 8.2.2.C.4, 8.2.2.C.5, 8.2.2.C.6 **D. Abilities for the Technological World** 8.2.2.D.1, 8.2.2.D.2, 8.2.2.D.3, 8.2.2.D.4 **E. Computational Thinking: Programing** 8.2.2.E.1, 8.2.2.E.2, 8.2.2.E.3, 8.2.2.E.4, 8.2.2.E.4
Interdisciplinary Connection:
English Language Arts SL.2.1, SL.2.2, SL.2.5, W.2.3 **Mathematics** 1.MD.C.4 **Science** 5.2.4.B.1, 5.2.4.B.2, 5.2.4.B.3
21st Century Themes and Skills (Life and Career):
21st Century Life & Career Skills (9.1) CRP2, CRP6, CRP8, CRP11
Instructional Activities
Focus:
Technology is always changing and we need to be life-long learners. We should use technology based on our personal and/or career needs. Digital tools allow for communication and collaboration anytime/anyplace worldwide How Technology has emerged through our world.
Essential Questions to be Answered
How does technology work? How can we use technology to look at science and life cycles? What is weight and mass? Can there be multiple solutions to one problem?
Student should be able to:
Follow directions Assemble and disassemble projects or algorithms based on a set of directions Brainstorm ways to improve on inventions and projects Use prior knowledge from other content areas to proof theories. Make predictions and record results of projects. Organize thoughts and materials Collect and use data to solve tasks assigned

Design hands-on activities to solve problems and explain results
Communicate results to peers and teachers
Assessment/Benchmark:
Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Materials/Resources
Computers
iPad
Digital Devices
Internet
Materials assigned to projects
Chrome Books
Google Apps
Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 03
Unit: Introduction to your Digital World
Pacing Guide: 6 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.2, 8.1.4.A.5 **E. Research and Information Literacy** 8.1.4.E.2
Interdisciplinary Connection:
English Language Arts RL 3.1, RI 3.1, W.3.4, W.3.6 **Math** 3.MD.3, 3.MD.4
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **B. Creativity and Innovation** 9.1.4.B.1 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **F. Accountability, Productivity, and Ethics** 9.1.4.F.3
Instructional Activities
Focus:
Digital media are 21st-century tools used for storing data, accessing data, and local and global communication. The use of digital tools requires students to have general understandings of the tools and how to use them appropriately. Technology products and systems impact our life and change over time.
Essential Questions to be Answered
What are the ways that we use digital technology in our daily lives?
How does digital technology help us in our daily lives?
What are the ways we can save our files and data?
What is the cloud?
What are the benefits of the cloud over previous technology for saving and accessing our data?
What is a website URL?
What are the following technology terms: computer parts: monitor, keyboard, mouse, printer, speakers /software terms - menu, file, folder, application, save, and quit. How is the keyboard setup? How should hands be placed on the keyboard to gain benefits in typing accuracy and speed?
Assessment/Benchmarks

Explain how digital media are used in our daily lives, in a variety of formats, and for a variety of purposes.

Explain how technology has strengthened our ability to save and access information anywhere we are, as part of a global society.

Explain how the cloud works.

Identify the different parts of the computer, and more specifically the keyboard ("power keys" e.g., Enter, Spacebar).

Place their hands correctly on the keyboard.

Use the mouse to access menus.

Use keyboard shortcuts.

Understand basic technology terms.

Materials/Resources

Computer
Internet Typing Pals
www.BrainPop.com
www.BrainPopjr.com
www.wordle.com
www.ABCyaa.com
http://www.schooltube.com/video/72fea4567c54a813de3c/Basic%20Keyboarding
https://www.youtube.com/watch?v=EiN_NL507pU&list=PLhrBKfgDdV049_R2L2NIuBVoeVTMtz12b
http://www.bbc.co.uk/guides/z3c6tfr
ISTE.org

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available

Subject: Technology Information and Literacy
Grade Level: 03
Unit: Digital Citizenship
Pacing Guide: 6 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.5 **C. Communication and Collaboration** 8.1.4.C.1 **D. Digital Citizenship** 8.1.4.D.1, 8.1.4.D.3 **E. Research and Information Literacy** 8.1.4.E.2 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts RL 3.1, RI 3.1, W.3.4, W.3.5, W.3.6 **Math** 3.MD.3, 3.MD.4
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **B. Creativity and Innovation** 9.1.4.B.1 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **E. Communication and Media Fluency** 9.1.4.E.1, 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.2
Instructional Activities
Focus:

The use of technology and digital tools requires knowledge and appropriate use of operations and related applications.

Digital tools and environments support the learning process and foster collaboration in solving issues and problems.

Technological advancements create societal concerns regarding the practice of safe, legal and ethical behaviors.

Effective use of digital tools assists in gathering and managing information.

Information accessed through the use of digital tools assists in generating solutions and making decisions.

The ability to recognize a problem and apply critical thinking and problem-solving skills to solve that problem is a lifelong skill that develops over time.

Collaboration and teamwork enable individuals or groups to achieve common goals with greater efficiency.

Effective communication skills convey intended meaning to others and assist in preventing misunderstandings.

Digital media are 21st-century tools used for communication. There are ethical and unethical uses of communication and media.

The nature of the 21st-century learning environment has shifted, demanding greater individual accountability, productivity, and collaboration.

