

**GARWOOD PUBLIC SCHOOLS
GARWOOD, NEW JERSEY 07027**



**COMPUTER/TECHNOLOGY
CURRICULUM GUIDE**

**KINDERGARTEN
TO
GRADE 8**

Dr. Teresa Quigley, Superintendent

**Revised and approved by the Garwood Board of Education
at the regular meeting held on August 16, 2022**



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DISTRICT MISSION STATEMENT

The Garwood Board of Education believes that all children can learn and that the Garwood Public Schools must prepare pupils to be lifelong learners, good citizens, and involved community members. Through the use of the New Jersey Core Curriculum Content Standards and our commitment to excellence, the Garwood Public Schools, in partnership with the community, will support a positive and productive learning environment that will empower each child to develop his/her potential while building and fostering enthusiasm, curiosity, responsibility, creativity, critical thinking, and problem-solving skills.

AFFIRMATIVE ACTION

The Garwood Public Schools provides equal educational opportunities for all students, including equal access to all school facilities, programs, equipment, staff, services, financial resources, courses or activities, and other benefits regardless of race, color, creed, religion, sex, ancestry, national origin, social, economic or academic status or physical handicap.

The district's affirmative action officer is Dr. Teresa Quigley, Superintendent of Schools who can be reached at (908) 789-0331.



GARWOOD PUBLIC SCHOOLS FIVE-YEAR PLAN
FOR CURRICULUM REWRITE and TEXTBOOK UPDATE

2022/23	Math K-8	
2023/24	Social Studies K-8	World Languages/World Cultures K-8
2024/25	Science K-8	
2025/26	Comprehensive Health & Physical Education K-8	21 st Century Life & Careers K-8
2026/27	Visual & Performing Arts K-8	ELA K-8

NOTE: Curriculum articulation will take place annually. Adjustments in instructional approaches may be made on a yearly basis at the approval of the CSA.

Adaptions and Modifications

Although this curriculum guide has been developed for general educational delivery, the knowledge, skills, and behaviors identified are generally appropriate for classified students. Modifications necessary to accommodate their specific educational needs will be described in each child’s Individualized Educational Program (IEP), which are on file in our Department of Special Services. Also considered when planning are those students with 504 plans, our G&T population, ELL, and at-risk students. This curriculum is meant to be modified through various techniques and procedures as per an individual person’s individualized educational needs.

Differentiated resources which are identified and approved, support materials that facilitate differentiation of curriculum, instruction, and assessment of this curriculum include but are not limited to: Choiceboards, lesson appropriate manipulatives, www.CK12.org; Discovery Streaming videos; BrainPop; Hour of Code.com;

<https://www.nj.gov/education/cccs/resources/educators/>, Tynker.com; https://home-school.lovetoknow.com/Lesson_Plans_for_Teaching_Computer_Skills; Kahoot!; and educational videos on YouTube and The Teaching Channel.

This Curriculum is meant to be modified through various techniques and procedures as per an individual person’s individualized educational needs.



Theory of Multiple Intelligences

Frames of Mind: The Theory of Multiple Intelligences by Howard Gardner

Interpersonal - the ability to work cooperatively with others in a group as well as the ability to communicate, verbally and non-verbally, with other people.

Intrapersonal - knowledge and understanding of the internal aspects of the self, such as emotions and their responses, self-reflection, and intuition.

Logical - the capacity to recognize patterns, work with abstract symbols (such as numbers and geometric shapes), and discern relationships and/or see connections between separate and distinct pieces of information.

Musical - the recognition and use of physical and tonal patterns, and sensitivity to sounds from the environment.

Naturalistic - the ability to know, understand, and respond to one's environment.

Psychomotor/Kinesthetic - the ability to use one's body to express ideas and feelings.

Spiritualistic - the ability to recognize, use and respond to sensory impressions.

Verbal/Linguistic - the ability to effectively use and understand language. The extraordinary ability in this intelligence is demonstrated by the use of metaphors, similes, abstract reasoning, symbolic thinking and conceptual patterning.

Visual/Spatial - the ability to form mental images and pictures based on the sense of sight. Those showing extraordinary ability in this intelligence include architects, graphic designers, cartographers, painters and sculptors.

INTRODUCTION

Curriculum is the backbone of instruction and supports the structure of programs and services provided in the Garwood Public School District. The Computer Technology curriculum guide is based on the New Jersey Student Learning Standards. These revised standards address the 21st-century student outcomes that require a deeper understanding of academic content as well as the creation of 21st-century learning environments in which teachers and students work across and beyond traditional disciplines and boundaries as engaged co-learners, critical and creative thinkers, and problem solvers.

The Computer Curriculum in the Garwood Public School System is a Chromebook based program with technology lab access as a secondary learning center. The program has been designed for integration into the classroom curriculum while focusing on technology literacy skills for each appropriate grade level. It is a student-centered program taught by the grade



level teacher and enhanced in a grade 5-8 ISTEAM cycle class.

