COMMONWEALTH OF THE BAHAMAS

MINISTRY OF EDUCATION
&
TECHNICAL & VOCATIONAL TRAINING

PRIMARY COMPUTER STUDIES CURRICULUM GUIDELINES

GRADES 4 - 6

2022-2027

PREFACE

In our globalized environment, education has taken on a new focus. The increasingly digitized and automated society is dependent on knowledge and understanding of digital systems and confidence in how to manage changes. Digital systems such as mobile and desktop devices and the Internet are transforming learning, recreational activities, home life, and work. These devices support new ways of communicating, collaborating, and developing new skills such as computational thinking. Computer studies is an essential toolset in our ever-evolving society.

The Bahamas Primary Computer Studies curriculum empowers students to engage in change by influencing how current and emerging technologies and practices are used to meet current and future needs. Computer studies provide students with practical opportunities to become global collaborators, innovative designers, knowledge constructors, and creative communicators.

To aid in developing the curriculum's framework, the committee reviewed curriculum documents generated in various jurisdictions. These countries included the United Kingdom, the United States of America, Canada, Australia, India, and The Bahamas. The documents from these countries were examined to determine the format used for the Scope and Sequence and Scope of Work.

The curriculum is intended to be utilized by elementary teachers throughout The Commonwealth of The Bahamas as a framework for developing engaging and meaningful learning experiences. It includes standards, objectives, targeted skills, course content, suggested activities, enduring understandings, and assessment methods. The aim is to provide standardized instruction in technology to all primary students and to ensure students are exposed to foundational technology concepts that can be reinforced and extended upon entering junior high school.

As the world of technology is constantly changing, Computer studies must stay aligned with its advancement. A timespan of five (5) years has been allotted for this document, with updates rendered yearly to keep up to date with advancing technologies and our rapidly evolving society.

Learning in the 21st century has seen a significant shift, much of it due to the rapid innovations in the development of technology. It is anticipated that this curriculum will meet the educational and social-emotional needs of all students while also developing technological competency to meet international educational standards.

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The Department of Education is grateful for the commitment, dedication, efficiency, and professionalism of the following persons who have made this achievement possible:

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MINISTRY OF EDUCATION
VISION AND MISSION STATEMENTS

VISION

Our vision is for a Bahamian education system that will foster academic excellence and equip students with multiple literacies that will enable them to make meaningful contributions as nation builders who are globally competitive.

MISSION

The mission of the Department and Ministry of Education is to provide all persons in The Bahamas an opportunity to receive a quality education that will equip them with the necessary beliefs, knowledge, attitudes, and skills required for life, both in a democratic society guided by Christian values and in an interdependent and changing world.

BELIEF STATEMENTS

We believe that:

1. The learning environment should be student-centered;
2. At each grade level students should acquire specific skills to prepare them for the succeeding grade level;
3. All students should have equal opportunity to learn based on their needs, interests and abilities;
4. Students should have opportunities to question, analyze, reason and make decisions as well as to develop self-confidence and greater freedom of expression;
5. All students should acquire essential survival skills enabling them to function well in society;
6. Technology should be integrated into content and instruction;
7. Content should be culturally relevant while still allowing a global perspective;
8. The methods used for assessing achievement should reflect the teaching and learning strategies employed in the curriculum;
9. Student success is integrally linked to parental involvement and community support;
10. All students should develop a perception of technology as a tool for innovation, creativity, productivity, and discovery;
11. Computer studies prepare students to be lifelong learners who are responsible for their own learning, skilled in accessing and processing information, and confident in using technological tools.

PROFILE OF THE IDEAL GRADUATE

The principal objective of the Bahamian education system is to develop productive citizens capable of caring for themselves and contributing positively to the national development process. Based on its consultation with stakeholders, the Ministry of Education has developed a profile for the ideal graduate. Among other qualities, the ideal graduate should:

- ✓ possess relevant knowledge in core disciplines/learning areas to be functionally literate;
- ✓ think critically, be an innovative problem solver and show initiative;
- ✓ demonstrate creativity and innovation;
- ✓ communicate effectively and collaborate willingly;
- ✓ demonstrate flexibility and adaptability;
- ✓ utilize social skills effectively;
- ✓ appreciate Bahamian culture and utilize the appropriate cultural skills;
- ✓ work productively and diligently with high level competency;
- ✓ guide and inspire others to do their best;
- ✓ have an appropriate awareness of the forces that shape and influence his/her life and surroundings;
- ✓ exhibit civic responsibility and display behaviours that benefit the wider community;
- ✓ appreciate his/her role in and responsibility to the local community, The Bahamas, the Caribbean Region, the Commonwealth of Nations and the world;
- ✓ demonstrate integrity and ethical behaviour at all times;
- ✓ possess digital literacy, appreciate the role of technology and innovation in national development;
- ✓ display skills and competencies that reflect career and college readiness;
- ✓ possess ability to work effectively in teams; and
- ✓ embrace his/her role as an environmental steward.

Adapted from: the Ministry of Education's ***Shared Vision for Education 2030***

RATIONALE

Computers are becoming an integral part of our lives in today's global and technological world. As we interact with technology every day, it is prudent that primary students learn about it. All students should be made aware of the possibilities that technology offers and the value it can have on their education. Research has shown that technology can enhance the teaching and learning process and aid in developing life-long skills. With many occupations requiring applicants to have at least a basic knowledge of computers, the demand for learners to be technologically literate is becoming painstakingly evident. Consequently, the primary goal of this curriculum is to foster critical thinking and problem-solving skills that comprise the foundations of computer studies.

The effective use of technology in education has achieved tremendous success in keeping students motivated and engaged in the learning process. It is desired that the computer studies curriculum is interconnected with various subject disciplines while exposing our students to new and exciting technological innovations. We seek to inspire and motivate students to pursue excellence in all academic endeavors and develop appropriate attitudes, values, and behaviors that will augment our Bahamian culture; as they keep abreast of new trends and technologies available in education.

We will continue to strive to advance our pedagogic approach and the resource tools utilized. We endeavor to prepare our students to work, live, and compete in a technologically demanding society. This necessitates the development of a computer curriculum that will prepare our students with the most promising strategies possible, providing them with the requisite knowledge and skills to facilitate their overall academic development and growth. Thus, the overall aim of this curriculum is to motivate, inspire, stimulate, and generate excitement for technology in education, which will hopefully endure throughout the student's academic life.

The Primary Computer Studies Curriculum is in alignment with the International Society for Technology Education (ISTE), which highlights the broad areas of technology. Listed below are components from the curriculum that support progressing from using technology to learn to transformative learning with technology:

- Support of technology and shared knowledge to enhance the teaching and learning of computer studies
- Develop and empower innovative learners
- Encourage collaboration and digital citizenship
- Develop computational thinkers
- Influence creative digital communicators

DEFINITION OF CURRICULUM TERMS

This document comprises several components, below is a brief description of each.

Assessment	The process through which the progress and achievements of a learner or learners is measured or judged in compliance with specific quality criteria.
Benchmarks	A reference point or standard against which performance or achievements can be assessed.
Content	The topics, themes, beliefs, behaviours, concepts and facts, often grouped within each subject or learning area under knowledge, skills, values and attitudes that are expected to be learned and form the basis of teaching and learning.
Differentiated Instruction	An approach to teaching that involves offering several different learning experiences and proactively addressing students' varied needs to maximize learning opportunities for each student in the classroom. It requires teachers to be flexible in their approach and adjust the curriculum and presentation of information to learners of different abilities.
Overarching Goal	Defines the ultimate outcome of learning and outlines the intended purpose of the curriculum document.
Pacing Guide	Shows the sequence of topics and estimated length of time that should be spent on each topic.
Project-based Learning	A process that fosters learners' engagement in studying authentic problems or issues centered on a particular project, theme, or idea.
Scope and Sequence	Interrelated concepts that refer to the overall organization of the curriculum in order to ensure its coherence and continuity. Scope refers to the breadth and depth of content and skills to be covered. Sequence refers to how these skills and content are ordered and presented to learners over time.
Scope of Work	Provides the basic content that should be included in lessons along with suggested activities, assessments and resources.

Skill	It is the ability, proficiency or dexterity to carry out tasks that come from education, training, practice or experience.
Sub-Goals	They form the major contextual framework for instruction.
Standards	A standard is a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose. Content standards refer to what learners are expected to know and be able to do in various subject areas. Performance standards specify what levels of learning are expected and assess the degree to which content standards have been met.

DEFINITION OF STRANDS

Today's students must be prepared to thrive in a constantly evolving technological world. The International Society for Technology in Education (ISTE) Standards for Students are designed to amplify student voice and ensure that learning is a student-driven process.

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

OVERARCHING GOAL

Students will use technology to educate, inspire, and cultivate the technical skills and competencies required to function in an evolving society effectively. They will also demonstrate mastery of the technological skills and concepts fostered through student-centered learning environments and project-based learning; while integrating classroom experiences with real-life situations.

SUB-GOALS

The computer studies program, as outlined in the curriculum guidelines, requires that all students in The Bahamas achieve the following:

1. Students engage in positive, safe, legal, and ethical behavior when using technology, including social interactions online or when using networked devices.

2. Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

3. Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

4. Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models, or simulations

5. Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

We intend that teachers and parents use this curriculum to guide their teaching of technology skills, supplementing it with activities, textbooks, and other sources to help our students attain the goals that are outlined within the curriculum.

BENCHMARKS

By the end of grade 6, all students should know and be able to perform the following:

- Students identify types of technology tools and resources best able to assist them in their learning and justify the rationale for their selection.
- Students set personal learning goals and use online tools to share and reflect on their learning.
- Students participate in school-approved online groups to support learning (e.g., online discussion boards through a Learning Management System).
- Students use interactive digital tools to create online polls or surveys to gather data to help guide and assess information during the learning process.
- Students comment on writing projects using online tools (e.g., blogs, online discussions, comments on live documents, etc.).
- Using knowledge about target audiences, students create digital presentations that provide opportunities for audience participation and feedback.
- Students solicit feedback for their ideas using digital tools.
- Students use a variety of devices (e.g., mobile devices and computers) to support planning, implementing, and reflecting upon a defined task.
- Students apply their knowledge and skills from existing technologies and devices to successfully use new technologies.
- Students develop criteria for selecting digital learning tools and resources to accomplish a defined task.
- Students from a variety of backgrounds are able to use digital technologies with fluency and ease.
- Students participate in class discussions about media literacy and online safety.
- Students demonstrate knowledge of core concepts and key questions of media literacy.
- Students demonstrate knowledge of when to share personal information.
- Students identify the differences between ethical and unethical online and digital use behavior.
- Students identify the consequences of unethical uses of technology.
- Students know that what goes online is never completely erased and can be easily replicated and reused for unintended purposes.
- Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
- Students create simple computational codes to respond to simple commands.
- Create algorithms (a series of ordered steps) to solve a problem.
- Students use computational thinking (e.g., step-by-step thinking or directions) to solve problems and make decisions.

HOW TO USE THIS GUIDE

This curriculum is created as a guide and should not be followed indiscriminately but used as an outline to create a program of study for each grade level. Teachers and school districts should use this curriculum as a starting point to develop lesson plans, exercises, and assessments that support each stated objective and that will best suit their students.

In the Scope and Sequence, there are acronyms to advise teachers when a skill is to be introduced (I), reinforced (R), or maintained (M). Proficiency is achieved if students comprehend skills and concepts with at least 56% accuracy, as stipulated by the Department of Education.