Ethical behaviors support dignity in all aspects of life.

The identification of key ideas and details is essential in the interpretation of text.

The reading of informational text provides rich opportunities for the integration of knowledge and ideas.

Research builds knowledge.

Collaboration with peers fosters the development of one's own comprehension and development of ideas.

Essential Questions to be Answered

What behaviors constitute cyber bullying?

How does cyber bullying differ from real-life bullying?

Are the psychological and emotional outcomes of cyber bullying any worse than those of real-life bullying?

What role does anonymity play in one's inclination to bully another using the Internet or other technologies?

Why would one engage in cyber bullying?

What medium (e.g., emailing, texting, instant messaging, social networking) lends itself most to cyber bullying?

What are the best ways to deal with cyber bullying?

What are the best ways to prevent cyber bullying?

Assessment/Benchmarks

Demonstrate effective input of text and data using an input device.

Determine the benefits of digital tools by using them to solve problems.

Explain the need for each individual, as a member of the global community, to practice cyber safety, cyber security, and cyber ethics when using existing and emerging technologies.

Explain the consequences of inappropriate use of technology.

Evaluate the use of print vs. non-print electronic information sources to complete a variety of tasks.

Select and apply digital tools to collect, organize, and analyze data.

Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.

Evaluate available resources that can assist in solving problems.

Determine when the use of technology is appropriate to solve problems.

Use data accessed on the Web to inform solutions to problems and the decision-making process.

Apply critical thinking and problem-solving skills in classroom settings.

Practice collaborative skills in groups, and explain how these skills assist in completing tasks in different settings (at home, in school, and during play).

Use effective oral and written communication in face-to-face and online interactions and when presenting to an audience.

Demonstrate an awareness of one's own culture and other cultures during interactions within and outside ofthe classroom.

Explain how digital media are used in daily life in a variety of settings.

Demonstrate effective communication using digital media during classroom activities.

Distinguish how digital media are used by individuals, groups, and organizations for varying purposes.

Explain why some uses of media are unethical.

Explain the meaning of productivity and accountability, and describe situations in which productivity and accountability are important in the home, school, and community.

Establish and follow performance goals to guide progress in assigned areas of responsibility and accountability during classroom projects.

Explain the importance of understanding and following rules in family, classroom, and community settings.

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from text.

Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Explain events, ideas, or concepts based on specific information in the text.

Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages).

Gather relevant information from digital sources; take notes and categorize information.

Engage effectively in a range of online collaborative exercises, building on others' ideas and expressing their own clearly.

Follow agreed-upon rules for online discussions.

Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

Review the key ideas expressed and explain their own ideas and understanding in light of classroom discussions.

Materials/Resources
Computer

Internet

www.BrainPop.com(Digital Citizenship Videos & Quizzes)

www.BrainPopjr.com (Digital Citizenship Videos & Quizzes)

http://www.schrockguide.net/parent-g uide-to- online-life.html
http://kids.ikeepsafe.org/
www.iste.og
Modifications
Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available

Subject: Technology Information and Literacy
Grade Level: 03
Unit: Interacting with Technology
Pacing Guide: 16 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.2, 8.1.4.A.3, 8.1.4.A.5 **D. Digital Citizenship** 8.1.4.D.3 **E. Research and Information Literacy** 8.1.4.E.2 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts RL 3.1, RI 3.1, W.3.4, W.3.6 **Math** 3.MD.3, 3.MD.4 **Visual Arts** 1.3.2.D.1-4
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **A. Critical Thinking and Problem Solving** 9.1.4.A.1, 9.1.4.A.2, 9.1.4.A.3 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **D. Cross-Cultural Understanding and Interpersonal Communication** 9.1.4.D.1 **E. Communication and Media Fluency** 9.1.4.E.1, 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.2
Instructional Activities
Focus:
Online cloud services are a place where we can store our files in cloud storage and share them with others. Online services allow us many capabilities, such as adding pictures, videos, and URLs. By selecting and manipulating different features of text, we can format documents to fit particular design needs. By interacting with digital tools, we can explore and utilize various resources.
Essential Questions to be Answered

What is a document?
How do I format documents?
How do I change the font?
How do I change the font size?
How do I change the text color and the text background color?
How do I bold, italicize or underline text?
How do I insert a link into a document?
How do I add bullets?
How do I align text?
How do I share my document with others so that we may collaborate on it?
How do I navigate in a digital environment?
How do I scroll?
How do I Cut, Copy, Paste?
How do I drag an item?
How do I use drop down boxes?

Assessment/Benchmarks

Input data and text into a document

Use a digital resource to format text and add graphics.

Explain how digital tools help us.

Engage in online communication with peers and students.

Evaluate digital resources that can assist us.

Collaboratively complete a task with peers using a digital platform.

Save and access files on-line and on the district servers.

Communicate via digital tools

Interpret visual online information and demonstrate understanding.