Students are introduced to software programs that enhance keyboarding and word processing skills as well as cover all content areas. Internet usage is addressed through browser fundamentals and search engine protocols. Internet exploration stays within classroom content areas. There is a cumulative progression in skills as the students move up in grade level. Lincoln School effectively utilizes Google Classroom and Chrome accounts in all of our classrooms. In the primary grades, the focus is on keyboarding and word processing skills using Microsoft Word and Google Docs. In fourth and fifth Grade the students are familiarized with Microsoft Power Point and Google Slides in addition to maintaining and expanding skills previously learned in the primary grades. The middle school years explore Google Platform, Microsoft Access, Microsoft Office and Microsoft Excel fundamentals. Additionally, students develop skills in Internet procedures and usage that can enhance using their individualized Chrome accounts.

NEEDS/PURPOSE

It is clear that technology is evolving and plays a vital role in our daily lives. Being literate in Computer Technology allows for infinite opportunities in learning. The Computer/Technology program is designed to enhance computer literacy skills that will enable our students to succeed in a technological society that is upgraded on a constant basis. This program will help our students to acquire the ability to utilize the technology as a tool for thinking, learning, communicating, and problem solving.

For the purpose of this document, the use of the words chromebook and computers are interchangeable.

The Technology curriculum reflects the emergence of new instructional technologies related to engineering, design, and computational thinking (programming) as they relate to the NJ Student Learning Standards for Technology 8.2 in grades K-5. Students in grades kindergarten through eight will experience opportunities to explore technology as it relates to the experience of engineering and design. As students progress through the elementary grades they will experience design challenges requiring them to implement problem solving strategies, collaboration, and creativity. Additionally, the free instructional resources provided by Code.org and Scratch.mit.edu are incorporated into standards 8.2, providing students with an opportunity to experience computational thinking in grades kindergarten through eighth grade.

The iSTEAM cycle class reflects the emergence of new instructional technologies related to engineering, design, and computational thinking. Students in grades five through eight experience opportunities to participate in the engineering design process to realize the relationship between theory and practical application. Design challenges require students to implement problem solving strategies, creativity, and teamwork and are fully aligned to standard 8.2 for technology education, engineering, design, and computational thinking (programming). Emerging instructional technology such as video game design, circuitry



design and microcontroller computer programming are infused throughout all three grade levels.

Through cross curricular engineering and design challenges students will be posed problems and scenarios in which they will implement the engineering design process, while building upon Mathematics and English Language Arts skills aligned to the NJ State Learning Standards (NJSLs). Design challenges require students to implement problem solving strategies, creativity, and teamwork. All activities are designed for safe and effective use of tools, equipment, materials, processes, and techniques within the context of the human-designed world. All instructional activities are designed for safe and effective use of tools, equipment, materials, processes, and techniques within the context of the human-designed world.

PROGRAM GOALS

- The students will learn routines and procedures for safe computer operation.
- The students will learn the capabilities of the computer and how they can be helpful to us in a personal and educational manner.
- The students will become familiar with and use the components of the computer system which include the monitor, keyboard, hard drive, mouse and printer.
- Students will learn grade-level skills in keyboarding. Students will be familiarized with all key functions. Students will be able to enter and edit text.
- Students will learn grade-level skills in word processing and coding.
- Students will be able to navigate through menus to perform basic window operations.
- Students will acquire skills to design and create a multimedia presentation.
- Students will be able to enter and manipulate data.
- Students will acquire grade-level skills in order to explore the Internet.
- Students will demonstrate age-appropriate keyboarding speed and accuracy.
- Students will demonstrate the ability to solve the most common tech problems.
- Students will demonstrate use of tech tools outside of class.
- Students will differentiate between tech tools -- understanding how each is uniquely suited to a task, purpose, and audience.
- Students will be able to transfer knowledge of technology from known skills to unknown skills.
- Students will be able to transfer knowledge of technology from tech class to other classes and home.
- Students are overall good digital citizens



ALIGNMENT OF THE NEW JERSEY STUDENT LEARNING STANDARDS

The New Jersey Student Learning standards define the level of knowledge and skills that students should possess from their K-12 education. By achieving these standards, students will be prepared to enter college and training programs to join the workforce.

Standard 8.1 Computer Science: *Outlines a comprehensive set of concepts and skills, such as data and analysis, algorithms and programming, and computing systems. 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.*

Standard 8.2 Design Thinking: *This standard outlines the technological design concepts and skills essential for technological and engineering literacy. The new framework design, detailed previously, includes Engineering Design, Ethics and Culture, and the Effects of Technology on the Natural world among the disciplinary concepts. 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.*

The design of this version of the NJSLS – Computer Science and Design Thinking (NJSLS-CS&DT) is intended to:

- Promote the development of curricula and learning experiences that reflect the vision and mission of computer science and design thinking as stated in the beginning of this document; foster greater coherence and appropriate progressions across grade bands;
- Prioritize the important ideas and core processes that are central to computing and have lasting value beyond the classroom; and
- Reflect the habits of mind central to technology that lead to post-secondary success
- Reflect Standard 9.4 Life Literacies and Key Skills. This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.