Following the Scope and Sequence is a suggested pacing guide for each grade level. The pacing guide assists teachers in planning for the year to include all the content necessary for meeting the standards in teaching computer studies.

Although each topic is presented independently, many are interdependent and require integration with the content of other topics or subjects. Teachers are encouraged to link topics as appropriate and present topics in an order, speed, and depth that meet the needs of their students, while giving equal emphasis to all concepts and skills. There are unlimited combinations, and each teacher should put together lessons that allow students to make sense of the material presented.

If students attain the learning objectives in the time frame given, then move on. If not, move on and use other avenues in the document to allow students to acquire the knowledge and skills.

In this document, each topic of study is distinguished by a color for ease of viewing. Please see the Topic Key below. In this document, each topic of study is distinguished by a color for ease of viewing. Please see the Topic Key below.

TOPIC KEY

- Technology Safety and Communications
- Computing Fundamentals
- Computational Thinking and Coding
- Keyboarding and Word Processing
- Multimedia and Graphics
- Spreadsheets

As a digital resource, the curriculum has links embedded throughout for additional resources and student activities.

BEST PRACTICES IN COMPUTER STUDIES

There is no concrete definition of a best practice when it comes to technology; it depends on where you work, who your students are, and many other variables. In this guide, the term 'best practices' refers not to the use of technology but its effective application.

The ISTE Standards provide the competencies for learning, teaching, and leading in the digital age, providing a comprehensive roadmap for the effective use of technology in schools worldwide. Grounded in learning science research and based on practitioner experience, the ISTE Standards ensure that using technology for learning can create high-impact, sustainable, scalable, and equitable learning experiences for all learners.

ISTE Standards are used around the world as policy and implementation guides. The ISTE Standards aim to develop educators' digital literacies and pedagogical practices that harness technology for learning (International Society for Technology in Education, 2022).

Some suggested practices include:

- Using project-based learning activities
- Incorporating game-based learning activities
- Including interactive whiteboards with student response systems
- Integrating virtual tours, simulations, and web-based exploration
- Student-created videos, podcasts, slideshows, blogs, and more
- Collaborative online tools
- Instructional materials presented in a visual format
- Providing adequate and timely feedback
- Allowing student choice
- Student Self-Assessment
- Peer Assessment
- Scaffold learners' use of the Internet, social networking, and new media
- Linking to student's prior knowledge
- Use of cooperative learning strategies
- Opportunities to discover and invent new knowledge in technology
- Whole class discussion
- Emphasizing the real-life relevance of information technology
- Revision of the instructional plan based on student progress
- Drawing on students' discovery and creativity to keep them motivated

ASSESSMENT STRATEGIES

Assessment should support the learning of information technology, provide useful information to both teachers and students, and should be more than a test at the end of instruction to gauge learning. It should be a part of instruction that guides teachers and enhances students' learning. Therefore, teachers should continuously gather information about their students through questions, interviews, writing tasks, and other means. Teachers can make sound decisions about reviewing materials, re-teaching a difficult concept, and providing additional material for students who are struggling or need enrichment.

Assessment is the standardized process of measuring students' performance to gather information for future use and should focus on understanding as well as procedural skills. For students to excel, they must be exposed to all the content areas across each strand of the computer studies curriculum.

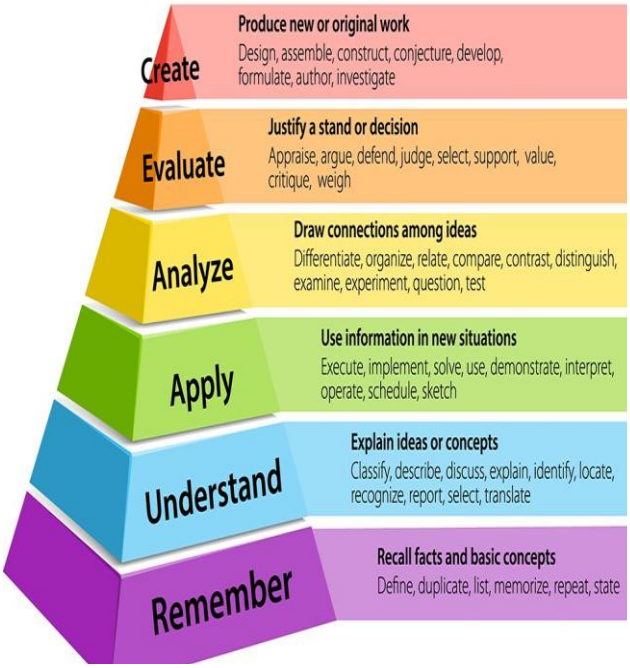
Students must become confident in their ability to apply the skills across all the cognitive levels of learning. Alexander Bloom (1956) identified six levels within the cognitive domain, which must be acquired if students are going to fully develop their critical thinking skills. These levels range from remembering facts, at the lowest level to creating material which is the highest level of the taxonomy. These levels range from remembering facts as the lowest level to
creating material as the highest level (Exhibit 1).

Over the years, these levels have been translated into digital environments, providing greater scope for the effective integration of technology. Bloom's Digital Taxonomy was devised by Andrew Churches and focuses on the use of 'power verbs' in teaching and learning with technology (Exhibit 2).

As computer studies is a practical field, assessments should allow for students to create products to demonstrate their skills and knowledge of concepts. Evaluations of these products can be done through self-assessment, peer assessment, or teacher assessment. Whichever method is chosen, ensure that rubrics are provided to guide the evaluation process.

To view a wide range of technology-based rubrics, click here:
https://www.schrockguide.net/assessment-and-rubrics.html

Exhibit 1 – Bloom's Revised Taxonomy



https://hub.verasana.com/newsroom/blooms-taxonomy-as-a-guide-for-learning-objectives

Exhibit 2 – Bloom's Digital Taxonomy

http://www.globaldigitalcitizen.org

STRATEGIES FOR TEACHING EXCEPTIONAL LEARNERS

Within this curriculum, there is room for learning based on students' individual needs. The word differentiation is a crucial, wide-ranging aspect in terms of exceptional education and for its association with students who struggle.

All students may need some type of differentiation assigned to their individual learning based on their unique circumstances; like the gifted student, the student whose work is never perfect enough, the bored student, or the one who overthinks. These are all examples of exceptional learners.

When educators value all modes of diversity encountered in the educational setting to teach students who are remarkably gifted with students who are academically challenged and those with a specific need, the stage is set for social-emotional and academic success.

Below are some strategies for exceptional learners in the computer studies classroom.

- Use of choice boards allows students to select the best method to convey their learning and understanding.
- Use of pre-recorded lessons allows students to view and learn at their own pace.
- Use of spell checking and grammatical tools allows students who struggle with written communication to be independent.
- Use of text-to-speech, magnification, and augmentative communication tools allows students with handicaps to engage in activities and whole group discussions.

Other strategies include:

- Cooperative learning
- Project-based learning
- Gamification
- Peer Teaching
- Additional time to complete tasks
- Timely feedback

The Commonwealth of The Bahamas

Ministry of Education

Scope and Sequence

Primary Computer Studies

Grades 4 - 6

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE AND SEQUENCE
TECHNOLOGY SAFETY AND COMMUNICATION

Sub-Goal 1: Students engage in positive, safe, legal, and ethical behavior when using technology, including social interactions online or when using networked devices.

Key: I = Introduce | R = Reinforce | M = Maintain

Objectives		Grade 4	Grade 5	Grade 6
1.1	Demonstrate proper use and care of devices and classroom rules.	I	R	R/M
1.2	Compare and contrast internet browsers and search engines.	I	R	R/M
1.3	Explain the appropriate use of communications tools such as email, discussion forums, and video conferencing.	I	R	R/M
1.4	Describe digital citizenship and potential risks and dangers.	I	R	R/M
1.5	Define cyberbullying.	I	R	R/M
1.6	List the effects of cyberbullying, and strategies in preventing it.	I	R	R/M
1.7	Create a project integrating best technology and online communications tools.	I	R	R/M

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE AND SEQUENCE
COMPUTING FUNDAMENTALS

Sub-Goal 2: Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Key: I = Introduce | R = Reinforce | M = Maintain

Objectives		Grade 4	Grade 5	Grade 6
2.1	Describe digital devices	I	R	M
2.2	Classify hardware components	I	R	M
2.3	Explain how a computer works	I	R	M
2.4	Compare software and their uses	I	R	M
2.5	Examine technology symbols and their functions	I	R	M
2.6	Evaluate cloud computing	I	R	M

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE AND SEQUENCE
COMPUTATIONAL THINKING AND CODING

Sub-Goal 5: Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

Key: I = Introduce | R = Reinforce | M = Maintain

Objectives		Grade 4	Grade 5	Grade 6
5.1	Define coding and programming	I	R/M	
5.2	Describe computational thinking	I	R/M	
5.3	Define and identify algorithms	I	R/M	
5.4	Demonstrate knowledge of the Scratch interface	I	R	M
5.5	Analyze the roles of sequences, events, loops, and conditions	I	R	M
5.6	Design and build robots			I

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE AND SEQUENCE
KEYBOARDING AND WORD PROCESSING

Sub-Goal 3: Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

Key: I = Introduce | R = Reinforce | M = Maintain

Objectives		Grade 4	Grade 5	Grade 6
3.1	Define keyboarding and label the parts of the keyboard.	I	R	R/M
3.2	Demonstrate proper keyboarding posture.	I	R	R/M
3.3	Demonstrate correct finger placement and reach techniques.	I	R	R/M
3.4	Identify and use special keys.	I	R	R/M
3.5	Perform basic touch-typing techniques.	I	R	R/M
3.6	Define the term word processing.	I	R	R/M
3.7	Identify the features of the Word interface.	I	R	R/M

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE AND SEQUENCE
GRAPHICS AND MULTIMEDIA

Sub-Goal 4: Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models, or simulations.