Materials/Resources

Computer

Internet

https://sites.google.com/site/specialneedsgamesonline/on-line-games/switch-games

www.abcya.com

http://www.funbrain.com/brain/SweepsBrain/Games/Title.html?GameName=DiggingForWorms

Modifications

Per student's needs/ IEP

Choice Boards, Cards

Screen Modification

Mouse Modification

Sound Modification

Adapted Access and Programs if available

Subject: Technology Information and Literacy
Grade Level: 03
Unit: Digital Assessment Integration
Pacing Guide: 6 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.5 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts RL 3.1, RI 3.1, W.3.4, W.3.6 **Math** 3.MD.3, 3.MD.4
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **A. Critical Thinking and Problem Solving** 9.1.4.A.3 **B. Creativity and Innovation** 9.1.4.B.1 **D. Cross-Cultural Understanding and Interpersonal Communication** 9.1.4.D.1 **E. Communication and Media Fluency** 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.1, 9.1.4.F.2
Instructional Activities
Focus:
Digital environments are specialized to meet certain needs (e.g., to inform, to persuade, to entertain, to assess, etc.). In order for one to interact appropriately within a digital environment, one must be adept at manipulating digital tools particular to that environment. Standardized testing is one form of assessment that assists teachers with refining their programs and improving student learning.
Essential Questions to be Answered
How does our knowledge of digital tools impact our performance on various forms of assessment?
What do I need to know in order to effectively and efficiently respond to questions posed in an online assessment environment?
What are the advantages and disadvantages of an online assessment environment?
How can I best prepare myself to perform well on an online assessment?

How do I transition between sections, focus on discrete instructions, employ the proper tools, and successfully respond to various types of assessment items?

Assessment/Benchmarks

Familiarize themselves with online assessment environments.

Respond to various types of online assessment items.

Recognize the disadvantages while capitalizing on the advantages provided by an online assessment environment.

Experience, sample, and practice with authentic online assessment items.

Transition between sections, focus on discrete instructions, employ the proper tools, and successfully respond to various types of assessment items.

Employ such specific skills as mouse clicking, dragging and dropping, selecting/highlighting, scrolling, inputting text, switching modes, manipulating digital tools, connecting headphones, interacting with videos, forwarding slide shows and test items, filling in boxes, maneuvering through a website without distraction, working on a computer for extended periods of time, and troubleshooting basic tech problems (e.g., caps lock not working, volume not loud enough, monitor suddenly malfunctioning, etc.).

Seek assistance for technical difficulties.

Materials/Resources

Computer Internet

http://www.parcconline.org/practice-tests

Modifications

Per student's needs/ IEP

Choice Boards, Cards

Screen Modification

Mouse Modification

Sound Modification

Adapted Access and Programs if available

Subject: Technology Information and Literacy
Grade Level: 03
Unit: Search Literacy
Pacing Guide: 10 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.5 **E. Research and Information Literacy** 8.1.4.E.2 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts Standards, Reading: Informational Text (Grade 4) CCSS.ELA-Literacy.RI.4.1, CCSS.ELA-Literacy.RI.4.2, CCSS.ELA-Literacy.RI.4.3, CCSS.ELA-Literacy.RI.4.5, CCSS.ELA-Literacy.RI.4.7, CCSS.ELA-Literacy.RI.4.8, CCSS.ELA-Literacy.RI.4.9 **English Language Arts Standards, Writing (Grade 4)** CCSS.ELA-Literacy.W.4.2d, CCSS.ELA-Literacy.W.4.3d, CCSS.ELA-Literacy.W.4.7, CCSS.ELA.Literacy.W.4.9 **English Language Arts Standards, Speaking and Listening (Grade 4)** CCSS.ELA-Literacy.SL.4.1c
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **A. Critical Thinking and Problem Solving** 9.1.4.A.1, 9.1.4.A.2, 9.1.4.A.3, 9.1.4.A.4, 9.1.4.A.5 **B. Creativity and Innovation** 9.1.4.B.1 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **D. Cross-Cultural Understanding and Interpersonal Communication** 9.1.4.D.1 **E. Communication and Media Fluency** 9.1.4.E.1, 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.1, 9.1.4.F.2
Instructional Activities
Focus:
The use of technology and digital tools requires knowledge and appropriate use of operations and related applications. Effective use of digital tools assists in gathering and managing information. Information accessed through the use of digital tools assists in generating solutions and making decisions.

The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time.

Brainstorming activities enhance creative and innovative thinking in individual and group goal setting and problem solving.

Collaboration and teamwork enable individuals or groups to achieve common goals with greater efficiency.

Effective communication skills convey intended meaning to others and assist in preventing misunderstandings.

Digital media are 21st-century tools used for communication.

The identification of key ideas and details is essential in both the search for information and interpretation of text.

The reading of informational text provides rich opportunities for the integration of knowledge and ideas.

The use of precise language and appropriate search operators improves the relevance and accuracy of search results.

Research builds knowledge.

Strong comprehension and collaboration skills benefit search literacy.

Essential Questions to be Answered

What does it mean to search on the web?

With so much information now available at our fingertips (via digital devices such as smartphones, iPads, tablet computers, etc.), is it easier or more difficult to find information?

Are multimedia-based resources more or less informative than text-based resources?

How does one perform a basic search?

Under what circumstances are search adjustments necessary?

What does it mean to adjust a search, and when should one make those adjustments?

How does search efficiency assist one's informational needs?

What search engines are most suitable for our search purposes?

Assessment/Benchmarks

Demonstrate effective input of text and data using an input device.

Determine the benefits of a wide variety of digital tools by using them to solve problems.

Evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.

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

Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.

Evaluate available resources that can assist in solving problems.

Determine when the use of technology is appropriate to solve problems.

