

Computers

Grade 3

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Grade 3 Computers

Course Description: Grade 3 Computers will continue to build off the skills and knowledge the students have attained in Grades 1 & 2. Keyboarding skills continue to be a central focus and additional keys and shortcuts will be introduced this year. Google Docs skills will also be enhanced through more advanced features when creating class projects. Navigating the Internet and using search engines effectively will enhance their ability to use the Internet for research. Internet safety and digital citizenship will be a key component due to the increased role of the Internet, smartphones and social media in our daily lives. Google SSlides will be a new program introduced and basic skills and features will be the focus.

Course Sequence:

Unit 1: Keyboarding, Computer Basics and Vocab. and Google Education Suite (13 weeks) *

Unit 2: Keyboarding, Internet safety, Digital Citizenship, Computer Navigation/Search engines (13 weeks)

Unit 3: Keyboarding, Coding, Slides (13 Weeks) *

Pre-requisite: Grade 2 Computers

** Approximately 2 weeks will be spent on on-line practice assessments preparing for NJSLA*

Unit 1 - Overview**Content Area: Computers****Unit Title: Computer Basics****Grade Level: 3**

Core Ideas: The foundation upon which computer skills are built is mastery of keyboarding and word processing. Understanding of how a computer works as a system and how its parts must work together is also fundamental.

Unit 1 - Standards**Standards:** (Content and Technology):**CPI#:** **Statement:****Performance Expectations (NJSL)****Career Readiness, Life Literacies, and Key Skills**

9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
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9.2.5.CAP.2	Identify how you might like to earn an income.
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9.4.5.CT.3	Describe how digital tools and technology may be used to solve problems.
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9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
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9.4.5.TL.1	Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
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9.4.5.TL.3	Format a document using a word processing application to enhance text, change page formatting, and include appropriate images graphics, or symbols.
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Computer Science and Design Thinking

8.1.5.CS.1	Model how computing devices connect to other components to form a system.
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8.1.5.CS.2	Model how computer software and hardware work together as a system to accomplish tasks.
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8.1.5.CS.3:	Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.
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8.1.5.DA.2:	Compare the amount of storage space required for different types of data.
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Interdisciplinary Connection

1.2.5.Cr3a:	Construct and arrange various content into unified and expressive media arts productions.
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1.2.5.Pr4b:	Demonstrate understanding of combining a variety of academic, arts and content with an emphasis on coordinating elements into a comprehensive media artwork.
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1.2.5.Pr4c:	Create media artworks through integration of multiple contents and forms.
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1.2.5.Cn10a	Use, examine and access internal and external resources to create media artworks, such as interests, knowledge and experiences.
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NJLSA.SL5.	Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
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NJLSA.W.3.6	With guidance and support from adults, use technology to produce and publish writing as well as to interact and collaborate with others.
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NJLSA.W6.	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
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NJLSA.R1.	Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
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Intercultural Statements (*Amistad, Holocaust, LGBT, SEL, etc...*)

Amistad: Discuss how it is important to have more minorities, women and people from a variety of backgrounds working in the technology sector.

Holocaust: Technology allows us to express ourselves freely, but it is important to be respectful and not judge others based on their race, culture, sex or religion.

Unit Essential Question(s):

- How will enhancing our keyboarding skills improve our lives?
- How can Docs make our projects more creative?
- What are some ways that technology can help us express ourselves?

Unit Enduring Understandings:

- Using the home row enables us to type more efficiently
- Understanding computer basics will help us succeed in the 21st century
- Docs has many features that allow us make projects look neater, more organized and more creative