Key: I = Introduce | R = Reinforce | M = Maintain

Objectives		Grade 4	Grade 5	Grade 6
4.1	Define graphics and multimedia		I	R/M
4.2	Explain the use of presentation software		I	R/M
4.3	Explain PowerPoint		I	R/M
4.4	Identify the features of the PowerPoint interface		I	R/M
4.5	Name the various slide layouts		I	R/M
4.6	Create a title slide and format text		I	R/M
4.7	Insert and format new slides adding texts and graphics		I	R/M
4.8	Add animation to text and graphics		I	R/M
4.9	Preview, save, print, and deliver a presentation		I	R/M

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE AND SEQUENCE
SPREADSHEETS

Sub-Goal 6: Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

Key: I = Introduce | R = Reinforce | M = Maintain

Objectives		Grade 4	Grade 5	Grade 6
6.1	Explain the use of the Excel program	I	R	R/M
6.2	Demonstrate opening and closing a workbook and worksheet	I	R	R/M
6.3	Identify the parts and features of a worksheet	I	R	R/M
6.4	Navigate within a worksheet and enter different types of data	I	R	R/M
6.5	Create a blank worksheet or use a template to enter data	I	R	R/M
6.6	Format, save, and print a worksheet	I	R	R/M
6.7	Perform simple calculations using formulas and the SUM function		I	R/M
6.8	Create a simple chart with worksheet data		I	R/M

Primary Computer Studies

Pacing Guide

Grades 4 - 6

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
PACING GUIDE
GRADE 4

WEEK	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
CHRISTMAS TERM						
1	Digital Citizen	Technology Safety and Communications	4.1.1	Demonstrate proper use and care of devices and classroom rules.	34	30 Minutes
2			4.1.2	Compare and contrast Internet browsers and search engines.	39	
3			4.1.3	Explain the appropriate use of communications tools email, discussion forums, and video conference.	41	
			4.1.4	Describe digital citizenship and potential risks and dangers.	45	
4			4.1.5	Define cyberbullying.	43	
5			4.1.6	List the effects of cyberbullying and strategies in preventing it.	44	
7			4.1.7	Create a project integrating best technology and online communications tools.	46	
8	Empowered Learner	Computing Fundamentals	4.2.1a	Describe a computer.	47	
9			4.2.1b	Name types of personal computers.	48	
10			4.2.1c	Identify digital devices and their parts.	50	
			4.2.1d	Demonstrate the proper way to use a pointer device.	51	
11			4.2.2a	Define the term hardware.	52	
12			4.2.2b	Classify hardware components.	53	
13			4.2.3	Explain how a computer works.	55	
14			4.2.4	Compare software and their uses.	56	
15			4.2.5a	Relate technology symbols with their functions.	57	
16			4.2.5b	Examine technology symbols and their functions	58	
CHRISTMAS BREAK						

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
PACING GUIDE
GRADE 4

WEEK	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
EASTER TERM						
17	Empowered Learner	Computing Fundamentals	4.2.6a	Explain cloud computing.	59	30 Minutes
18			4.2.6b	Model how to cloud compute.	60	
		Computational Thinking and Coding	4.5.1	Define coding and programming	61	
			4.5.2a	Describe computational thinking.	63	
			4.5.2b	Explain modeling	64	
			4.5.3	Define and identify algorithms	65	
			4.5.4	Demonstrate knowledge of the Scratch interface	66	
			4.5.5a	Use sequences to create an algorithm	68	
			4.5.5b	Identify events.	69	
			4.5.5c	Demonstrate loops	71	
19		Keyboarding and Word Processing	4.3.1	Define keyboarding and label the parts of the keyboard.	73	
20			4.3.2	Demonstrate proper keyboarding posture.	74	
21			4.3.3	Demonstrate correct finger placement and reach techniques.	75	
22			4.3.4	Identify and use special keys.	77	
23			4.3.5	Perform basic touch-typing techniques.	79	
24			4.3.6	Define the term word processing.	81	
25			4.3.7	Identify the features of the Word interface.	82	
EASTER BREAK						

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PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
PACING GUIDE
GRADE 4

WEEK	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
SUMMER TERM						
35		Spreadsheets	4.6.1	Explain the use of the Excel program, spreadsheet, and basic terminology	84	
36			4.6.2	Demonstrate opening and closing a workbook and worksheet	85	
37			4.6.3	Identify the parts and features of a worksheet	86	
38			4.6.4	Navigate within a worksheet and enter different types of data	87	
39			4.6.5	Create a new blank worksheet or use a template and perform basic calculations	88	
40			4.6.6	Format, save, and print a worksheet	89	
SUMMER BREAK						

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WEEK	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
CHRISTMAS TERM						
1	Digital Citizen	Technology Safety and Communications	5.1.1	Demonstrate proper use and care of devices and classroom rules.	91	30 Minutes
2			5.1.2	Compare and contrast Internet browsers and search engines.	95	
3			5.1.3	Explain the appropriate use of communications tools - email, discussion forums, and video conference.	97	
			5.1.4	Describe digital citizenship and potential risks and dangers.	101	
4			5.1.5	Define cyberbullying.	99	
5			5.1.6	List the effects of cyberbullying and strategies in preventing it.	100	
7			5.1.7	Create a project integrating best technology and online communications tools.	102	
8	Empowered Learner	Computing Fundamentals	5.2.1a	Describe a computer and state types of digital computers.	103	
9			5.2.1b	Identify digital devices and their parts.	105	
10			5.2.2	Define and classify hardware components.	107	
11			5.2.3	Construct a representation of an IPO cycle.	109	
12			5.2.4	Explain the purpose of software.	110	
13			5.2.5a	Discuss the role of GUI.	112	
14			5.2.5b	Identify functions of technology based on their symbols.	113	
15			5.2.6a	Evaluate cloud computing.	114	
16			5.2.6b	Model how to use cloud computing	115	
		Computational Thinking and Coding	5.5.1	Define coding and programming.	116	
			5.5.2	Describe computational thinking.	118	
			5.5.3	Define and identify algorithms.	119	
			5.5.4	Demonstrate knowledge of the Scratch interface.	120	
			5.5.5a	Use sequences in an algorithm	122	
			5.5.5b	Identify events	123	
			5.5.5c	Demonstrate loops and animation.	124	
			5.5.5d	Create an animation in Scratch.	126	
CHRISTMAS BREAK						

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WEEK	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
EASTER TERM						
17	Empowered Learner	Keyboarding and Word Processing	5.3.1	Define the term keyboarding and label the parts of the keyboard.	127	30 Minutes
18			5.3.2	Demonstrate proper keyboarding posture.	128	
19			5.3.3	Demonstrate correct finger placement and reach techniques.	129	
20			5.3.4	Identify and use special keys	131	
21			5.3.6	Define word processing and give examples of word processing software	134	
22			5.3.7a	Identify features and ribbon tabs of the Word interface.	135	
23			5.3.7b	Enter and format text	138	
24	Creative Communicator	Graphics and Multimedia	5.4.1	Define graphics and multimedia.	141	
25			5.4.2	Explain the use of presentation software.	143	
26			5.4.3	Explain PowerPoint.	144	
27			5.4.4	Identify the features of the PowerPoint interface.	145	
28			5.4.5	Name the various slide layouts.	147	
29			5.4.6	Create a title slide and format text.	148	
30			5.4.7	Insert and format new slides adding texts and graphics.	149	
31			5.4.8	Add animation to text and graphics.	151	
32			5.4.9	Preview, save, print, and deliver a presentation.	152	
EASTER BREAK						

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WEEK	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
SUMMER TERM						
41		Spreadsheets	5.6.1	Explain the use of the Excel program.	153	
42			5.6.2	Demonstrate opening and closing a workbook and worksheet.	154	
43			5.6.3	Identify parts of the Excel worksheet and understand basic terminology.	156	
44			5.6.4	Navigate within a worksheet.	159	
45			5.6.5	Create a blank worksheet or use a template to enter data.	160	
46			5.6.6	Format, save, and print a worksheet.	161	
47			5.6.7	Perform simple calculations using formulas and the SUM function.	162	
48			5.6.8	Create a simple chart with worksheet data.	163	
SUMMER BREAK						

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WEEK	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
CHRISTMAS TERM						
1	Digital Citizen	Technology Safety and Communications	6.1.1	Demonstrate proper use and care of devices and classroom rules.	165	30 Minutes
2			6.1.2	Compare and contrast Internet browsers and search engines.	169	
3			6.1.3	Explain the appropriate use of communications tools - email, discussion forums, and video conference.	171	
			6.1.4	Describe digital citizenship and potential risks and dangers.	175	
4			6.1.5	Define cyberbullying.	173	
5			6.1.6	List the effects of cyberbullying and strategies to prevent it.	174	
7			6.1.7	Create a project integrating best technology and online communications tools.	177	
8	Empowered Learner	Computing Fundamentals	6.2.1a	Examine how computers have changed society.	178	
9			6.2.1b	Connect technology devices to their jobs.	180	
10			6.2.2	Classify hardware components.	181	
11			6.2.3	Explain the IPO cycle.	183	
12			6.2.4a	Explain the purpose of software.	184	
13			6.2.4b	Discover contributions to software advancement by female pioneers.	186	
14			6.2.5a	Discuss the role of GUI.	187	
15			6.2.5b	Identify functions of technology based on their symbols.	188	
16			6.2.6	Evaluate cloud computing and model its use.	189	
CHRISTMAS BREAK						

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GRADE 6

WEEK	STRAND	TOPIC		OBJECTIVE	PAGE NO	DURATION
EASTER TERM						
18	Empowered Learner	Keyboarding and Word Processing	6.3.1	Define the term keyboarding and label the parts of the keyboard.	199	Minutes30
19			6.3.2	Demonstrate proper keyboarding posture.	200	
20			6.3.3	Demonstrate correct finger placement and reach techniques.	201	
21			6.3.4	Identify and use special keys.	203	
22			6.3.6	Define the term word processing.	205	
23			6.3.7a	Identify the features and ribbon tabs of the Word interface.	206	
24			6.3.7b	Enter and format text.	207	
25	Creative Communicator	Graphics and Multimedia	6.4.1	Define graphics and multimedia.	210	
26			6.4.2	Explain the use of presentation software.	212	
27			6.4.3	Explain PowerPoint.	213	
28			6.4.4	Identify the features of the PowerPoint interface.	214	
29			6.4.5	Name the various slide layouts.	216	
30			6.4.6	Create a title slide and format text.	217	
31			6.4.7	Insert and format new slides adding texts and graphics.	218	
32			6.4.8	Add animation to text and graphics.	219	
33			6.4.9	Preview, save, print, and deliver a presentation.	220	
EASTER BREAK						

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	STRAND	TOPIC	OBJECTIVE		PAGE NO	DURATION
SUMMER TERM						
40		Spreadsheets	6.6.1	Explain the use of the Excel program.	221	Minutes30
41			6.6.2	Demonstrate opening and closing a workbook and a worksheet	222	
42			6.6.3	Identify parts and features of a worksheet	224	
43			6.6.4	Navigate within a workbook and worksheet	226	
44			6.6.5	Create a blank worksheet or use a template to enter data	227	
45			6.6.6	Format, save, and print a worksheet.	228	
46			6.6.7	Perform simple calculations using formulas and the SUM function.	229	
47			6.6.8	Create simple pie and column charts with worksheet data.	230	
SUMMER BREAK						

Technology Education for Primary School

Scope of Work

Grade 4

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Objective 4.1.1: Demonstrate proper use and care of devices and classroom rules.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Classroom Rules for Using Technology ♦ Only visit approved internet sites. ♦ Never give out your personal information ♦ Tell your teacher if you see something uncomfortable or inappropriate ♦ Never download anything without teacher permission ♦ Leave your workspace as you found it. ♦ Print only if you have permission ♦ Never change settings without permission ♦ Place devices on charge when not in use. ♦ Sanitize devices after each use. ♦ Do not eat or drink near the	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos

Content	Suggested Activities	Suggested Assessment(s)	Resources
devices. How to Care for Various Digital Devices <u>Laptops and Tablets</u> Follow these steps to clean your laptop: ▪ Step One: Detach your battery; wipe it down with a dry cloth. ▪ Step Two: Wipe down the screen with the same cloth to remove any smudges. ▪ Step Three: Wipe the laptop down using a clean, dry towel. Avoid wet wipes, detergent, or harsh chemicals. <u>Cell Phones</u> The best way to clean and disinfect your phone: ▪ Step One: Remove the phone from its case and turn the power off. ▪ Step Two: Gently remove any smudges or marks using a dry cloth. ▪ Step Three: For	infographic poster tool such as, Canva or Create a poster with rules for the care of a device. Have a contest and have the students vote on the top three to post in the computer lab.		