Use data accessed on the Web to inform solutions to problems and the decision-making process.

Apply critical thinking and problem-solving skills in classroom and family settings.

Participate in brainstorming sessions to seek information, ideas, and strategies that foster creative thinking.

Practice collaborative skills in groups, and explain how these skills assist in completing tasks in different settings (at home, in school, and during play).

Explain how digital media are used in daily life in a variety of settings.

Distinguish how digital media are used by individuals, groups, and organizations for varying purposes.

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Interpret information presented visually, orally, or quantitatively.

Explain how an author uses reasons and evidence to support particular points in a text.

Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

Read and comprehend appropriate grade-level informational text embedded in digital resources.

Use precise language and domain-specific vocabulary to describe a topic.

Use concrete words, phrases, and sensory details to convey ideas precisely.

Search different aspects of a topic.

Draw evidence from literary or informational texts to support research.

Draw on information known about a topic to explore related ideas about that topic.

Pose and respond to specific questions to clarify or follow up on information.

Materials/Resources
Computer Internet www.kidtopia.info www.google.com http://www.gogooligans.com/ http://www.kidrex.org/

Modifications
Per student's needs/ IEP Choice Boards, Cards Screen Modification Mouse Modification Sound Modification Adapted Access and Programs if available

Subject: Technology Information and Literacy
Grade Level: 03
Unit: How does Technology Affect our World
Pacing Guide: Approximately 28 Lessons
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment. **A. Nature of Technology: Creativity and Innovation** 8.2.5.A.1, 8.2.5.A.2, 8.2.5.A.3, 8.2.5.A.4, **B. Technology and Society** 8.2.5.B.1, 8.2.5.B.2, 8.2.5.B.3, 8.2.5.B.4, 8.2.5.B.5, 8.2.5.B.6 **C. Design** 8.2.5.C.1, 8.2.5.C.2, 8.2.5.C.3, 8.2.5.C.4, 8.2.5.C.5, 8.2.5.C.6 **D. Abilities for the Technological World** 8.2.5.D.1, 8.2.5.D.2, 8.2.5.D.3, 8.2.5.D.4, 8.2.5.D.5, 8.2.5.D.6, 8.2.5.D.7 **E. Computational Thinking: Programing** 8.2.5.E.1, 8.2.5.E.2, 8.2.5.E.3, 8.2.5.E.4
Interdisciplinary Connection:
English Language Arts RL 3.1, RI 3.1, W.3.4, W.3.6 **Math** 3.MD.3, 3.MD.4 **Science** 3-5 – ETS1-1, 3-5 – ETS1-2, 3-5 – ETS1-3
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **B. Creativity and Innovation** 9.1.4.B.1 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **F. Accountability, Productivity, and Ethics** 9.1.4.F.3
Instructional Activities
Focus:
S.T.E.M. (Science, Technology, Engineering and Math) course is designed to prepare our students to be 21st century learners, while exploring the world around them. The primary goals of this class is for students to become more aware of current technologies, how technology works, and what impact it has on the world we live in.
Essential Questions to be Answered
Can we control the pace at which technology is created? Should we, even if we can? How does technology extend human capabilities? What are the positive and negative consequences of technology? Should technologies that produce negative impact continue to be used? When sophisticated tools are required and when are the simplest tools the best to use?

Can a system continue to operate with a missing or malfunctioning component?
Is it always beneficial to use the most economical material/materials for production of a technological product?
How can I re-design a product better suited for my age group?
What is my responsibility in this world to help with Green Technologies?
What are multiple ways I can present my projects? (Videos, PowerPoints, Newsletters)
What do software or apps do I use to communicate with other people around the world? (Online, Translators)

Instructional Activities

Investigate how the Technology items were developed and its impact on society and other technologies.
Interview multi-generations on technology they grew up with and record in graphic organizer.
Be able to discuss the difference between innovation and invention.
Examine a broken item. Identify the parts and their interactions with each other.
Discuss how the items could be fixed or improved.
Be able to identify items in technology that help people in their daily lives. (Elderly, disabled, injured)
Identify products that require special care when disposed.
Summarize the benefits to recycling products over disposing of them in a landfill.
Be able to discuss Green Technologies and how it is important to help protect the environment.
Students will use appropriate vocabulary when explaining projects and inventions.
Students will use various means to present materials (Videos, digital presentations, paper)
Students will use various means to communicate with people around the world.

Assessment/Benchmarks

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Research Log Books

Materials/Resources

Computers
Chrome Books
Hands-on Activities Materials
Age Appropriate Apps
Age Appropriate Software
Graphic Organizers