ISTE STANDARDS FOR STUDENTS

1 Empowered Learner

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

[VIEW INDICATORS](#) 

2 Digital Citizen

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

[VIEW INDICATORS](#) 

3 Knowledge Constructor

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

[VIEW INDICATORS](#) 

4 Innovative Designer

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

[VIEW INDICATORS](#) 

5 Computational Thinker

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

[VIEW INDICATORS](#) 

6 Creative Communicator

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

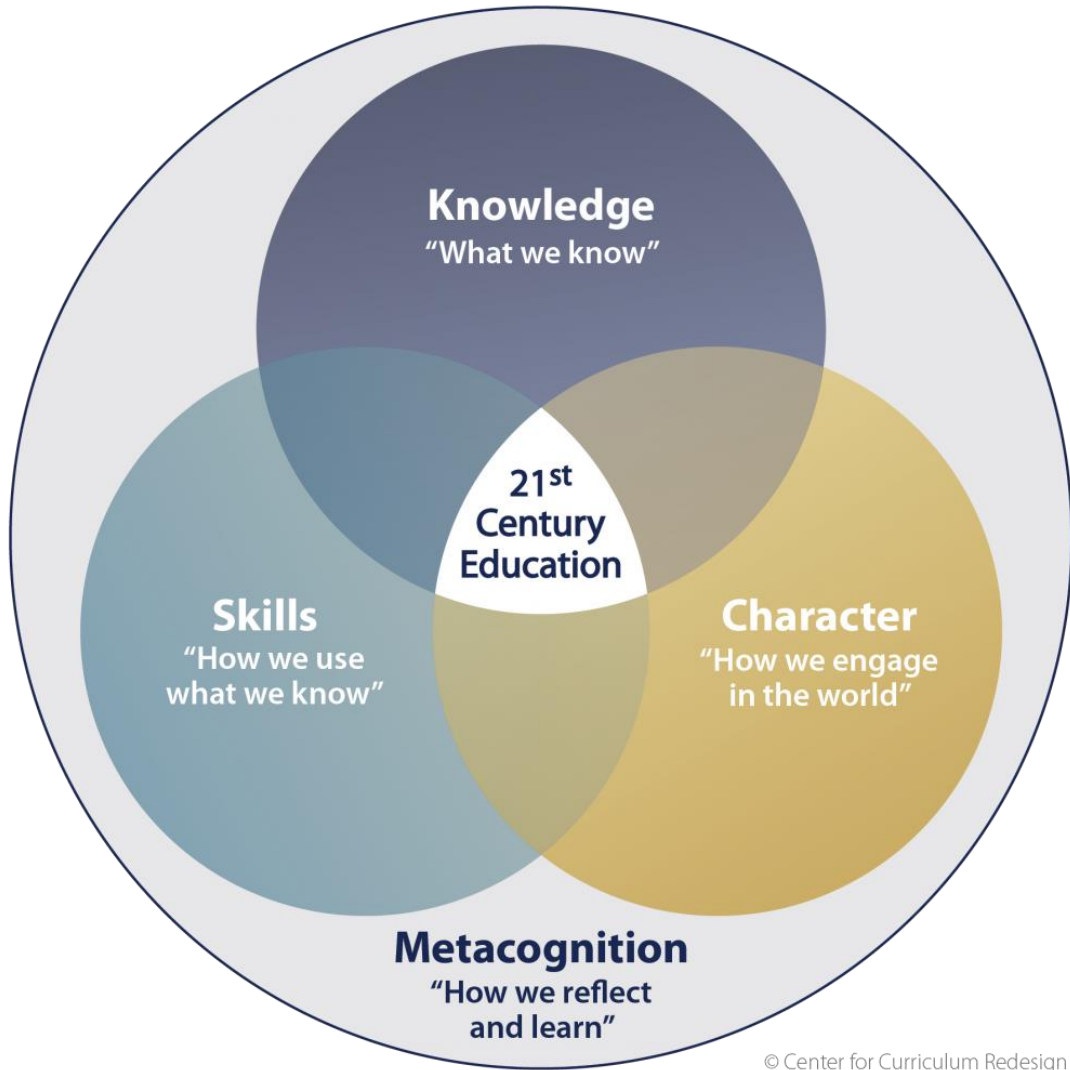
[VIEW INDICATORS](#) 

7 Global Collaborator

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

[VIEW INDICATORS](#) 





K-8 TECHNOLOGY CURRICULUM OVERVIEW

K-8 Scope and Sequence of Technology Skills: The technology integration lessons, google lesson plans and online resources that students use address a scope and sequence of technology skills for each grade level. Students are introduced to skills, develop skills and ultimately master specific technology skills.