Content	Suggested Activities	Suggested Assessment(s)	Resources
a deeper clean, dip the corner of a soft cloth in isopropyl alcohol or white vinegar. ▪ Step Four: Set the phone on a clean towel so it can air dry. Do not use an overly wet cloth or wipes on your phone. <u>Headphones and Ear Buds</u> How to clean headphones: ▪ Step 1: Wash the foam or rubber pieces with isopropyl alcohol. Do not overly soak the towel you're using, but simply dab a corner into the rubbing alcohol. ▪ Step 2: Dry thoroughly before using. Clean your headphones once per week. <u>Game Consoles</u> How to clean game consoles like Xbox: ▪ Step One: Use a microfiber cloth for the outside			

Content	Suggested Activities	Suggested Assessment(s)	Resources
<u>Flash Drive</u> How to clean your flash drive: ▪ Step One: Use rubbing alcohol and a Q-tip to clean your flash drive. ▪ Step Two: Make sure it's completely dry before plugging it into the computer. <u>Alexa, Google Home, Amazon Echo</u> How to clean your Alexa, Google Home, or Amazon Echo: ▪ Step One: Use a dry cloth to remove any dust that builds up on your voice assistant. ▪ Step Two: Do not use any cleaners as moisture can easily damage your device. <u>Printers</u> How to clean your printer: ▪ Step One: Use rubbing alcohol, a clean cloth. ▪ Step Two: Avoid using			

Content	Suggested Activities	Suggested Assessment(s)	Resources
paper towels as these can leave streaks.			

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Objective 4.1.2: Compare and contrast internet browsers and search engines.

Content	Suggested Activities	Suggested Assessment(s)	Resources
<u>The Main Web Browsers</u> A web browser or just browser is what you and the other 3 billion internet users access the internet through. <u>Commonly Used Web Browsers</u> *Google Chrome*: known for its speed and simplicity. This browser is developed by Google and was first released for Microsoft Windows in 2008. Today, Chrome is known to be the most popular web browser. *Internet Explorer*: is the big one – traditionally the most used browser in the world. *Safari*: like Internet Explorers is to PCs, Safari is to Macs. It's the default web browser installed on all brand-new Macs. <u>Safe Search Engines for Kids</u> Kidtopia - a Google custom student safe search engine for preschool and elementary students, indexing only educator approved websites.' Kiddle - a visual search engine for kids powered by	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos *<u>Extension Activities</u>* ▪ Students will collaboratively create an individual google account. Use lastname. firstname ▪ Using Kidtopia, students will search for the name of the smallest bird in the world	Variety of game-based learning platforms such as Quizizz and Kahoot. Peer assessment such as; online quizzes, polls, graphic organizers Research three (3) Commonwealth Countries, including The Bahamas Integrate Science/Social Studies topic such as; 'Earth and Space' as research project Using Magisto, create a two (2) minute video describing population, leadership, government, culture, food, and music Collaborate with home- room teacher to obtain content.	Safety Champion https://www.safetychampion.com.au/what-are-the-main-web-browsers-and-how-do-they-differ/ Teachnology https://www.teach-nology.com/worksheets/critical_thinking/internet/2/ Educational Technology and Mobile Learning https://www.educatorstechnology.com/2018/01/11-great-kids-safe-search-engines.html Magisto https://www.magisto.com/ Learning Management System https://bahamas.1on1lms.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
Google, offering safe kids web, image, and video search. Results are vetted by editors.' KidRex - a fun and safe search for kids, by kids! KidRex searches emphasize kid-related webpages from across the entire web and are powered by Google Custom Search™ and use Google SafeSearch™ technology.' GoGooligans - is another kid search engine that provide a number of important features including: use Google index to retrieve results, apply different kinds of filtering features, excludes inappropriate sites and keywords, offers search in over 30 languages and many more.			

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Objective 4.1.3: Explain the appropriate use of communications tools such as email, discussion forums, and video conferencing.

Content	Suggested Activities	Suggested Assessment(s)	Resources
<u>The Use of Communications Tools</u> *Email* - Electronic mail or email is a means of sending messages, text, and computer files between computers via the internet. *Features of Email* ▪ Automatic reply to messages ▪ Files, graphics or sound can be sent as attachments, often in compressed formats *Email On Other Devices* Today email is not limited to computers. It can be sent from many other devices too, such as: ▪ Mobile phones (using the carrier's network or a wireless hotspot) ▪ Tablets ▪ Games Consoles	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos Oral Type Quizzes	Variety of game-based learning platforms such as Quizizz and Kahoot Peer assessment such as online quizzes, polls, graphic organizers	Bitesize https://www.bbc.co.uk/bitesize/guides/zghfr82/revision/2 machealth https://machealth.ca/help/w/faqs/156.what-kinds-of-forums-are-there Common Sense Education https://www.commonsense.org/education/articles/5-online-discussion-tools-to-fuel-student-engagement nowcomment https://nowcomment.com/ Class Dojo https://www.classdojo.com/ Learning Management System https://bahamas.1on1lms.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
Discussion Forums What kinds of forums are there? Discussion – Discussion forums are the most traditional type of forum. Both Q&A and Discussion - Both Q&A and traditional discussions are enabled for this type of forum thread. Examples of Online Discussion Forum Tools ▪ Now Comment ▪ Class Dojo			

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Objective 4.1.4: Describe digital citizenship and potential risks and dangers.

Content	Suggested Activities	Suggested Assessment(s)	Resources
What is Digital Citizenship? Digital citizenship can be defined as engaging in appropriate and responsible behavior when using technology. *Stranger. Danger.* Beware of emails from anyone, particularly adults you don't know, asking for personal information, attempting to arrange meetings, or engaging in personal contact. Alert your teacher and/or your parents if any message you receive that is inappropriate or makes you feel uncomfortable.	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos *Extension Activities* Using Goose Chase, students will go on a scavenger hunt mission to create audio and video that will be used to solve clues on good and bad digital citizenship. Encourage students to use their best drama club/role play performances Create a comic strip in which the superhero is an upstander against cyberbullying.	Variety of game-based learning platforms such as Quizizz and Kahoot Peer assessment such as; online quizzes, polls, graphic organizers	Virtual Library https://www.virtuallibrary.info/digital-citizenship.html#:~:text=Digital%20citizenship%20can%20be%20defined,%2C%20rights%2C%20culture%20and%20more. Netiquette PowerPoint Booth https://www.slideshare.net/kabooth/netiquette-powerpointbooth What Does It Mean to Be a Good Digital Citizen? Common Sense Education - Video Library https://www.commonsense.org/education/video Goose Chase https://www.goosechase.com/ Grade 4-Be A Super Digital Citizen-Quick Activity Guide https://docs.google.com/document/d/1zonIv7rR2figlM6TTjEsEY1Mv3Aq4-LeMRo_4Tuwhnl/edit Word Mint Digital Citizenship Word Search Puzzle https://wordmint.com/public_puzzles/372681

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Objective 4.1.5: Define cyberbullying

Content	Suggested Activities	Suggested Assessment(s)	Resources
What Is Cyberbullying? Cyberbullying is bullying that takes place over digital devices like cell phones, computers, and tablets. Cyberbullying can occur through SMS, Text, and apps, or online in social media, forums, or gaming where people can view, participate in, or share content. Cyberbullying includes sending, posting, or sharing negative, harmful, false, or mean content about someone else. It can include sharing personal or private information about someone else causing embarrassment or humiliation. Some cyberbullying crosses the line into unlawful or criminal behavior.	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos	Variety of game-based learning platforms such as Quizizz and Kahoot Peer assessment such as online quizzes, polls, graphic organizers	Stop Bullying https://www.stopbullying.gov/cyberbullying/what-is-it Into the Cloud – Season 2 https://www.youtube.com/watch?v=rFbQd7VIILc Learning Management System https://bahamas.1on1lms.com/

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Objective 4.1.6: List the effects of cyberbullying, and strategies in preventing it.

Content	Suggested Activities	Suggested Assessment(s)	Resources
How to Identify the Effects of Cyberbullying Victims generally show some of the following signs: ▪ Depression ▪ Anxiety ▪ Loneliness ▪ Low self-esteem ▪ Social exclusion ▪ School phobias ▪ Poor academic performance *What to Do If You Are Being Cyberbullied* ▪ Block their incoming calls and unfriend them on Facebook ▪ Block them on Twitter ▪ Block them on Instagram ▪ Tell a trusted adult like the police (call 911 or visit the police station in your community to report cyberbullying), teacher, parents, guidance counsellor, and/or principal	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos *Extension Activities* Using Canva, students will collaboratively design cyberbullying posters with catchy slogans and phrases to post around campus, hallways and lunch areas	Variety of game-based learning platforms such as Quizizz and Kahoot Peer assessment such as online quizzes, polls, graphic organizers	The Real-Life Effects of Cyberbullying on Children https://www.verywellfamily.com/what-are-the-effects-of-cyberbullying-460558 Canva https://www.canva.com/ What to Do If You're Being Cyberbullied? https://www.justice.govt.nz/assets/Documents/Publications/what-to-do-if-youre-being-cyberbullied.pdf EdTechReview https://edtechreview.in/news/2392-cyber-bullying-posters-pictures Royal Bahamas Police Force http://www.royalbahamaspolice.org/crimeprevention/onlinesafety.php?cp_id=10 Learning Management System https://bahamas.1on1lms.com/

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Objective 4.1.7: Create a project integrating best technology and online communications tools.

	Suggested Activities	Suggested Assessment(s)	Resources
Essential Tools for Project-Based Learning The rise of technology used in classrooms has made learning much more interactive. The emergence of iPads to browser-based tools in project-based learning, take teaching to a new level in the 21st century. Even the current trends in education include the use of new technology, from collaborative projects to blending traditional textbook teaching with innovative tools. ▪ Mindmeister ▪ Animoto ▪ Fotobabble *Online Communications Tools* ▪ Skype ▪ Google Hangouts ▪ WhatsApp Group Video	*Project-Based Learning Activity* ▪ Students will collaboratively create an adventure story using a digital book. ▪ Using "Story Bird" students will create their own story using images to depict the story- compare and contrast images.	Group project Group presentation	What Are the Essential Tools for Better Project-Based Learning? https://www.teachthought.com/education/better-project-based-learning-2/ Mindmeister https://www.mindmeister.com/ Animoto https://animoto.com/ Fotobabble https://www.fotobabble.com/login/auth 9 Collaborative Technology Projects Students Will Love! https://www.weareteachers.com/10-collaborative-technology-projects-your-students-will-love/ Story Bird https://storybird.com/

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Objective 4.2.1a: Describe a computer

Content	Suggested Activities	Suggested Assessment(s)	Resources
A **computer** is an electronic device that manipulates information, or data. It has the ability to store, retrieve, and process data.[1] Computers exist in many digital devices that we use on a day-to-day basis. *Inquiry Prompt:* What can a computer be used for?	*Before Teaching* Pair and Share: Have students share with a partner their thoughts on what is a computer. *During Teaching* Have students watch the *'What are Computers for Kids'* video (0:00 – 1:35). Have students create a Word Cloud highlighting activities that can be completed using a computer. [Partner/Independent]	*Journal Writing/Blogging* In at least three sentences, describe a computer in your own words.	What are Computers for Kids Video: https://www.youtube.com/watch?v=RmbFJq2jADY Word Cloud Generator: https://www.abcya.com/games/word_clouds

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Objective 4.2.1b: Name types of personal computers

Content	Suggested Activities	Suggested Assessment(s)	Resources
When most people hear the word computer, they think of a **personal computer** such as a **desktop** or **laptop**. However, computers come in many shapes and sizes, and they perform many different functions in our daily lives. When you withdraw cash from an ATM, scan groceries at the store, or use a calculator, you're using a type of computer. *Desktop Computers* Computers designed to be placed on a desk and used in that spot. They need a constant supply of electricity to function. *Laptop Computers* Battery-powered all-in-one computers that are more portable than desktops, allowing you to use them almost anywhere. *Tablet Computers* Handheld computers that are even more portable than laptops.[1] *Embedded Computers* Many of today's electronics are basically **specialized computers**, though we don't always think of them	Have students watch the 'Types of Personal Computers' video. Show students a slideshow of examples of the various types of computers. Have them determine which group each example belongs to. Platforms: Quizizz/Kahoot/Word Wall [Whole Class/Partner/Independent] Have students complete a compare and contrast worksheet on the types of computers.	*Write the Room* Paste numbered descriptions and images of the types of personal computers around the room. Have students walk around and write the number along with the matching name on a paper or in their book. This can also be done in reverse. Have students write a description for a posted name or picture.	Types of Personal Computers: https://www.youtube.com/watch?v=sHyA_Qgdzol Kahoot Platform: https://create.kahoot.it/auth/login Quizizz Platform: https://quizizz.com Word Wall Platform: https://wordwall.net

Content	Suggested Activities	Suggested Assessment(s)	Resources
that way. Like, smartphones, wearables, game consoles, smart TVs, washing machines, microwaves, and smart speakers.[1] *Inquiry Prompt:* How can you tell the difference between the types of computers?			