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available

Subject: Technology Information and Literacy
Grade Level: 03
Unit: Using Technology to Improve our World and Green Technology
Pacing Guide: 10 Days
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment.   **A. Nature of Technology: Creativity and Innovation**   8.2.5.A.5   **B. Technology and Society**   8.2.5.B.2, 8.2.5.B.3, 8.2.5.B.4   **D. Abilities for the Technological World**   8.2.5.D.1, 8.2.5.D.2, 8.2.5.D.3, 8.2.5.D.4, 8.2.5.D.5, 8.2.5.D.6, 8.2.5.D.7   **E. Computational Thinking: Programing**   8.2.5.E.2
Interdisciplinary Connection:
English Language Arts   RL 3.1, RI 3.1, W.3.4, W.3.6   **Math**   3.MD.3, 3.MD.4   **Science**   3-5 – ETS1-1, 3-5 – ETS1-2, 3-5 – ETS1-3
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.   **A. Critical Thinking and Problem Solving**   9.1.4.A.3   **B. Creativity and Innovation**   9.1.4.B.1   **D. Cross-Cultural Understanding and Interpersonal Communication**   9.1.4.D.1   **E. Communication and Media Fluency**   9.1.4.E.2, 9.1.4.E.3   **F. Accountability, Productivity, and Ethics**   9.1.4.F.1, 9.1.4.F.2
Instructional Activities
Focus:
To have students use technology to help improve their world and for future generations.
Essential Questions to be Answered
How can technology be used to help the environment?   What in technology can we use to reuse, re-purpose or recycle?   How can we use technology to help improve our community and environment?   How do I use data collected from technology to help improve the environment?
Instructional Activities

Students will collaborate together to discuss the environment and the ways to help improve situations.
Students will learn about the differences between reuse, recycle or re-purpose.
Students will discuss different technologies available to help improve the environment and their community.
Students will use graphic organizers to organize data and present results and solutions on how they can help the environment.

Assessment/Benchmarks

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Research Log Books
Graphic Organizers
Student Presentations

Materials/Resources

Computers
Chrome Books
Hands-on Activities Materials
Age Appropriate Apps
Age Appropriate Software
Graphic Organizers

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy	
Grade Level: 04	
Unit: Your Digital World	
Pacing Guide: 4 Days	
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 collaboratively and to create and communicate knowledge.
A. Technology Operations and Concepts
8.1.4.A.1, 8.1.4.A.2, 8.1.4.A.5
E. Research and Information Literacy
8.1.4.E.2

Interdisciplinary Connection:

English Language Arts
SL.4.2, W.4.1.a
Math
4.MD.4 M,

21st Century Themes and Skills (Life and Career):

Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures.
B. Creativity and Innovation
9.1.4.B.1
C. Collaboration, Teamwork, and Leadership
9.1.4.C.1
F. Accountability, Productivity, and Ethics
9.1.4.F.3

Instructional Activities

Focus:

Digital media are 21st-century tools used for storing data, accessing data, and local and global communication.
The use of digital tools requires students to have general understandings of the tools and how to use them appropriately.
Technology products and systems impact our life and change over time.

Essential Questions to be Answered

What are the ways that we use digital technology in our daily lives?

How does digital technology help us in our daily lives?

What are the ways we can save our files and data?

What is a Google Drive?

What is the cloud?

What are the benefits of the cloud over previous technology for saving and accessing our data?

What is a website URL?

What are the following technology terms: computer parts: monitor, keyboard, mouse,
printer, speakers /software terms - menu, file, folder, application, save, and quit.
How is the keyboard setup?
How should hands be placed on the keyboard to gain benefits in typing accuracy and speed?

Student should be able to:
Explain how digital media are used in our daily lives, in a variety of formats, and for a variety of purposes. Explain how technology has changed to help accommodate our lives Explain how technology has strengthened our ability to save and access information anywhere we are, as part of a global society. Explain how the cloud works. Explain how Google Drive works. Identify the different parts of the computer, and more specifically the keyboard ("power keys" e.g., Enter, Spacebar) . Place their hands correctly on the keyboard. Use the mouse to access menus. Use keyboard shortcuts. Understand basic technology terms.
Assessment/Benchmarks
Exit Tickets Class Discussions Teacher Discussions Student Work Examples Rubrics
Materials/Resources
Computer Internet Typing Pals Google www.BrainPop.com www.BrainPopjr.com www.wordle.com http://www.schooltube.com/video/72fea4567c54a813de3c/Basic%20Keyboarding https://www.youtube.com/watch?v=EiN_NL507pU&list=PLhrBKfgDdV049_R2L2NIuBVoeVTMtz12b http://www.bbc.co.uk/guides/z3c6tfr
Modifications
Per student's needs/ IEP Choice Boards, Cards Screen Modification Mouse Modification Sound Modification Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 04
Unit: Digital Citizenship
Pacing Guide: 6 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.5 **C. Communication and Collaboration** 8.1.4.C.1 **D. Digital Citizenship** 8.1.4.D.1, 8.1.4.D.3 **E. Research and Information Literacy** 8.1.4.E.2 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts RI.4.7, SL.4.2, W.4.1.a **Math** 4.MD.4 M,
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **B. Creativity and Innovation** 9.1.4.B.1 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **E. Communication and Media Fluency** 9.1.4.E.1, 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.2
Instructional Activities
Focus:
The use of technology and digital tools requires knowledge and appropriate use of operations and related applications. Digital tools and environments support the learning process and foster collaboration in solving issues and problems. Technological advancements create societal concerns regarding the practice of safe, legal and ethical behaviors. Effective use of digital tools assists in gathering and managing information. Information accessed through the use of digital tools assists in generating solutions and making decisions.

The ability to recognize a problem and apply critical thinking and problem-solving skills to solve that problem is a lifelong skill that develops over time.

Collaboration and teamwork enable individuals or groups to achieve common goals with greater efficiency.

Effective communication skills convey intended meaning to others and assist in preventing misunderstandings.

Digital media are 21st-century tools used for communication. There

are ethical and unethical uses of communication and media.