Technology Skills Overview: I=Introduce D=Develop M=Master R=Reinforce

Technology Skills	K-2	3-5	6-8
Terminology and identification of key components 8.1,9.4	I	D-M	R
Review online safety rules 8.1, 9.4	I	D	M
Being a good citizen: Identify and combat cyber-bullying 8.1,8.2,9.4		I-D	M
Use a mouse to to run programs in the Windows/Chrome environment 8.1, 9.4	I-D	M	R
Coding using Blockly tutorials on Code.org 8.1, 8.2,9.4	I-D	M	R
Intermediate to advanced coding: Scratch, Java, Python 8.1,8.2, 9.4		I-D	M
Computer aided design using TinkerCAD 8.1,8.2,9.4		I-D	M
Practice proper keyboarding skills using Typing.com 8.1,9.4	I	D-M	M
Use a mouse in a point & click operating system 8.1, 9.4	I	D	M
Proper keyboarding skills with typing.com accounts 8.1,9.4	I	D	M
Log-on, open, name, and edit files from Google Drive 8.1,8.2,9.4		I-D	M
Google Docs: Basic skills/intermediate 8.1,9.4	I	D-M	R
G-Suite (Google Docs, Slides, Sheets,etc) 8.1,8.2,9.4		I-D	M
Internet researching and reporting 8.1, 9.4	I	D	M
Search for specific information, images, consider best sources 8.1,9.4	I	D-M	R
Complete research process with all Google applications 8.1,9.4		I-D	D-M
Students will properly cite sources of information obtained from the Internet 8.1,9.4		I-D	M-R
Create Google Slides presentation with simple research 8.1,9.4		I-D	M
Google Slides:Scholarly research with proper citation 8.1,9.4		I-D	D-M
Google Slides: Oral presentations with animations 8.1,9.4	I	D-M	R
Google Sheets: Basic skills, enter data, create graphs 8.1,9.4		I-D	M
Google Sheets: Intermediate skills, formulas and charts 8.1, 8.2, 9.4		I-D	M
Google Sites: Simple to complex websites 8.1,8.2, 9.4	I	D	M
Google classroom 8.1, 9.4	I	D	M
Collaboration research-based presentations 8.1, 8.2, 9.4	I	D	M
Simple PC trouble-shooting; check cables, reboot system 8.1, 9.4		I	D-M



Kindergarten Overview

The Kindergarten Computer Curriculum is a teacher-directed program that is designed to introduce our young students to the world of computer technology. Kindergarten is often the first formal introduction that students will have to technological hardware, applications, computer programming/coding and 21st century skills. A strong foundation with technological literacy will benefit all of the students at Garwood Public Schools with their core academic subjects and it will enable them to engage in the 4C's, Critical Thinking, Communication, Collaboration and Creativity. Students in Kindergarten will also be introduced to coding through the code.org platform. Computer Programming/Coding is a skillset that is rising in demand in all economic fields throughout the globe. There is a purposeful intent to immerse our Kindergarten students with computerized coding throughout the entire academic school year so that they may become viable candidates in tomorrow's technological work force. The program aims to lay a foundation for the computer/chromebook learning experience. Every student is introduced to their Chrome account and their individual IXL online learning account.

**The Course Content of the Kindergarten grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Kindergarten Objectives

1. Students will learn routines and procedures to safely use/care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way.
3. Students will become familiar with basic components of the computer system including the monitor, mouse, and keyboard.
4. Students will be introduced to grade-level skills through grade-level applications and software.
5. Students will locate and type letters and numbers.
6. Students will locate and utilize and important function keys including “Enter”, “Delete”, “Shift “, and “Space Bar” on the keyboard.
7. Students will be able to turn “smart toys” on and off.
8. Students will use technology terms in daily practice.

Evaluation

- Teacher Observation
- Student performance and class participation
- Checkpoints



First Grade Overview

The First Grade Computer Curriculum is a teacher-directed program. The classroom chromebooks are used for reinforcement and extension activities related to content areas. The program emphasized the importance of technology and how they can be meaningful in the classroom and in our daily lives. The program aims to lay a foundation for the computer learning experience.

**The Course Content of the First-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

First Grade Objectives

1. Students will learn routines and procedures to safely use/care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will become familiar with basic components of the computer system including the monitor, hard drive, printer, mouse, and keyboard.
4. Students will be able to Log On, Log Off, and Shut Down a computer/chromebook.
5. Students will become comfortable with typing with two hands in a proper typing position.
6. Students will locate and type letters and numbers.
7. Students will locate and utilize function keys including “Enter”, “Delete”, “Shift “, “Caps Lock”, and “Space Bar” on the keyboard. Students will edit documents using these function keys.
8. Students will explore typing using different sizes and styles of Font.
9. Students will be able to navigate within an application. These skills will include manipulating the Mouse while working with Menus, Commands, Icons, as per the application.
10. Students will be able to perform such commands as saving and printing a document.
11. Students will be introduced to grade-level skills through grade-level applications and software.
12. Students will use technology terms in daily practice.