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Objective 4.2.1c: Identify digital devices and their parts

Content	Suggested Activities	Suggested Assessment(s)	Resources
The basic parts of a desktop computer are the **system unit, monitor, keyboard,** and **mouse**. Laptop computers have all their parts in one case – **screen, keyboard,** and **touchpad**. Instead of a keyboard and mouse, tablet computers use a **touch-sensitive screen** for typing and navigation.[1] While some of their external parts may be different, they all have similar internal components. The main one being the **central processing unit** (CPU) that controls the operation of the device. *Inquiry Prompt*: Can you identify digital devices and their parts?	Have students watch the 'Basic Parts of a Computer' video. Complete the Computer Parts activity on Flippity. [Partner/Individual] Have students complete the Word Wall matching activity. [Partner/Individual] Complete the 'Find the Technology' interactive search. [Whole Class/Group/Individual]	Have students complete a worksheet labeling the parts of digital devices. [Print/Digital]	Basic Parts of a Computer Video: https://www.youtube.com/watch?v=mLgTnkw558w Flippity Computer Parts: https://www.flippity.net/sh.asp?k=1gmixS7Bq4m51bWUn_6TBx2nTkoF7SgKFsL_Z2GR-IzQ Word Wall Interactive: https://wordwall.net/resource/10458811/parts-of-a-computer Find the Technology Interactive Game: https://www.abcya.com/games/find_the_tech Name that Device Quizlet: https://quizlet.com/_300qy7?x=1jqt&i=1hxrsm

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Objective 4.2.1d: Demonstrate the proper way to use a pointer device

Content	Suggested Activities	Suggested Assessment(s)	Resources
When holding the computer mouse, our fingers should take the shape of the letter V. Right-handed: index finger on the left button and middle finger on the right button. Left-handed: index finger on the right button and middle finger on the left button.[3]	Have students complete the interactive mouse/pointer device tutorial.		Mouse Tutorial: https://edu.gcfglobal.org/en/mousetutorial/mouse-tutorial/1/

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Objective 4.2.2a: Define the term hardware

Content	Suggested Activities	Suggested Assessment(s)	Resources
A computer is made up of many parts that work together. The parts of the computer that can be seen and touched are called hardware.[2]	Have students read or listen to the book, '*Little Red Hen Builds a Computer*'. From the story, they will make a list of all the hardware components mentioned.	*Peer Assessment*: Have students share with a partner their definition of hardware and provide examples.	Little Red Hen Builds a Computer Read Aloud: https://www.youtube.com/watch?v=hF7-koBFpeI&t=1s

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Objective 4.2.2b: Classify hardware components

Content	Suggested Activities	Suggested Assessment(s)	Resources
Each hardware component has a specific job it does to help the digital device work. Four groups that hardware components can be divided into are: - Input Devices – used to enter data into the computer. Data can be letters, numbers, sounds, or images. *Examples: mouse, keyboard, stylus, smart pencil, touchscreen, joystick, remote control, touchpad, scanner, digital camera, web camera, microphone, drawing tablet, and interactive whiteboard.* - Output Devices – used to hear and see information from the computer. You use an output device to see or hear information from the computer. Information can be sound through speakers, art displayed on the screen, or text and graphics on a paper. *Examples: monitor, screen, printer, speaker, headphones, and projector.* - Storage Devices – used to save work to be retrieved later. *Examples: flash drive, CD, DVD, hard drive, external hard drive, memory*	Have students watch the 'Input and Output Devices' video. [0:00 – 0:45] Review examples of input and output devices using BBC Bitesize interactive. Have students complete a Quizizz identifying hardware components for each group. [Individual] Have students research and report (orally/digitally) on hardware components that are able to function as both input and output devices. [Group/Partner/Individual]	Have students complete a sorting worksheet with a collection of hardware components. [Print/Digital] Have students create a crossword puzzle that contains the names and clues for 5 input devices and 5 output devices.	Input and Output Devices video: https://www.youtube.com/watch?v=jzwa-HegLk4 BBC Bitesize Input and Output Devices Interactive: https://toybox-assets.files.bbci.co.uk/activities/gggzpmgr82/v0.0.0//images/input-output-devices_t.png Input or Output Quizizz: https://quizizz.com/admin/quiz/614a8db174e146001dab287c ABCya Puzzle Maker: https://www.abcya.com/games/crossword_puzzle_maker Discovery Education Puzzle Maker: https://puzzlemaker.discoveryeducation.com/criss-cross

Content	Suggested Activities	Suggested Assessment(s)	Resources
cards, and the cloud. - System Unit – protects the internal components of the computer, like the CPU, motherboard, and hard drive.[2] *Inquiry Prompt:* Can hardware components have more than one job?			

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Objective 4.2.3: Explain how a computer works

Content	Suggested Activities	Suggested Assessment(s)	Resources
A computer helps us generate information from raw data. It follows the **Input-Process-Output** (IPO) cycle: - We use an input device to enter data into a computer. This data is called the **input**. - The CPU converts the data into meaningful information. This is called **processing**. - After the data is processed, the result is conveyed through an output device. This is the **output**.[5] *Inquiry Prompt:* What examples of an IPO cycle can you find in real life?	Have students watch the 'How Does a Computer Work?' video. Have students complete a Quizizz identifying the input, process, and output of various IPO cycles. [Whole Class/ Group/ Partner/Individual] Use the following activities and have students determine the stages of the IPO cycle: Adding numbers / generating a report card / playing a video game. [Partner/Individual] Have students illustrate real life examples of an IPO cycle.	Have students label a diagram of the IPO cycle. Present students with a variety of IPO cycles and have them identify the activity at each stage. [Print or Digital Worksheet /Notebook]	How Does a Computer Work video: https://youtu.be/3e0aN_pPhME IPO Cycle Quizizz: https://quizizz.com/admin/quiz/60ee7229fa248c001e16c0ad

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Objective 4.2.4: Compare software and their uses.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Software are instructions that tell the computer what to do. There are two main types: system software and application software. **System Software** are the programs that run behind the scenes to ensure the computer functions properly, like the operating system and utility programs. *Examples: Windows 10, Mac OS, iPad OS, Android, and Linux.*[2] **Application Software** are the programs used to perform specific computer tasks. Applications are also used on smartphones and tablets to do lots of things, such as social networking, listening to music and messaging. The word 'app' is short for application software. This is a piece of software that allows us to do an everyday task.[4] A digital device needs software to work. Unlike hardware, software cannot be touched.[2] *Inquiry Prompt:* Can you list examples of system and application software?	*Before Instruction:* Round Robin Question – What is software? *During Instruction:* Share with students the 'What is Software' video. Share a slideshow of examples of system software and application software – have students guess which category the example falls in. Platforms: Quizizz/Kahoot/Word Wall [Whole Class/Partner/Independent]	Have students create a short video (Flipgrid) stating how to identify software by type. Have students create a T-chart with System Software and Application Software labels. List the names of four examples of each type of software. [Individual]	Flipgrid Platform: https://info.flipgrid.com/ What is Software Video: https://youtu.be/PBDlbSAddAI

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Objective 4.2.5a: Relate technology symbols with their functions

Content	Suggested Activities	Suggested Assessment(s)	Resources
How do you tell a computer what to do? You use **Graphical User Interfaces** or **GUIs**. GUIs are pictures or graphics that contain instructions for the computer. Or an interactive visual component of software. These pictures are called icons. You would use a pointing device to select the icon. The icon usually looks like the task you would like to do.	Share with students how early computers operated only on coded (written) instructions and had no pointing devices. [Kids React to Old Computers Video] Share a PowerPoint of different icons and have students identify their role. *Examples: power, trash, Wi-Fi, signal strength, volume, and battery.* [Whole Class]	Have students complete a scavenger hunt to identify/find icons placed around the room based on clues.	Kids React to Old Computers Video: https://www.youtube.com/watch?v=PF7EpEnglgk Learning.com: Symbols of Technology: https://www.learning.com/

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Objective 4.2.5b: Examine technology symbols and their functions.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Pictures and words work together all the time. Many pictures in the real world give you information. Many of these pictures are symbols. Symbols are very simple pictures that tell you something, like which bathroom to use, where to throw your trash, or when something is not allowed. They are easily understood by people around the world. When you use technology, you will see even more symbols.[6]	Explore the Zoom or Teams platform with students, identifying the functions of the various symbols. [PowerPoint/Quizizz/Kahoot] Explore the Google Chrome platform with students, identifying the functions of the various symbols. [PowerPoint, Quizizz/Kahoot] Explore icons on the desktop/mobile device, identifying their functions.	Have student's complete worksheets on icons and symbols. [Print/Digital]	Zoom Language Worksheet: https://www.liveworksheets.com/ge16514170j Zoom Symbol Worksheet: https://www.liveworksheets.com/1-jx2251887hu Web Browser Icons Worksheet: https://www.liveworksheets.com/1-qv1344152zs

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Objective 4.2.6a: Explain cloud computing

Content	Suggested Activities	Suggested Assessment(s)	Resources
The cloud (cloud computing or cloud storage) is the Internet - more specifically, it's all of the things you can access remotely over the Internet. When something is in the cloud, it means it's stored on Internet servers instead of your computer's hard drive. Two main reasons people use the cloud are convenience and reliability. They can store files, share files, back up data for future use. Inquiry Prompt: Can you list five examples of cloud-based services?	Have students watch the 'What is a Cloud?' video. Have students research and list cloud-based programs. Example: Google Drive, iCloud, Dropbox, OneDrive, Office365	Have students create a poster on cloud computing.	What is a Cloud video: https://youtu.be/4OO77HFcCUs

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Objective 4.2.6b: Model how to cloud compute.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Microsoft 365 is a cloud service that allows you to use different software and save your work in the cloud.	Explore the Office365 platform with students, highlighting the different applications [Whole Class/Group/Partner]	Have students create a document and share with a partner through the cloud.	Office365: https://www.office.com/

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Objective 4.5.1: Define coding and programming