	<ul style="list-style-type: none"> Computers and Technology allow us to present and share our ideas and knowledge in many ways 		
Evidence of Learning			
Formative Assessments: BrainPop assignments Ed Club Typing Progress Parts of the Computer Worksheet Teacher Observations Summative/Benchmark Assessment(s): Parts of the Computer Quiz Vocabulary Quiz Alternative Assessments: Student conversations Student project			
Resources/Materials: BrainPop EdClub Typing Google Docs Google Classroom Faronics Insight		Key Vocabulary: Hardware Input Software Output Memory Home Row	
Suggested Pacing Guide			
Lesson Name/Topic	Student Learning Objective(s)	Suggested Tasks/Activities:	Day(s) to Complete
Introduction	<ul style="list-style-type: none"> Be able to log-in independently Navigate Google Education Suite 	Review Class Rules and Procedures Log-ins for programs Google Classroom Review	2
Folders and Navigation	-Create a folder on the desktop	-Demonstrate how to create a folder	1
Keyboarding	-Use home row and proper keyboarding technique	-Review of typing accounts -Home Row Review -Keyboarding Practice Try for 2-3x per month	3
Computer Basics and Vocab	-Hardware and Software -Main components -Work as a system	-BrainPop Parts of a Computer -YouTube -Magic School Bus	2
Google Docs	-Formatting -Adding Images	-Demonstrate using Faronics -Have students create a Doc about themselves	2
Google Slides	-CREATE a slideshow -Add slides -Format slides -Add images and transitions	-Demonstrate how to use Slides -Review direction sheet with class -Allow students to explore and create a slideshow	2
Teacher Notes:			
Additional Resources: YouTube K-5Tech.Net			
Differentiation/Modification Strategies			
Students with Disabilities/504 <ul style="list-style-type: none"> Preferential Seating Strategic/flexible grouping and pairing Ample wait time before calling on students Student self-assessment, self-monitoring of progress Speaking: Provide sentence starters, processing time, cues and prompts, embedded choices, practice time; repeating/simplifying of directions; clear visual, verbal and demonstrative modeling; think/Pair/Share 			

- Have students set personal growth goals
- Groups/Pairs: teach rules and expectations; skills of independence – bridging phrases, disagreeing agreeably, voice level; strategies for moving in and out of groups; signal for getting teacher’s attention
- Allow: flexible grouping; adequate/extra time; assign group roles; ample use of visuals; kinesthetic activities; rhythm, music, body movements; teach vocab in context, and in small chunks; break down assignments into manageable parts/tasks
- Reading: Use peer tutoring; label main ideas; label 5 W’s; visual imagery; graphic organizers
- Allow: Highlighting of key words/concepts; silent pre-reading; partner reading
- Teach: Pre-reading strategies; ‘During’ reading strategies; Post-reading strategies; Use of manipulatives; Use of graphic organizers; Frequent repetition; Learning centers or stations that address varied activities, skills, learning modalities
- Writing: Shorten task; Require lists rather than sentences. Allow: note-taking; visual representation of ideas; collaborative writing; Brainstorm word bank; Pre-writing with graphic organizers. Provide: Model of writing; Structure for writing; Fill-in-blank form for note-taking

English Language Learners

- Give instructions/directions in writing and orally
- Assign a buddy, same language or English speaking
- Allow errors in speaking
- Allow errors in writing
- Highlight key vocabulary
- Reduce amount of work required
- Rephrase questions, directions, and explanations
- Allow extended time to answer questions, and permit drawing, as an explanation

Gifted and Talented

- Anchor Activities
- Appoint as teacher’s helpers
- Assign additional Internet activities

Students at Risk

- Online Enrichment activities
- Peer tutoring

Unit 2 - Overview**Content Area: Computers****Unit Title: Digital Citizenship****Grade Level: 3****Core Ideas:** Being a responsible and ethical digital citizen is crucial for our 21st century learners. Students will learn to protect their information, be responsible online,**Unit 2 - Standards****Standards:** (Content and Technology):**CPI#:** **Statement:****Performance Expectations (NJSLs)****Career Readiness, Life Literacies, and Key Skills****9.2.5.CAP.1** Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.**9.4.5.CT.3** Describe how digital tools and technology may be used to solve problems.**9.4.5.DC.4** Model safe, legal, and ethical behavior when using online or offline technology

Identify the characteristics of a positive and negative online identity and the lasting implications of online activity.