The nature of the 21st-century learning environment has shifted, demanding greater individual accountability, productivity, and collaboration.

Ethical behaviors support dignity in all aspects of life.

The identification of key ideas and details is essential in the interpretation of text.

The reading of informational text provides rich opportunities for the integration of knowledge and ideas.

Research builds knowledge.

Collaboration with peers fosters the development of one's own comprehension and development of ideas.

Essential Questions to be Answered

What behaviors constitute cyber bullying?

How does cyber bullying differ from real-life bullying?

Are the psychological and emotional outcomes of cyber bullying any worse than those of real-life bullying?

What role does anonymity play in one's inclination to bully another using the Internet or other technologies?

Why would one engage in cyber bullying?

What medium (e.g., emailing, texting, instant messaging, social networking) lends itself most to cyber bullying?

What are the best ways to deal with cyber bullying?

What are the best ways to prevent cyber bullying?

Assessment/Benchmarks

Demonstrate effective input of text and data using an input device.

Determine the benefits of digital tools by using them to solve problems.

Explain the need for each individual, as a member of the global community, to practice cyber safety, cyber security, and cyber ethics when using existing and emerging technologies.

Explain the consequences of inappropriate use of technology.

Evaluate the use of print vs. non-print electronic information sources to complete a variety of tasks.

Select and apply digital tools to collect, organize, and analyze data.

Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.

Evaluate available resources that can assist in solving problems.

Determine when the use of technology is appropriate to solve problems.

Use data accessed on the Web to inform solutions to problems and the decision-making process.

Apply critical thinking and problem-solving skills in classroom settings.

Practice collaborative skills in groups, and explain how these skills assist in completing tasks in different settings (at home, in school, and during play).

Use effective oral and written communication in face-to-face and online interactions and when presenting to an audience.

Demonstrate an awareness of one's own culture and other cultures during interactions within and outside ofthe classroom.

Explain how digital media are used in daily life in a variety of settings.

Demonstrate effective communication using digital media during classroom activities.

Distinguish how digital media are used by individuals, groups, and organizations for varying purposes.

Explain why some uses of media are unethical.

Explain the meaning of productivity and accountability, and describe situations in which productivity and accountability are important in the home, school, and community.

Establish and follow performance goals to guide progress in assigned areas of responsibility and accountability during classroom projects.

Explain the importance of understanding and following rules in family, classroom, and community settings.

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from text.

Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Explain events, ideas, or concepts based on specific information in the text.

Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages).

Gather relevant information from digital sources; take notes and categorize information.

Engage effectively in a range of online collaborative exercises, building on others' ideas and expressing their own clearly.

Follow agreed-upon rules for online discussions.

Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

Review the key ideas expressed and explain their own ideas and understanding in light of classroom discussions.

Materials/Resources
Computer

Internet

www.BrainPop.com(Digital Citizenship Videos & Quizzes)

www.BrainPopjr.com (Digital Citizenship Videos & Quizzes)

http://www.schrockguide.net/parent-g uide-to- online-life.html

http://kids.ikeepsafe.org/

www.iste.og

Modifications
Per student's needs/ IEP

Choice Boards, Cards

Screen Modification

Mouse Modification

Sound Modification

Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 04
Unit: Interacting with Technology
Pacing Guide: 16 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.2, 8.1.4.A.3, 8.1.4.A.5 **D. Digital Citizenship** 8.1.4.D.3 **E. Research and Information Literacy** 8.1.4.E.2 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts SL.4.2, W.4.1.a Math 4.MD.4 M, **Visual Arts** 1.3.2.D.1-4
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **A. Critical Thinking and Problem Solving** 9.1.4.A.1, 9.1.4.A.2, 9.1.4.A.3 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **D. Cross-Cultural Understanding and Interpersonal Communication** 9.1.4.D.1 **E. Communication and Media Fluency** 9.1.4.E.1, 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.2
Instructional Activities
Focus:
Online cloud services are a place where we can store our files in cloud storage and share them with others. Online services allow us many capabilities, such as adding pictures, videos, and URLs. By selecting and manipulating different features of text, we can format documents to fit particular design needs. By interacting with digital tools, we can explore and utilize various resources.
Essential Questions to be Answered

What is a document?

How do I format documents?

How do I change the font?

How do I change the font size?

How do I change the text color and the text background color?

How do I bold, italicize or underline text?

How do I insert a link into a document?

How do I add bullets?

How do I align text?

How do I share my document with others so that we may collaborate on it?

How do I navigate in a digital environment?

How do I scroll?

How do I Cut, Copy, Paste?

How do I drag an item?

How do I use drop down boxes?

How do I use Google Apps?

Student should be able to:

Input data and text into a document

Use a digital resource to format text and add graphics.

Explain how digital tools help us.

Engage in online communication with peers and students.

Evaluate digital resources that can assist us.

Collaboratively complete a task with peers using a digital platform.

Save and access files on-line and on the district servers.

Communicate via digital tools

Interpret visual online information and demonstrate understanding.