Content	Suggested Activities	Suggested Assessment(s)	Resources
Digital devices operate by following a list of instructions, called a program, that has been written to carry out a particular task.[13] Programming is writing code to create a program, to solve a problem.[14] It involves writing commands to tell the device to do something in a programming language it can understand.[15] Programming languages have been specially designed, with a limited set of instructions, to tell computers what to do. Some languages are more suitable for some purposes than others. Regardless of what language they use, programmers must become adept at specifying exactly what they want the computer to do. Unlike human beings, a computer will carry out instructions to the letter even if they are patently ridiculous. It is important that programs are well written.[13]	*Before Teaching* Pair and Share: Have students share with a partner their thoughts on what is programming. *During Teaching* Have students watch the *'What is computer programming'* video. Complete the 'Marching Orders' activity having students draw an image based only on the instructions given.[13] [Whole Class] Blindfold one student and have the class direct them around the room.[13] [Whole Class] Have students research programming languages to compile a list. Have them share which one they believe would be easier for kids to use.	Have students write instructions on how to get to a mystery location around the school using such instructions as "Go forward x steps", "turn left", and "turn right".[15] [Group/Partner]	Bitesize: What is programming: https://www.bbc.co.uk/bitesize/guides/zts8d2p/revision/1 BrainPop: What is computer programming: https://youtu.be/pKBw98uHOyk Marching Orders Activity: https://classic.csunplugged.org/documents/activities/programming-languages/unplugged-12-programming_languages.pdf

Content	Suggested Activities	Suggested Assessment(s)	Resources
Inquiry Prompt Can you list the names of five coding languages? *Examples of Coding Languages* *- Block Coding: a visual coding system that uses colored blocks and premade graphics to create games and apps.* - Lego Mindstorms NXT: a language used by the FIRST Robotics League - Python: a general-purpose language that can be used for different tasks - HTML/CSS: These are markup languages and not programming languages. A markup language is a way to design and present text. - JavaScript: a language used to make the web interactive.[17]			

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Objective 4.5.2a: Describe computational thinking

Content	Suggested Activities	Suggested Assessment(s)	Resources
Computational thinking means planning, problem-solving, and analyzing information the way a computer does.[17] The cornerstones of computational thinking are decomposition, pattern making, abstraction, and algorithms. **Vocabulary** 1. *decomposition: break a problem down into smaller pieces* 2. *pattern making: finding similarities between things* 3. *abstraction: pulling out specific differences to make one solution work for multiple problems* 4. *algorithm: a list of steps that you can follow to finish a task*[13] Each cornerstone is as important as the others. They are like legs on a table - if one leg is missing, the table will probably collapse. Correctly applying all four techniques will help when programming a computer.[16]	Pair and Share: Have students consider what the term 'computational thinking' means for 15 seconds. Allow them to share their thoughts with a partner. [Partner] Share the 'PopFizz' video as an introduction. Discuss the meaning of the term. [Whole Class] Have students view the 'Computational Thinking for Children' video. Discuss the terms explained in the video. [Whole Class/Partner] Read Aloud 'Hello Ruby: Adventures in Coding' which introduces the fundamentals of computational thinking. [Whole Class] Code.org: Computational Thinking Activity (See Teacher Lesson Guide)	*Journal Writing/Blogging:* Why is computational thinking important?	PopFizz Computer Science Computational Thinking: https://www.youtube.com/watch?v=kVfGUdIaUvY Computational Thinking for Children Video: https://www.youtube.com/watch?v=mUXo-S7gzds Hello Ruby: Adventures in Coding Book: http://www.cs.unibo.it/~renzo/DIDATTICA/RUBY/HelloRuby_KickStarter_lores.pdf Teacher Guide Video: https://www.youtube.com/watch?v=7sHTZsGMQuQ&list=PL2DhNKNdmOtpGJ79ZYYttiEmc-1Aq8hxm Code. Org Teacher Lesson Guide: https://code.org/curriculum/course3/1/Teacher

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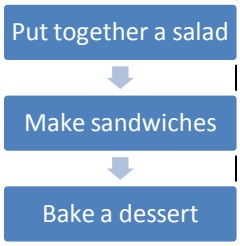
Objective 4.5.2b: Explain modeling

Content	Suggested Activities	Suggested Assessment(s)	Resources
A model is a representation of something in another form. *Example: A map represents the streets in a city or the geography of an area. A calendar represents the days in a month and the months in a year. A restaurant's menu represents the food they serve. It takes the place of showing the customers the actual food.* Each of these models are an abstraction of the thing it represents. We can use models to help us figure out how to solve problems or find ways to improve an existing solution. Models can be used to represent steps in a process, a set of information, or the solution to a problem. A flowchart is a model that represents an algorithm as a series of connected steps. They help to organize the steps in a process into a specific order.[19]	Show students a display of models and have them identify what they represent. Examples: team roster = member of a sports team; floor plan = layout of a house; street map = layout of a city. Have students create a flowchart to prepare a three-course meal. Example: 	Have students decompose an everyday activity and model it using a flowchart.	Learning.com Lesson: https://cdshtm.learning.com/shell/lesson

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Objective 4.5.3: Define and identify algorithms

Content	Suggested Activities	Suggested Assessment(s)	Resources
An algorithm is simply a set of steps used to complete a specific task. They're the building blocks for programming, and they allow things like computers, smartphones, and websites to function and make decisions. In addition to being used by technology, a lot of things we do on a daily basis are similar to algorithms.[17] Examples of algorithms in everyday life are: recipes, traffic lights, GPS, brushing your teeth, and planting a seed. When something is not working in a program/code, it's called a bug. Finding, identifying, and fixing the problem is called debugging.[17]	Have students view the 'Algorithms' video. What are some of the algorithms they see in the day-to-day living? [Whole Class Discussion] [Worksheet] Have students compile six-steps to making a paper airplane. [Partner] Have students create a six-step algorithm for putting on sneakers. [Partner/Group] Have students identify the algorithms for getting to class from the front of the school. [Partner/Group]	*Mystery Animal* Have each student draw an animal on a sheet of paper. On another sheet of paper, write out the steps to draw the animal. They will switch their steps paper with a partner who will follow their instructions to draw the mystery animal. [Peer Evaluation]	Computer Science Basics – Algorithms Video: https://www.youtube.com/watch?v=sHyA_Qgdzol Airplane Worksheet: https://code.org/curriculum/course2/2/Activity2-RealLifeAlgorithms.pdf GCF – Algorithms: https://edu.gcfglobal.org/en/computer-science/algorithms/1/

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Objective 4.5.4: Demonstrate knowledge of the Scratch interface.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Scratch is an environment where you can build algorithms by combining code blocks together. You can create interactive stories, animations, artwork, and games. There are three main sections of the Scratch interface. On the left-hand side we have tools to control or change our characters. The main way is through our code blocks. There are different types of block categories or ways to control our characters. We can also change the way our characters look under the "costumes" tab. We can also add sound under the "sounds" tab. In the middle we have our scripts area. This is where we put together code blocks to create our algorithms, or instructions, for our character. We *"drag and drop"* the code blocks we want to use. The *code blocks are shaped like puzzles* to help you know	Have students view the 'Scratch Basics' video. Discuss products that can be made in Scratch, and the method used. Open a New Project (click on "create" on the top left) and explain the different components of the Scratch Interface. Have students view the Exploring Scratch 3.0 sheet of the student workbook as a reference. [Individual] Pair and Share: Have students share with a partner what they would like to create in Scratch. Have a few students share their thoughts with the class. [Partner] Have students log into their accounts and explore the interface. Introduce the menu options: My Stuff; My Class; Studio. [Individual] Have students access the Hello Mr. Scratch project and use the blocks available. [Individual/Partner]	Have students complete a LiveWorksheet, Kahoot, or Quizizz identifying the parts of the Scratch interface. Have students choose and complete one of the Scratch starter projects	Pinnguaq Scratch Basics Video: https://www.youtube.com/watch?v=NqMd44Oi2l4 Scratch ECForAll Act 1 Student Workbook: https://docs.google.com/presentation/d/189Vg1wejcISlMatwfrtftfWIfrYTi1F3sMmeTxLlaLs/edit#slide=id.gba823378e5_0_365 Scratch ECforAll Teachers' Guide: https://docs.google.com/document/d/18GgFajp8nmSqoy6WZBsANkCvGtVxJ4Jj64D87Szrz3k/edit# Scratch Starter Projects: https://scratch.mit.edu/starter-projects Hello Mr. Scratch Project: https://scratch.mit.edu/projects/404899091/editor/ Scratch Tutorial Links: https://docs.google.com/presentation/d/1FGkEaUi-dEqjyiZN7AweMLg97OxxgE

Content	Suggested Activities	Suggested Assessment(s)	Resources
what you can put together. When you put code blocks together, you create a script. On the right-hand side we have our stage, where we can see how our algorithms work and add backdrops for our story. The characters we use are called sprites.[20]	Have students practice using the platform by completing tutorials.		5UsKzsTYYVnfw/edit#slide=id.gdf19f5b3e4_0_84

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Objective 4.5.5a: Use sequences to create an algorithm.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Behind all the software we use daily, there's a code being run with all sorts of terms and symbols. Surprisingly, it can often be broken down into three simple programming structures called **sequences**, **events**, and **loops**. These come together to form the most basic instructions and algorithms for all types of software. A **sequence** is a **series of actions** that is completed in a **specific order**. Action 1 is performed, then Action 2, then Action 3, etc., until all the actions in the sequence have been carried out.	Have students watch the 'What is a Sequence' video. [0:00 – 2:23] Have students share activities that follow a set sequence. Examples: brushing your teeth, washing your hands, baking a cake, getting dressed for school, etc.	Have students complete the Sequence: On the Farm project in Scratch.	Kodable: What is a Sequence Video: https://youtu.be/v_Pc3UnePZY ECforAll Sequence Engage Video: https://www.youtube.com/watch?v=vq8GVg4J31w Scratch ECForAll Act 1 Student Workbook: https://docs.google.com/presentation/d/189Vg1wejcISIMatwfrtftfWIfrYTi1F3sMmeTxLlaLs/edit#slide=id.gba823378e5_0_365 ECforAll Teachers Guide - Sequences: https://docs.google.com/document/d/1bidhstM8GojGvw2PB6VSC6rIdcvtDrWR2k9qtJThodQ/edit#bookmark=id.7hzot23iwqbo Scratch Sequence on the Farm project: https://scratch.mit.edu/projects/312724937/

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Objective 4.5.5b: Identify events