9.4.5.DC.6 Compare and contrast how digital tools have changed social interactions**9.4.5.DC.7** Explain how posting and commenting in social spaces can have positive or negative consequences.**Computer Science and Design Thinking****8.1.5.NI.2** Describe physical and digital security measures for protecting sensitive personal information.**8.1.5.IC.1** Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.**8.1.5.IC.2** Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.**8.1.5.DA.1** Collect, organize, and display data in order to highlight relationships or support a claim.**Interdisciplinary Connection** (*must include Companion Standard(s) R and W*)**1.2.5.Cr3a:** Construct and arrange various content into unified and expressive media arts productions.**NJSLSA.SL5.** Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.**NJSLSA.W6.** Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.**NJSLSA.R7.** Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.**RI.3.4.** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area**RI.3.5.** Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.**RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).**Intercultural Statements** (*Amistad, Holocaust, LGBT, SEL, etc...*)

Holocaust: Students will discuss and understand impact of cyberbullying and its potential consequences.

Unit Essential Question(s):

- What does it mean to be a good digital citizen?
- How can what we do and say online now affect our future?
- What are some ways to ensure that we keep our data private?
- How can our online words affect others and their mental health?

Unit Enduring Understandings:

- Technology allows us to connect with others in meaningful ways
- It is important to keep our information and identities private while online.
- There are proper ways to respond when faced with inappropriate behaviors online
- You must treat others as you would like to be treated when online.
- Once you post something on the Internet you can't take it back.
- There can be real world consequences to bad online behavior.

Evidence of Learning

Formative Assessments: BrainPop assignments
Common Sense Media assignments
Class projects

Summative/Benchmark Assessment(s):
Internet Safety Quiz
Vocabulary Quiz

Alternative Assessments:
Student conversations
Student project

Resources/Materials:

BrainPop
Common Sense Media
Google Be Internet Awesome
Code.Org
Google Docs
Google Classroom
Faronics Insight

Key Vocabulary:

Cyberbully Password
Social Media Troll
Digital Citizen Clickbait
Digital Etiquette
Bystander
Upstander

Suggested Pacing Guide

Lesson Name/Topic	Student Learning Objective(s)	Suggested Tasks/Activities:	Day(s) to Complete
Digital Citizenship Intro	-Understand what Digital Citizenship is -Review prior knowledge	-Class Discussion -Video	1
Vocabulary	-Discuss what students have experienced online -Comprehend vocabulary terms	-Class Discussion -Review Key Vocabulary	2
BrainPop	-How to stay safe online	-BrainPop Internet Safety video -Brain Pop activities	1
Common Sense Media	-Digital Footprint -Cyberbullying	-Common Sense Media grade 3 lessons	3
Digital Passport	-Protect your Password -Know what is safe to share online	Digital Passport Password Protect, Twalkers, & Share Jumper Games	3
Google Interland	-It's Cool to be Kind -How to keep info secure	-Google Be Internet Awesome -Slideshow from https://beinternetawesome.withgoogle.com/en_us/slides -Play Interland	3

Teacher Notes:

Additional Resources:

YouTube
K-5Tech.Net
Flocabulary

Differentiation/Modification Strategies

Students with Disabilities/504

- Preferential Seating
- Strategic/flexible grouping and pairing
- Ample wait time before calling on students
- Student self-assessment, self-monitoring of progress
- Speaking: Provide sentence starters, processing time, cues and prompts, embedded choices, practice time; repeating/simplifying of directions; clear visual, verbal and demonstrative modeling; think/Pair/Share
- Have students set personal growth goals

- Groups/Pairs: teach rules and expectations; skills of independence – bridging phrases, disagreeing agreeably, voice level; strategies for moving in and out of groups; signal for getting teacher’s attention
- Allow: flexible grouping; adequate/extra time; assign group roles; ample use of visuals; kinesthetic activities; rhythm, music, body movements; teach vocab in context, and in small chunks; break down assignments into manageable parts/tasks
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Gifted and Talented

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Students at Risk

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- Peer tutoring

Unit 3 - Overview**Content Area: Computers****Unit Title: Coding****Grade Level: 3**

Core Ideas: Coding is a skill that is becoming more and more useful in today's world. It also furthers students' abilities in problem solving, critical thinking, teamwork, logic and perseverance. There are a variety of ways to teach coding and different types of coding which makes it accessible to a wide variety of learners. Programming allows you to create new apps, games, websites, art and other computer based artifacts.