Evaluation

- Teacher Observation
- Student performance and class participation
- Checkpoints
- Completed projects (Hard Copy and through Google Classroom)
- Verbal Expression
- Students ability to make judgment and selections applicable to objectives



Second Grade Overview

The Second Grade Computer Curriculum is a teacher-directed program. The classroom chromebooks are used for reinforcement and extension activities related to content areas. Second grade students that are enrolled in this course will fortify their understanding of technological hardware, applications, computer programming/coding and their 21st century skills to guarantee that they possess a solid foundation with regards to technological literacy. These students will increase their engagement and rigor with computer programming/coding. The program emphasizes the importance of computers/chromebooks and how they can be meaningful in the classroom and in our daily lives. The program aims to enhance and build on the foundation already laid out in Kindergarten and Grade 1.

**The Course Content of the Second-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Second Grade Objectives

1. Students will review routines and procedures to safely use/care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will review the basic components of the computer system including the monitor, hard drive, printer, mouse, and keyboard.
4. Students will be able to Log On, Log Off, and Shut Down a computer/chromebook.
5. Students will reinforce typing with two hands and sitting in a proper typing position.
6. Students will locate and type letters and numbers with increasing speed and accuracy.
7. Students will become more fluent when typing a document consisting of sentences, paragraphs, or a friendly letter.
8. Students will locate and utilize function keys including “Enter”, “Delete”, “Shift “, “Caps Lock”, and “Space Bar” on the keyboard. Students will be able to edit a document using these function keys.
9. Students will explore typing using different sizes and styles of Font.
10. Students will be able to navigate within an application. These skills will include manipulating the Mouse when working with Menus, Tool Bars, Commands, and Icons as per the application.
11. Students will be able to insert a picture using the “Insert” command and Clip Art within Microsoft Word and Google Docs.
12. Students will be able to perform such commands as saving, retrieving, and printing a document.
13. Students will be able to create a story using the appropriate grade-level software.
14. Students will be able to perform the commands of “Copy”, “Cut”, and “Paste”.
15. Students will be able to edit a document with teacher assistance.
16. Students will be introduced to the Internet, it’s importance and it’s value as a resource for many things including communication and research.



17. Students will learn rules and expectations when exploring the Internet.
18. Students will utilize appropriate Internet Browser.
19. Students will be introduced to varying grade-level skills through grade-level applications and software.
20. Students will use technology terms in daily practice.

Evaluation

- Teacher Observation
- Student performance and class participation
- Checkpoints
- Completed projects (Hard Copy and through Google Classroom)
- Verbal Expression
- Students ability to make judgment and selections applicable to objectives



Third Grade Overview

The Third Grade Computer Curriculum is a teacher-directed program. The classroom chromebooks are used for reinforcement and extension activities related to content areas. The program emphasizes the importance of computers/chromebooks and how they can be meaningful in a classroom and personal environment. Third grade students will begin to explore the internal structure of a computer system which includes central processors, memory, graphics cards, Google Classroom and data storage options. Students will also be introduced to the graphing options with spreadsheet tools, the production of digital presentations for different audiences, and email as a communication tool while maintaining a safe online presence. Throughout the entire year, students will continue to work on increasing their accuracy and speed when typing and will be taught computer coding. The program aims to enhance and build on the foundation already laid out in Grades Levels K-2.

**The Course Content of the Third-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Third Grade Objectives

1. Students will review routines and procedures to safely use/care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will review the basic components of the computer system including the monitor, hard drive, printer, mouse, and keyboard.
4. Students will discuss advantages and disadvantages of computer applications.
5. Students will be able to Log On, Log Off, and Shut Down a computer.
6. Students will reinforce typing with two hands and sitting in a proper typing position.
7. Students will locate and type letters and numbers with increasing speed and accuracy.
8. Students will become more fluent when typing a document including sentences, paragraphs, essays, reports, or a friendly letter. (Microsoft Word and Google Docs)
9. Students will locate and utilize function keys including “Enter”, “Delete”, “Shift“, “Caps Lock”, and “Space Bar” on the keyboard.
10. Students will explore typing using different sizes and styles of Font.
11. Students will be able to navigate within an application. These skills will include manipulating the Mouse when working with Menus, Tool Bars, Commands, and Icons as per the application.
12. Students will be able to insert a picture into a document.
13. Students will be able to perform such commands as saving, retrieving, and printing a document.
14. Students will be able to create a story using the appropriate grade-level software.
15. Students will be able to perform the commands of “Copy”, “Cut”, and “Paste”.
16. Students will be able to review, assess, and edit their own documents using appropriate tools and function keys.



17. Students will continue exploration of the Internet using the appropriate Internet Browser.
18. Students will review the importance of the Internet and its value as a resource for many things including communication and research.
19. Students will review rules and expectations when exploring the Internet.
20. Students will learn how a search engine can be effective when trying to narrow your search or locate a website.
21. Students will be introduced to varying grade-level skills through grade-level applications and software.