Content	Suggested Activities	Suggested Assessment(s)	Resources
Events are actions that cause something to happen like when you click on a play or pause button. Two examples are a knock on the door or the ringing of the telephone. When using digital devices, events lets them know what to do or show. Using input devices, we communicate to our devices. With a stroke of a key or a press on the screen we activate a command. Events in coding also are actions that cause something else to happen. *Inquiry prompt* *Can you name event blocks in Scratch?* A Scratch event block tells a script to run. A script in Scratch should always begin with an event block.[20]	Have students view the 'Events' video. Complete the 'Big Event' activity from the Teachers Guide. [Whole Class] Have students identify blocks in the Scratch platform that triggers an event.	Have students complete the Sequence and Events Assessment from ECforAll Have students explore *Events Ofrenda* project and use the TIPP&SEE worksheet as a guide to understand how events can be used in a project.	ECforAll Events Engage Video: https://www.youtube.com/watch?v=zKlrffvqhLQ ECforAll Setting X and Y Coordinates Video: https://www.youtube.com/watch?v=TFEgNFGOEpk ScratchECForAll Act 1 Student Workbook: https://docs.google.com/presentation/d/189Vg1wejcISIMatwfrtftfWIfrYTi1F3sMmeTxLlaLs/edit#slide=id.gba823378e5_0_365 ECforAll Teachers Guide Events: https://docs.google.com/document/d/1IXDK3Fp7FlgLaUtsRDmYA1btlytmK30AaMpS6Gz3hrU/edit#bookmark=id.xbo2dqdnzioj ECforAll Assessment: https://docs.google.com/document/d/1AN-UgahxYcLKCjKA2ycNpNzmOuCrnZjgqjerIGsKhoo/edit Events Ofrenda Google Form Worksheet: https://www.google.com/url?q=https://docs.google.com/forms/d/1_JlvO4jlyH1fJV_IwwaEkHGTbt7aTgzjOUUNe4_iUrg/copy&sa=D&source=editors&ust=1651124163862

Content	Suggested Activities	Suggested Assessment(s)	Resources
			947&usg=AOvVaw3HvS4YtfpuALxXDUZNoB8Q Scratch Events Ofrenda project: https://scratch.mit.edu/projects/313834205/

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Objective 4.5.5c: Demonstrate loops

Content	Suggested Activities	Suggested Assessment(s)	Resources
A loop is a sequence of instructions that is repeated. Loops allow programmers to efficiently code repetitive tasks instead of having to write the same actions over and over again. If one wanted to draw a square, a loop can be written that states 'go straight, then turn right'; have it repeat four times instead of writing eight lines of code.	Introduce the concept of loops with the 'Loopy Dance' activity. Have students think of everyday activities that contain repeated steps. Use loops to make them easier to complete.	Have students complete the ECforAll Loops assessment worksheet Have students complete the Loop Animals project using the TIPP&SEE worksheet.	Loopy Dance Tutorial for Teachers: https://www.youtube.com/watch?v=JoKTqHCnioM ScratchECForAll Act 1 Student Workbook: https://docs.google.com/presentation/d/189Vg1wejcISIMatwfrtftfWIfrYTi1F3sMmeTxLlaLs/edit#slide=id.gba823378e5_0_365 ECforAll Teachers Guide Events: https://docs.google.com/document/d/1IXDK3Fp7FlgLaUtsRDmYA1btlytmK30AaMpS6Gz3hrU/edit#bookmark=id.xbo2dqdnzioj ECforAll Assessment: https://docs.google.com/document/d/1AN-UgahxYcLKCjKA2ycNpNzmOuCrnZjgqjerIGsKhoo/edit Scratch Loop Animals project: https://scratch.mit.edu/projects/404649224/ Scratch Loop Animals Google Form: https://docs.google.com/forms/d/1cKfGtriiOflhzInTq76FGILtwhL7gZJJnFF4XgwovVM/copy

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Objective 4.5.5d: Create an animation in Scratch

Content	Resources
Final Project Have students choose a country that is connected to their family, or one that they are interested in. They will plan and build an animated project that will present information about that country using their knowledge of sequences, events, and loops.	ECForAll Act 1 Student Workbook: https://docs.google.com/presentation/d/189Vg1wejcISIMatwfrtftfWIfrYTi1F3sMmeTxLlaLs/edit#slide=id.gba823378e5_0_365 ECforAll Teachers Guide Events: https://docs.google.com/document/d/1IXDK3Fp7FlgLaUtsRDmYA1btlytmK30AaMpS6Gz3hrU/edit#bookmark=id.xbo2dqdnzioj

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Objective 4.3.1: Define keyboarding and label the parts of the keyboard

Content	Suggested Activities	Suggested Assessment(s)	Resources
Keyboarding is using a keyboard to type letters, numbers and symbols. A keyboard is an input device. A keyboard has letter keys, number keys and special keys. You type letters, numbers and symbols to create documents. You use a keyboard to work on the Internet, play some games, and when you use most software.	View video introducing the keyboard. Explain the parts of the keyboards on different devices. Label the keyboard and explain their various parts	Label the keyboard. Explain the various parts of the keyboard. Match the keys of the keyboard to their functions.	Parts and functions of the keyboard multiple choice worksheet https://www.liveworksheets.com/zl239436ojb Keyboarding Matching Worksheet https://www.liveworksheets.com/oj2322222mb

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Objective 4.3.2: Demonstrate proper keyboarding posture

Content	Suggested Activities	Suggested Assessment(s)	Resources
How you sit when you use a keyboard is important. How you sit is called posture. Good posture is important because not sitting correctly can result in injuries to your body. You should sit up straight when you use the keyboard. You should face the computer screen. Your arms should rest in front of you. Your hands should be clean. You should place your fingers gently on the keys.	Students will demonstrate proper/correct posture.	Identify good and bad posture from pictures using **yes** and **no** responses.	Proper Keyboarding Techniques Slide Show: https://slideplayer.com/slide/12743406/ Proper Keyboarding Techniques: https://www.youtube.com/watch?v=ee9eIsUzEOM https://www.youtube.com/watch?v=4UJ9BkSbR-I&t=275s

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Objective 4.3.3: Demonstrate correct finger placement and reach techniques

Content	Suggested Activities	Suggested Assessment(s)	Resources
When typing your work area should be arranged as follows: ♦ Keyboard directly in front of chair; front edge of keyboard even with edge of desk ♦ Monitor placed for easy viewing ♦ Book at right of keyboard *Finger Placement* When using the keyboard: ♦ Curve your fingers upright over the home keys, ♦ Keep your wrists low but not touching the keyboard, ♦ Hold your forearms parallel to the slant of the keyboard, ♦ Keep your body erect, sitting back in the chair ♦ Keep your feet flat on the floor The keys on the middle row of the keyboard are called	Practice putting fingers correctly on home row Students will practice typing the characters from the home row keys without looking at the keyboard Students may use printed keyboard replicas to practice home row finger placing and practice. Practice the mnemonic in the video for remembering keys on keyboard. Teacher may call characters from the home row keys as student type.	Touch type home row keys. Touch type simple words from the home row.	Printable keyboard for practice: https://www.educationworld.com/tools_templates/template_keyboard-download.pdf https://www.shutterstock.com/image-vector/104-keys-pc-keyboard-layout-vector-1102032 https://www.teacherspayteachers.com/Product/Printable-Keyboard-for-Typing-Practice-3869496 Introduction to Typing https://www.typingclub.com/sportal/program-3/116.play https://www.youtube.com/watch?v=Ito-SiS8XTE Mnemonic for remembering keys on the keyboard https://www.youtube.com/watch?v=EebWkecsW38 Practice for typing skills http://primarygamesarena.com/Play/Keyboard-2030

Content	Suggested Activities	Suggested Assessment(s)	Resources
the **home row keys**. The home keys are a s d f for the left hand and j k l ; for the right hand When you are ready to keyboard, you rest your fingertips on the home row keys. When you type a character that is not typed with a home row key, you move a finger from the home row key to the key on the top or bottom rows. After you press the key, you return your finger to its place on the home row. You look at the screen when you keyboard, not the keys			

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Objective 4.3.4: Identify and use special keys

Content	Suggested Activities	Suggested Assessment(s)	Resources
Backspace - Deletes a character to the left of the cursor *Caps Lock* – Capitalizes all letters. *Delete* – Deletes a character to the right of the cursor. *Enter* – Completes or enters a command. Moves cursor down to the next line. *Tab* – Indents. It is used to take the cursor to the next tab stop. *Esc* - Short for Escape, Esc is a key found on the top-left corner of a computer keyboard. It allows the user to abort, cancel, or close an operation. *The Spacebar* - is the longest bar at the bottom of the keyboard. *The Backspace Key* - helps you to erase a mistake on your screen, just like you would use an eraser in your book. *The Directional or Arrow Keys* - help you to move the cursor up, down, left and right without erasing any of your work.	Watch appropriate video of special keys. Have students explain the functions of the special keys. Type simple words using the special keys.	Identify the special keys on the keyboard Match the keys with their functions. Type lists of simple words using the special keys.	Special Keys https://youtu.be/4XS1_j1XhCE Special Keys https://youtu.be/geKIJEghaqU

Content	Suggested Activities	Suggested Assessment(s)	Resources
Shift Keys - The keyboard has 2 shift keys. Hold down the shift key on the left side when you want to type capital letters with your right hand. Hold down the shift key on the right side when you want to type capital letters with your left hand. You hold down the shift key then press a letter key to type a capital letter. When new keys are introduced, you are required to take your time in order to get used to the position of the keys. The movement to and from each key should be quick and a part of the act of striking. Return your fingers to the home keys immediately after striking the new keys.			

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Objective 4.3.5: Perform basic touch-typing techniques

Content	Suggested Activities	Suggested Assessment(s)	Resources
When typing strike each key with a light tap with the tip of the finger. To begin Touch Typing place your fingers on the home row keys. You will know that you have placed your fingers correctly when you feel a little bump on the F and J keys. Your fingers should be curved and your thumbs should be on the space bar. You can press the spacebar with either thumb. It helps you to put a space between your work. The correct fingers for keying the home row keys are: Left hand for a, s, d, f, and right hand for j, k, l, ;. Your thumbs are on the spacebar. Continue reach techniques for all other keys of the keyboard.	Teacher will access various online typing games to facilitate keyboarding lessons. Practice keyboard using various online keyboard programs Students practice typing the letters from the home row keys. They are to remember to curve and position their fingers over the correct keys. They are to put spaces between their work by pressing the space bar. Students explain the use and function of the special keys learnt. Type words from spelling list for the week to reinforce letters. Type short sentences and paragraphs.	Speed drills Typing tests using websites like typingtest.com. Students may use a word processing document and type the letters as the teacher calls them off slowly and randomly. They will put spaces between their work by pressing the space bar when they hear the teacher say 'space'.	PDF Keyboarding Lessons https://www.emsisd.com/cms/lib/tx21000533/centricity/domain/172/keyboardlesson.pdf Online Keyboarding Lessons and Games http://www.crazy4computers.net/keyboarding-practice.html https://www.typing.com/student/games https://www.abcya.com/ Dance Mat Typing Power Typing E-Learning for Kids Typer Shark Learning Games for Kids Fun to Type Typing Master Free Typing Game.net Typing Chef UpBeat TypingClub https://www.typingclub.com/sportal/program-3.game

Content	Suggested Activities	Suggested Assessment(s)	Resources
			Mnemonic for remembering the keys https://www.youtube.com/watch?v=EebWkecsW38 Online Typing Tests https://www.typingtest.com/

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Objective 4.3.6: Define the term word processing

Content	Suggested Activities	Suggested Assessment(s)	Resources
Word processing is writing and editing words and sentences on the computer or other computerized device. Word processing is the writing, manipulating, and storing of textual material on a computerized medium. Microsoft Word is one of the most popular and widely used word-processing software.	Students will model accessing the MS Word program, how to save a document, and how to print it.	Play Word Processing Scoot Game	Word Processing Display Board Ideas https://www.teachingideas.co.uk/word-processing/word-processing-display https://www.teachingideas.co.uk/word-processing/using-icons-in-microsoft-office Word Processing Scoot Game file:///C:/Users/12424/Downloads/ElementaryWordProcessingScootGame-1.pdf

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Objective 4.3.7: Identify the features of the Word interface

Content	Suggested Activities	Suggested Assessment(s)	Resources
Some of the features of MS Word are as follows: **Home**: font, size, font style, font color, bullets, line spacing, an alignment are some of the elements included on the home tab. **Insert**: In your MS Word document, you can include graphs, shapes, images, charts, tables, footer, page number, and header, these may be found under the insert tab. **Design**: Under the design tab you get a list of templates or design in which you want your document to be created to improve your documents appearance. **Page Layout**: You get options like columns, lines, margins, orientation spacing, identification under the page layout tab.	Create and format simple text documents using font, style, color, bold, italic, underline, alignment, select, cut, copy, and paste options. Create documents in which you may do the following: • add text • enter text • format text: font, style, size, and color • adjust line spacing • insert and format WordArt • insert and format clip art or picture file • modify the text wrap of an object • draw and format shapes • scale, move, and rotate objects • insert a simple page border • spell check a document • print preview • print a document • cut, copy, and paste a selection • copy formatting from a selection Use spell check features in simple documents.		https://www.gadgetsnow.com/faqs/what-is-ms-word-and-its-features/articleshow/8446446.cms Text formatting tools worksheet https://www.liveworksheets.com/md2049753ma Formatting fonts quiz worksheet https://www.liveworksheets.com/ri252880sd

Content	Suggested Activities	Suggested Assessment(s)	Resources
	Name, save, open and print simple documents.		