Unit 3 - Standards**Standards:** (Content and Technology):**CPI#:** **Statement:****Performance Expectations (NJSLs)****Career Readiness, Life Literacies, and Key Skills****9.2.5.CAP.3** Identify qualifications needed to pursue traditional and non-traditional careers and occupations.**9.2.5.CAP.4** Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.**9.4.5.CT.1** Identify and gather relevant data that will aid in the problem-solving process**9.4.5.CT.3** Describe how digital tools and technology may be used to solve problems.**9.4.5.DC.6** Compare and contrast how digital tools have changed social interactions**Computer Science and Design Thinking****8.1.5.NI.1** Develop models that successfully transmit and receive information using both wired and wireless methods.**8.1.5.IC.1** Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.**8.1.5.IC.2** Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.**8.1.5.AP.1** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.**8.1.5.AP.3** Create programs that include sequences, events, loops, and conditionals.**8.1.5.AP.4** Break down problems into smaller, manageable sub-problems to facilitate program development.**8.2.5.ITH.1** Explain how societal needs and wants influence the development and function of a product and a system.**8.2.5.ITH.4** Describe a technology/tool that has made the way people live easier or has led to a new business or career.**8.2.5.ETW.2** Describe ways that various technologies are used to reduce improper use of resources.**Interdisciplinary Connection** (*must include Companion Standard(s) R and W*)**NJSLSA.SL5.** Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.**NJSLSA.W6.** Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.**NJSLSA.R7.** Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.**RI.3.7.** Use information gained from text features (e.g., illustrations, maps, photographs) and the words in a text to demonstrate understanding of the text**Intercultural Statements** (*Amistad, Holocaust, LGBT, SEL, etc...*)

Amistad: Discuss how computer programming provides opportunities for all, and discuss Kimberley Bryant, founder of Black Girls Code.

Unit Essential Question(s):

- How do we use algorithms in our everyday lives?
- Can we use loops to make our programs easier to write?
- How does computer programming impact our world?

Unit Enduring Understandings:

- We communicate with computers, applications, and software programs through computer programming
- There are a wide variety of ways for coding to be used
- Algorithm is a set of directions used to solve problems or perform tasks
- Perseverance, critical thinking, problem solving and teamwork are some important skills learned through coding

Evidence of Learning**Formative Assessments:** BrainPop assignments

Code.org Lesson Work

Class projects with Google CS First

Summative/Benchmark Assessment(s):

Vocabulary Quiz

Alternative Assessments:

Student conversations

Student project

Resources/Materials:

BrainPop

Code.Org

Google CS First

Flocabulary

Google Classroom

Faronics Insight

Botley Robots

Coding Caterpillar

Key Vocabulary:

Coding

Program

Algorithm

Loop

Sequence

Block Coding

Debugging

Binary

Suggested Pacing Guide

Lesson Name/Topic	Student Learning Objective(s)	Suggested Tasks/Activities:	Day(s) to Complete
BrainPop	-Understand how programming is used -Be able to write commands for a computer to follow	-Computational Thinking -Computer programming	2
Code.Org	-Use block coding to complete puzzles -Problem solve a variety of coding puzzles -Work with a partner to solve complex problems	-Work through the assigned levels of Code.Org Course C -Create art using Code -Debug a program with errors -Unplugged Code.org lessons as a class	8
Flocabulary	-Understand what an algorithm is and how they are used in programming	-Flocabulary Coding: Algorithms lesson -Watch video as a class and discuss -Students independently	1
Google CS First	-Learn how technology keeps us connected	-Get signed into CS First accounts -Intro to Google CS First -Watch CS First video as a class -Complete unplugged activity "CS First Unplugged"	2

Teacher Notes:**Additional Resources:**

YouTube

K-5Tech.Net

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