Evaluation

- Teacher Observation
- Student performance and class participation
- Checkpoints
- Completed projects (Hard Copy and through Google Classroom)
- Written and Verbal Expression
- Students ability to make judgment and selections applicable to objectives



Fourth Grade Overview

The Fourth Grade Computer Curriculum is a teacher-directed program. The students' chromebooks are used for reinforcement and extension activities related to content areas. The program emphasizes the importance of computers/chromebooks and how they can be meaningful in a classroom and personal environment. Fourth grade students will master basic technology skills such as word processing, spreadsheets and digital presentations. These students will also become proficient with computer programming / coding. Fourth Grade students will immerse themselves with the G-Suite educational platform to create collaborative documents. These students will begin to develop an understanding on how to use the internet as a research tool to find credible evidence for their core subject areas. These students will also begin to use the internet as a means to share their collective knowledge to the world. The program aims to enhance and build on the foundation already laid out in Grades Levels K-3.

**The Course Content of the Fourth-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Fourth Grade Objectives

1. Students will review routines and procedures to safely use/care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will review importance of safety and rules in the computer lab setting.
4. Students will discuss advantages and disadvantages of computer applications.
5. Students will review basic components of the computer system.
6. Students will use basic technology vocabulary.
7. Students will use the basic features of an operating system including accessing programs, saving and retrieving data, creating and maintaining files, selecting a printer to print a document, and finding help.
8. Students will be able to Log On, Log Off, and Shut Down a computer.
9. Students will type with increasing speed and accuracy.
10. Students will explore typing using different sizes and styles of Font.
11. Students will be able to navigate within an application. These skills will include manipulating the Mouse when working with Menus, Tool Bars, Commands, and Icons as per the application.
12. Students will be able to insert a picture into compliment a project or document.
13. Students will be able to perform basic word processing skills.
14. Students will be able to review, assess, and edit their own projects and documents using the appropriate tools and function keys.
15. Students will continue exploration of the Internet, review its importance and its value as a resource for many things including communication and research.
16. Students will access appropriate Internet Browser.



17. Students will review rules and expectations when exploring the Internet. Students will understand consequences to inappropriate usage including copyrighted materials, personal security, and safety issues.
18. Students become familiar with a search engine to narrow a search.
19. Students will produce and interpret a graph or chart by entering and editing data on a prepared spreadsheet template.
20. Students will use a graphic organizer.
21. Students will produce a basic Power Point/Google Slides Presentation.
22. Students will be introduced to varying grade-level skills through grade-level applications and software.
23. Students will determine the benefits of a wide range of digital tools by using them to solve problems.
24. Students will model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.

Evaluation

- Teacher Observation
- Student performance and class participation
- Checkpoints
- Completed projects (Hard Copy and through Google Classroom)
- Written and Verbal Expression
- Students ability to make judgment and selections applicable to objectives
- Cumulative Reviews



Fifth Grade Overview

The Fifth Grade Computer Curriculum is a teacher-directed program. The students' chromebooks are used for reinforcement and extension activities related to content areas. The program emphasizes the importance of technology and how they can be meaningful in a classroom and personal environment. Fifth-Grade students will immerse themselves with the G-Suite educational platform to create collaborative documents. The program aims to enhance and build on the foundation already laid out in Grades Levels K-4.

**The Course Content of the Fifth-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Fifth Grade Objectives

1. Students will review routines and procedures to safely use/care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will review importance of safety and rules in the computer lab setting.
4. Students will discuss advantages and disadvantages of computer applications.
5. Students will review basic components of the computer system.
6. Students will use appropriate technology vocabulary.
7. Students will use the basic features of an operating system including accessing programs, creating and maintaining folders, Saving and retrieving data, selecting a printer to print a document, and finding help.
8. Students will be able to Log On, Log Off, and Shut Down a computer.
9. Students will type with increasing speed and accuracy.
10. Students will explore typing using different sizes and styles of Font.
11. Students will be able to navigate within an application. These skills will include manipulating the Mouse when working with Menus, Tool Bars, Commands, and Icons as per the application.
12. Students will be able to perform majority of word processing skills.
13. Students will be able to insert a picture into compliment a project or document.
14. Students will produce and present a Power Point/Google Slide Presentation.
15. Students will create and present multimedia presentation using appropriate software.
16. Students will be able to review, assess, and edit their own documents using the appropriate tools and function keys.
17. Students will continue exploration of the Internet, review its importance and it's value as a resource for many things including communication and research.
18. Students will access appropriate Internet Browser.
19. Students will review rules and expectations when exploring the Internet. Students will understand consequences to inappropriate usage including copyrighted materials, personal security, and safety issues.



20. Students will examine ethical considerations in the development and production of a product from its inception through production, marketing, use, maintenance, and eventual disposal by consumers.
21. Students will use a search engine to narrow a search or locate a website.
22. Students will produce and interpret a graph or chart by entering and editing data on a prepared spreadsheet template.
23. Students will use a graphic organizer.
24. Students will be introduced to varying grade-level skills through grade-level applications and software.
25. Students will determine the benefits of a wide range of digital tools by using them to solve problems.
26. Students will model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.