Use Google accounts and apps for appropriate tasks

Assessment/Benchmarks

Exit Tickets

Class Discussions

Teacher Discussions

Student Work Examples

Rubrics

Materials/Resources

Computer

Internet

https://sites.google.com/site/specialneedsgamesonline/on-line-games/switch-games

www.abcya.com

http://www.funbrain.com/brain/SweepsBrain/Games/Title.html?GameName=DiggingForWorms

www.google.com

Google Apps

Modifications

Per student's needs/ IEP

Choice Boards, Cards

Screen   Modification
Mouse   Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 04
Unit: Digital Assessment Integration
Pacing Guide: 4 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.5 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts W.4.1.a ,W.4.1.b, RI.4.1, RI.4.2, SL.4.2 **Math** 4.MD.4 M,
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **A. Critical Thinking and Problem Solving** 9.1.4.A.3 **B. Creativity and Innovation** 9.1.4.B.1 **D. Cross-Cultural Understanding and Interpersonal Communication** 9.1.4.D.1 **E. Communication and Media Fluency** 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.1, 9.1.4.F.2
Instructional Activities
Focus:
Digital environments are specialized to meet certain needs (e.g., to inform, to persuade, to entertain, to assess, etc.). In order for one to interact appropriately within a digital environment, one must be adept at manipulating digital tools particular to that environment. Standardized testing is one form of assessment that assists teachers with refining their programs and improving student learning.
Essential Questions to be Answered
How does our knowledge of digital tools impact our performance on various forms of assessment?
What do I need to know in order to effectively and efficiently respond to questions posed in an online assessment environment?
What are the advantages and disadvantages of an online assessment environment?
How can I best prepare myself to perform well on an online assessment?

How do I transition between sections, focus on discrete instructions, employ the proper tools, and successfully respond to various types of assessment items?

Assessment/Benchmarks

Familiarize themselves with online assessment environments.

Respond to various types of online assessment items.

Recognize the disadvantages while capitalizing on the advantages provided by an online assessment environment.

Experience, sample, and practice with authentic online assessment items.

Transition between sections, focus on discrete instructions, employ the proper tools, and successfully respond to various types of assessment items.

Employ such specific skills as mouse clicking, dragging and dropping, selecting/highlighting, scrolling, inputting text, switching modes, manipulating digital tools, connecting headphones, interacting with videos, forwarding slide shows and test items, filling in boxes, maneuvering through a website without distraction, working on a computer for extended periods of time, and troubleshooting basic tech problems (e.g., caps lock not working, volume not loud enough, monitor suddenly malfunctioning, etc.).

Seek assistance for technical difficulties.

Materials/Resources

Computer Internet
http://www.parcconline.org/practice-tests

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 04
Unit: Search Literacy
Pacing Guide: 10 Days
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 collaboratively and to create and communicate knowledge. **A. Technology Operations and Concepts** 8.1.4.A.1, 8.1.4.A.5 **E. Research and Information Literacy** 8.1.4.E.2 **F. Critical Thinking, Problem Solving, and Decision-Making** 8.1.4.F.1
Interdisciplinary Connection:
English Language Arts Standards RI.4.1,.RI.4.2, RI.4.3, RI.4.5, RI.4.7, RI.4.8, RI.4.9,W.4.2d, W.4.3d, W.4.7, W.4.9, SL.4.1c **Math** 4.MD.4 M
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **A. Critical Thinking and Problem Solving** 9.1.4.A.1, 9.1.4.A.2, 9.1.4.A.3, 9.1.4.A.4, 9.1.4.A.5 **B. Creativity and Innovation** 9.1.4.B.1 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **D. Cross-Cultural Understanding and Interpersonal Communication** 9.1.4.D.1 **E. Communication and Media Fluency** 9.1.4.E.1, 9.1.4.E.2, 9.1.4.E.3 **F. Accountability, Productivity, and Ethics** 9.1.4.F.1, 9.1.4.F.2
Instructional Activities
Focus:
The use of technology and digital tools requires knowledge and appropriate use of operations and related applications. Effective use of digital tools assists in gathering and managing information. Information accessed through the use of digital tools assists in generating solutions and making decisions. The ability to recognize a problem and apply critical thinking and problem-solving skills to solve the problem is a lifelong skill that develops over time. Brainstorming activities enhance creative and innovative thinking in individual and group goal setting and problem solving.

Collaboration and teamwork enable individuals or groups to achieve common goals with greater efficiency.

Effective communication skills convey intended meaning to others and assist in preventing misunderstandings.

Digital media are 21st-century tools used for communication.

The identification of key ideas and details is essential in both the search for information and interpretation of text.

The reading of informational text provides rich opportunities for the integration of knowledge and ideas.

The use of precise language and appropriate search operators improves the relevance and accuracy of search results.

Research builds knowledge.

Strong comprehension and collaboration skills benefit search literacy.

Essential Questions to be Answered

What does it mean to search on the web?

With so much information now available at our fingertips (via digital devices such as smartphones, iPads, tablet computers, etc.), is it easier or more difficult to find information?

Are multimedia-based resources more or less informative than text-based resources?

How does one perform a basic search?

Under what circumstances are search adjustments necessary?

What does it mean to adjust a search, and when should one make those adjustments?

How does search efficiency assist one's informational needs?

What search engines are most suitable for our search purposes?

Assessment/Benchmarks

Demonstrate effective input of text and data using an input device.

Determine the benefits of a wide variety of digital tools by using them to solve problems.

Evaluate the accuracy of, relevance to, and appropriateness of using print and non-print electronic information sources to complete a variety of tasks.

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

Recognize a problem and brainstorm ways to solve the problem individually or collaboratively.