Evaluation

- Teacher Observation
- Student performance and class participation
- Checkpoints
- Completed projects
- Written and Verbal Expression
- Students ability to make judgment and selections applicable to objectives
- Cumulative Reviews



Sixth Grade Overview

The Sixth Grade Computer Curriculum is a teacher-directed program. Emphasis is placed on the skills needed to manipulate data in a manner appropriate for a variety of word processing tasks. Students will practice a variety of formatting options enabling the students to employ these techniques in their academic classes. Additionally, keyboarding skills will be addressed to increase input of data. Internet usage will be explored through browser fundamentals and search engine protocols primarily focusing on procedures for practical searches. Sixth Grade students will immerse themselves with the G-Suite educational platform to create collaborative documents. Students in sixth grade will learn how to apply a variety of technology concepts in all of their academic and technological coursework. Middle school presents a progression of increasingly advanced skills and concepts with accommodations for differing levels of background knowledge. Online safety and 21st century skills are stressed throughout the year to enable students not only to be safe, but college and work ready as well. Computer Programming/Coding will also be a yearlong primary focus to prepare students to enter high school with the technology skills necessary to learn advanced programming techniques

**The Course Content of the Sixth-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Sixth Grade Objectives

1. Students will review routines and procedures to safely use/care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will discuss advantages and disadvantages of computer applications.
4. Students will demonstrate an understanding of how changes in the technology impact a workplace and society.
5. Students will use appropriate technology vocabulary.
6. Students will use the basic features of an operating system including accessing programs, creating and maintaining folders, saving and retrieving data, selecting a printer to print a document, and finding help.
7. Students will be able to navigate within an application. These skills will include manipulating the Mouse when working with Menus, Tool Bars, Commands, and Icons as per the application.
8. Students will be able to create a document using proficient word processing skills.
9. Students will demonstrate effective input of text and data; using proper technique of touch keyboarding.
10. Students will produce and interpret a graph or chart by entering and editing data on a prepared spreadsheet template.
11. Students will create and present multimedia presentation using appropriate software.
12. Students will be able to review, assess, and edit their own documents using the



- appropriate tools and function keys.
13. Students will choose an electronic graphic organizer to construct a document.
 14. Students will continue exploration of the Internet, review its importance and its value as a resource for many things including communication and research.
 15. Students will access appropriate Internet Browser.
 16. Students will understand purpose and importance of Acceptable Use Policy when using the Internet.
 17. Students will review rules and expectations when exploring the Internet. Students will understand consequences to inappropriate usage including copyrighted materials, personal security, and safety issues.
 18. Students will examine ethical considerations in the development and production of a product from its inception through production, marketing, use, maintenance, and eventual disposal by consumers.
 19. Students will use appropriate tools including but not limited to search engines, databases, and subject directories. These tools will be used to support research and solve real world problems.
 20. Students will be introduced to varying grade-level skills through grade-level applications and software.
 21. Students will determine the benefits of a wide range of digital tools by using them to solve problems.
 22. Students will model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.

Evaluation

- Tests
- Quizzes
- Completed Assignments
- Class Work
- Cumulative Reviews
- Teacher Observation
- Student performance and class participation



Seventh Grade Overview

The Seventh Grade Computer Curriculum is a teacher-directed program. Emphasis is placed on the skills needed to manipulate data in a manner appropriate for a variety of word processing tasks. Students will practice a variety of formatting options enabling the students to employ these techniques in their academic classes. Students in sixth-seventh grade have the ability to understand a variety of technology concepts. Middle school presents a progression of increasingly advanced skills and concepts with accommodations for differing levels of background knowledge. Online safety and 21st century skills are taught throughout the middle school curriculum to enable students to be safe, and college and work ready. For those students already familiar with technology, the first year should be a year of reviewing and mastering computer hardware and software skills. Seventh-grade students will immerse themselves with the G-Suite educational platform to create collaborative documents. Students leave 7th grade with technology literacy skills ready for high school and prepared for college and career. Additionally, keyboarding skills will be addressed to increase input of data. Internet usage will be explored through browser fundamentals and search engine protocols primarily focusing on procedures for practical searches.

**The Course Content of the Seventh-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Seventh Grade Objectives

1. Students will review routines and procedures to safely use/ care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will examine ethical considerations in the development and production of a product from its inception through production, marketing, use, maintenance, and eventual disposal by consumers.
4. Students will discuss advantages and disadvantages of computer applications.
5. Students will demonstrate an understanding of how changes in the technology impact a workplace and society.
6. Students will use appropriate technology vocabulary.
7. Students will use the basic features of an operating system including accessing programs, creating and maintaining folders, saving and retrieving data, selecting a printer to print a document, and finding help.
8. Students will be able to navigate within an application. These skills will include manipulating the Mouse when working with Menus, Tool Bars, Commands, and Icons as per the application.
9. Students will be able to create a document using proficient word processing skills.
10. Students will improve ability to input data by increasing speed and accuracy of keyboarding skills.
11. Students will produce and interpret a graph or chart by entering and editing data on a



- prepared spreadsheet template.
12. Students will understand importance of a spreadsheet.
 13. Students will construct a spreadsheet, input and manipulate data. They will become familiar with formatting techniques.
 14. Students will display data through use of graphics integrated into the spreadsheet software. They will be familiar with a variety of graphics and their characteristics.
 15. Students will be able to review, assess, and edit their own documents using the appropriate tools and function keys.
 16. Students will choose an electronic graphic organizer to construct a document.
 17. Students will plan and create a simple database, define fields, input data, and produce a report using sort and query.
 18. Students will be able to identify and solve basic hardware problems.
 19. Students will continue exploration of the Internet, review its importance and its value as a resource for many things including communication and research.
 20. Students will access appropriate Internet Browser.
 21. Students will understand purpose and importance of Acceptable Use Policy when using the Internet.
 22. Students will review rules and expectations when exploring the Internet. Students will understand consequences to inappropriate usage including copyrighted materials, personal security, and safety issues.
 23. Students will use appropriate tools including, but not limited to, search engines, databases, and subject directories. These tools will be used to support research and solve real world problems.
 24. Students will be introduced to varying grade-level skills through grade-level applications and software.
 25. Students will determine the benefits of a wide range of digital tools by using them to solve problems.
 26. Students will model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.

Evaluation

- Tests
- Quizzes
- Completed Assignments
- Class Work
- Timed Writings
- Cumulative Reviews
- Teacher Observation
- Student performance and class participation



Eighth Grade Overview

The Eighth Grade Computer Curriculum is a teacher-directed program. Emphasis is placed on the skills needed to manipulate data in a manner appropriate for a variety of word processing tasks. Students will practice a variety of formatting options enabling the students to employ these techniques in their academic classes. Additionally, keyboarding skills will be addressed to increase input of data. Internet usage will be explored through browser fundamentals and search engine protocols primarily focusing on procedures for practical searches. Eighth Grade students will immerse themselves with the G-Suite educational platform to create collaborative documents. The students will also learn to program computers using coding. They will learn to use the advanced functions of loops, events, conditionals and the societal impacts of computing on the internet. The course will culminate in a capstone project that the students will share with their peers and family members

**The Course Content of the Eighth-Grade level is meant to be modified through varying techniques, strategies, and materials, as per students needs and abilities as assessed by the classroom teacher and by the computers and operating systems available for use by the students.*

Eighth Grade Objectives

1. Students will review routines and procedures to safely use/ care for their chromebook.
2. Students will understand the capabilities of the computer and how it could be used in a meaningful way on an educational and personal level.
3. Students will discuss advantages and disadvantages of computer applications.
4. Students will demonstrate an understanding of how changes in the technology impact a workplace and society.
5. Students will use appropriate technology vocabulary.
6. Students will use the basic features of an operating system including accessing programs, creating and maintaining folders, saving and retrieving data, selecting a printer to print a document, and finding help.
7. Students will be able to navigate within an application. These skills will include manipulating the Mouse when working with Menus, Tool Bars, Commands, and Icons as per the application.
8. Students will be able to create a document using advanced text-formatting and graphics using word processing.
9. Students will improve ability to input and access data and text efficiently and accurately through proficient use of the keyboard and mouse.
10. Students will produce and interpret a graph or chart by entering and editing data on a prepared spreadsheet template.
11. Students will construct a spreadsheet, enter data, and interpret the information.
12. Students will display data through use of graphics integrated into the spreadsheet software. They will be familiar with a variety of graphics and their characteristics.
13. Students will be able to review, assess, and edit their own documents using the appropriate tools and function keys.



14. Students will choose an electronic graphic organizer to construct a document.
15. Students will produce multimedia slides and organize those slides into an effective presentation. Students will be able to incorporate a wide range of special effects in the presentation.
16. Students will plan and create a simple database, define fields, input data, and produce a report using sort and query.
17. Students will be able to identify and solve basic hardware problems.
18. Students will continue exploration of the Internet, review its importance and its value as a resource for many things including communication and research.
19. Students will access appropriate Internet Browser.
20. Students will understand purpose and importance of Acceptable Use Policy when using the Internet.
21. Students will review rules and expectations when exploring the Internet. Students will understand consequences for inappropriate usage including copyrighted materials, personal security, and safety issues.
22. Students will use appropriate tools including, but not limited to, search engines, databases, and subject directories. These tools will be used to support research and solve real world problems.
23. Students will create and manipulate shortcuts.
24. Students will be introduced to varying grade-level skills through grade-level applications and software.
25. Students will determine the benefits of a wide range of digital tools by using them to solve problems.
26. Students will model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics.

Evaluation

- Tests
- Quizzes
- Completed Assignments
- Class Work
- Cumulative Reviews
- Teacher Observation
- Student performance and class participation



References

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