Evaluate available resources that can assist in solving problems.

Determine when the use of technology is appropriate to solve problems.

Use data accessed on the Web to inform solutions to problems and the decision-making process.

Apply critical thinking and problem-solving skills in classroom and family settings.

Participate in brainstorming sessions to seek information, ideas, and strategies that foster creative thinking.

Practice collaborative skills in groups, and explain how these skills assist in completing tasks in different settings (at home, in school, and during play).

Explain how digital media are used in daily life in a variety of settings.

Distinguish how digital media are used by individuals, groups, and organizations for varying purposes.

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Interpret information presented visually, orally, or quantitatively.

Explain how an author uses reasons and evidence to support particular points in a text.

Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

Read and comprehend appropriate grade-level informational text embedded in digital resources.

Use precise language and domain-specific vocabulary to describe a topic.

Use concrete words, phrases, and sensory details to convey ideas precisely.

Search different aspects of a topic.

Draw evidence from literary or informational texts to support research.

Draw on information known about a topic to explore related ideas about that topic.

Pose and respond to specific questions to clarify or follow up on information.

Materials/Resources

Computer
Internet www.kidtopia.info
www.google.com
http://www.gogooligans.com/
http://www.kidrex.org/

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.

Subject: Technology Information and Literacy
Grade Level: 04
Unit: How does Technology Affect our World
Pacing Guide: Approximately 28 Lessons
Standards:
8.2 Technology Education, Engineering, and Design All students will develop an understanding of the nature and impact of technology, engineering, technological design, and the designed world, as they relate to the individual, global society, and the environment. **A. Nature of Technology: Creativity and Innovation** 8.2.5.A.1, 8.2.5.A.2, 8.2.5.A.3, 8.2.5.A.4, **B. Technology and Society** 8.2.5.B.1, 8.2.5.B.2, 8.2.5.B.3, 8.2.5.B.4, 8.2.5.B.5, 8.2.5.B.6 **C. Design** 8.2.5.C.1, 8.2.5.C.2, 8.2.5.C.3, 8.2.5.C.4, 8.2.5.C.5, 8.2.5.C.6 **D. Abilities for the Technological World** 8.2.5.D.1, 8.2.5.D.2, 8.2.5.D.3, 8.2.5.D.4, 8.2.5.D.5, 8.2.5.D.6, 8.2.5.D.7 **E. Computational Thinking: Programing** 8.2.5.E.1, 8.2.5.E.2, 8.2.5.E.3, 8.2.5.E.4
Interdisciplinary Connection:
English Language Arts SL.4.2, W.4.1.a **Math** 4.MD.4 M **Science** 5.1.4.A.2, 5.1.4.A.3, 5.1.4.B.1, 5.1.4.B.2, 5.1.4.B., 5.1.4.B.4
21st Century Themes and Skills (Life and Career):
Standard 9.1: 21st-Century Life & Career Skills: All students will demonstrate the creative, critical thinking, collaboration, and problem-solving skills needed to function successfully as both global citizens and workers in diverse ethnic and organizational cultures. **B. Creativity and Innovation** 9.1.4.B.1 **C. Collaboration, Teamwork, and Leadership** 9.1.4.C.1 **F. Accountability, Productivity, and Ethics** 9.1.4.F.3
Instructional Activities
Focus:
S.T.E.M. (Science, Technology, Engineering and Math) course is designed to prepare our students to be 21st century learners, while exploring the world around them. The primary goals of this class is for students to become more aware of current technologies, how technology works, and what impact it has on the world we live in.
Essential Questions to be Answered
Can we control the pace at which technology is created? Should we, even if we can? How does technology extend human capabilities? What are the positive and negative consequences of technology? Should technologies that produce negative impact continue to be used? When sophisticated tools are required and when are the simplest tools the best to use?

Can a system continue to operate with a missing or malfunctioning component?
Is it always beneficial to use the most economical material/materials for production of a technological product?
How can I re-design a product better suited for my age group?
What is my responsibility in this world to help with Green Technologies?
What are multiple ways I can present my projects? (Videos, PowerPoints, Newsletters)
What do software or apps do I use to communicate with other people around the world? (Online, Translators)

Instructional Activities

Investigate how the Technology items were developed and its impact on society and other technologies.
Interview multi-generations on technology they grew up with and record in graphic organizer.
Be able to discuss the difference between innovation and invention.
Examine broken items. Identify the parts and their interactions with each other.
Discuss how the items could be fixed or improved.
Be able to identify items in technology that help people in their daily lives. (Elderly, disabled, injured)
Identify products that require special care when disposed.
Summarize the benefits to recycling products over disposing of them in a landfill.
Be able to discuss Green Technologies and how it is important to help protect the environment.
Students will use appropriate vocabulary when explaining projects and inventions.
Students will use various means to present materials (Videos, digital presentations, paper)
Students will use various means to communicate with people around the world.

Assessment/Benchmarks

Exit Tickets
Class Discussions
Teacher Discussions
Student Work Examples
Rubrics
Research Log Books

Materials/Resources

Computers
Chrome Books
Hands-on Activities Materials
Age Appropriate Apps
Age Appropriate Software
Graphic Organizers

Modifications

Per student's needs/ IEP
Choice Boards, Cards
Screen Modification
Mouse Modification
Sound Modification
Adapted Access and Programs if available.