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Objective 4.6.1: Explain the use of the Excel program, spreadsheets, and basic terminology

Content	Suggested Activities	Suggested Assessment(s)	Resources
Microsoft Excel (or excel) is an electronic spreadsheet computer program developed by Microsoft for windows. It can be used on Android, iOS, MacOS, Google Sheets and other similar programs. It is used to store data, perform calculations, present reports and to create charts. Spreadsheet can be used for personal budgeting, tracking expenses, or creating a list of personal items. A spreadsheet is a table arrange in rows and column, in which the data, that is, texts, numbers, and formula are entered.	Project-Based Learning Activity Appropriate Spreadsheet Tutorial videos; share Fun Games Show a Blank Spreadsheet – illustrate rows, columns, and cells, Sheet Tabs, Active Cell, etc. *Create a simple M&M Candy Spreadsheet* Step 1: Sort and count the different colors of M&M's in a small bag or handful. Enter the data in respective columns and rows. Step 2: Write a Formula for Basic arithmetic calculations to add the totals, e.g., = A2 + B2)	Plan a Lunch Expense for two Budget Spreadsheet (Munch Box Menu) Manually Calculate the Sum Totals. Draw a sketch of a spreadsheet, include columns and rows, enter data from Lunch Expense Budget; include the dollar signs and commas. Save the sketch to use in creating a new excel worksheet.	Teaching Spreadsheets - A guide to introducing Spreadsheets to Primary Students: https://www.attechedu.com/single-post/teaching-spreadsheets-a-guide-to-introducing-spreadsheets-to-primary-students https://www.youtube.com/watch?v=muu2R-AscGY: Fun Activities: Including: M & M Candy Spreadsheet: https://oakdome.com/k5/lesson-plans/excel/third-excel-lesson.php

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Objective 4.6.2: Demonstrate opening and closing a workbook and worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
To launch the Microsoft Excel program, locate the Microsoft **Excel Icon** on the device screen and double click it. To launch the program from the **Start menu**, select the **Start Button** – Program – Microsoft Office – select Excel. Once launched the program interface – the blank worksheet/spreadsheet appears. **Closing a workbook**, a dialog box might appear, prompt to save or option not to save. **An Excel File** is called a Workbook – Title Book 1. The book contains several sheets, called Worksheets or Spreadsheets. **Mouse action** and or **Touch Screen (mode)** from the main Screen. Touch Mode is the use of the finger or a stylus to tap objects on the touchscreen to activate a command or tool. In this mode the ribbon increases in height, the buttons are bigger, and more space appears around each button, to easily use the finger or a stylus to tap the button needed.[22]	Project-Based Learning Activity Appropriate Excel Videos Demonstrate how to open the Excel Program and Worksheet; how to close a program and worksheet. Demonstrate the common ways to interact with a touch screen device. Touch Screen Gestures vs. Mouse Action • Tap – To Activate a link; press a button. Mouse equivalent - a click. • Double-tap – double-click • Press and Hold – right - click. Drag or slide, Pinch, Swipe, Stretch.	Students to demonstrate the correct ways to open and close the workbook/worksheet; using a Mouse, and or a Touch Screen device. Classwork – Short Answer Questions; Fill-In the Blanks	YouTube Videos: https://www.youtube.com/watch?v=OpbYbGcELoU https://windowsloop.com/touchscreen-gestures-in-windows-10 https://www.youtube.com/watch?v=2WWn1h12PuQ Textbook: Shelly Cashman Series – Discovering Computers & Microsoft Office 365 Office 2016

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Objective 4.6.3: Identify the parts and features of a worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
Basic Parts of the Worksheet Title bar, Minimize, Restore, Close and Maximize buttons. Ribbon – Tabs and Commands, Name box, Column letter; Row numbers; Active Cell; Cell; Cell Range, etc. *Basic Terminology* rows, columns, cell, active cell, data - labels or text and numbers. Values or numbers; formula and function (to perform calculations)	Project-Based Learning Activity PowerPoint presentations Appropriate Spreadsheet videos Show a labelled worksheet and explain each part	Label parts of a worksheet and explain the function of each part. Matching True or False Fill-In the Blanks	Websites: Parts of the Worksheet – YouTube Videos https://www.youtube.com/watch?v=otdlR1rBwkM https://www.youtube.com/watch?v=OpbYbGcELoU

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Objective 4.6.4: Navigate within a worksheet and enter different types of data.

Content	Suggested Activities	Suggested Assessment(s)	Resources
The worksheet is a table consisting of cells, which are formed by the intersection of columns and rows that ae used to hold data. Moving around the cells of a worksheet using the following methods: Pointing and clicking in a cell (block plus sign cursor) Scroll Bars arrows; Directional Arrows or Cursor Control Keys (Left, Right, Up, Down); Home Key and CTRL + Home, End, CTRL +G or F5 (Go To dialog box to move quickly to a cell address. TAB Key; PGUP, PGDN. The horizontal and vertical scroll bar to move to other areas of the worksheet. *Entering Texts, Dates, and Numbers* Text or label (data) is any combination of letters, numbers, and symbols. Numeric data is any number or value used in calculations. Date and Time data are values to represent dates and times formats.	Project-Based Learning Activity Presentation videos Students to identify these keys on device and practice movements around the worksheet Provide a list with labels (texts); numbers, dates and times. Have students differentiate each. In a sample worksheet, point out the positioning of labels – left align. Numbers – right align in a cell. Demonstrate how to select a cell, a range of cells, an entire row or column.	Students to enter data from their Lunch Box Budget Expense Menu sketched spreadsheet; include the dollar signs and commas. Review questions on: Types of data entered. The position/alignment in the cells. Ways to move within a worksheet	How to Navigate in a Worksheet: https://www.youtube.com/watch?v=yr12epMMBTI Theory – Important Navigation Keys: https://www.omnisecu.com/excel/worksheet/important-excel-worksheet-navigation-keys.php

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Objective 4.6.5: Create a blank worksheet or use a template and perform basic calculations.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Create a new workbook from the new screen in Backstage view. Use the blank workbook template or open an existing one. *Note: using the CTRL + N or a new blank document in any Office application.* To enter data into a cell, it must be selected. The easiest way to select a cell (make it active) is to use the mouse to move the block plus sign pointer to the cell and click it. Use the Arrow Keys. When the cell is selected, the thick border surrounds the cell, and the active cell reference appears in the Name Box. The active cell column and row headings color changes to a darker shade. Enter data into a cell and pressing the Enter key, moving the cell cursor to the next cell in the column. Resizing columns and rows. *(Click and drag the border)* *Calculating with a Formula*: The main reason for using Excel is to perform calculations and analysis of data. A formula is written using arithmetic operators for calculations, such as addition, subtraction, multiplication (*), division (/) A Formula must begin with the equal sign (=)	Project-Based Learning Activity Appropriate Presentation video Students to use their sample sketch spreadsheets and to enter their data in a new worksheet. Demonstrate how to write a formula using mathematical operator to add values. e.g., = A2+B2 Demonstrate the use of the SUM Function.	Practical Exercise: Use the Lunch Expense for two Budget Spreadsheet (Munch Box Menu) Write the formula to total the values. Practical Test – other assigned exercises.	Collaboration with Mathematics tutors Website: https://www.youtube.com/watch?v=MZimPlQ5v88 Importance of Using Excel Games: https://keyskillset.com/excel-simulation-game-better-video-tricks.

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Objective 4.6.6: Format, save, and print a worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
Formatting enhances the appearance of the worksheet data by changing font, size, color, alignment, and adding borders. Borders are useful when a worksheet is printed, to show the gridlines Saving a worksheet – This is done to keep the document for later use or to share with others. Using the Backstage view – File – Save or Save As. From the Keyboard: Ctrl +S in all Office Program. Printing is necessary for a paper-based copy of the worksheet. From the File – Backstage View. Excel has many tools to control the print layout and appearance of a worksheet. Preview before printing for correctness.	Project-Based Learning Activity Presentation Videos Sample formatted worksheet. Demonstrate the uses of the Save/Save As commands and print options.	Project: Finalizing a worksheet. Assigned exercise to format, save, preview, and print a hard copy or Screen Share Test/Quiz – multiple choice, True/False, Matching, Fill-in the Blanks	https://www.youtube.com/watch?v=otdlR1rBwkM https://www.pinterest.com/thedigitalscoop/spreadsheet-activities/

Technology Education for Primary School

Scope of Work

Grade 5

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SCOPE OF WORK
TECHNOLOGY SAFETY AND COMMUNICATION
GRADE 5

Objective 5.1.1: Demonstrate proper use and care of devices and classroom rules.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Rules For Using Technology in the Classroom ▪ Never touch another student's device ▪ No food or drinks near the device ▪ Only visit apps or websites with permission ▪ Ask for help if you don't understand something, or if your device malfunctions ▪ Do not delete anyone else's work or apps ▪ Only one person uses the device at a time ▪ When you're done, close all apps and power off device ▪ Respect each other's workspace ▪ Sanitize devices after each use ▪ Ensure that workstation is tidy ▪ Put devices away in storage compartment ▪ Remember, devices are the school's tools, not toys	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos *Extension Activity:* ▪ Students will collaboratively create a video demonstrating ways to care for digital devices from start to finish ▪ Post videos to Class Dojo	Variety of game-based learning platforms such as Quizizz, Kahoot, and Poll Everywhere Peer assessment such as online quizzes, polls, graphic organizers	Classroom Technology Rules https://educatorpages.com/site/grouptwo/pages/classroom-technology-rules Quality Logo Products, https://www.qualitylogoproducts.com/promo-university/how-to-take-care-of-your-gadgets.htm Learning Management System https://bahamas.1on1lms.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
How to Care for Various Digital Devices *Laptops and Tablets* Follow these steps to clean your laptop: ▪ Step One: Detach your battery, wipe it down with a dry cloth, and blow out the dust using a can of compressed air. ▪ Step Two: Wipe down the screen with the same cloth to remove any smudges. *Cell Phones* The best way to clean and disinfect your phone: ▪ Step One: Remove the phone from its case and turn the power off. ▪ Step Two: For a deeper clean, dip the corner of a soft cloth in isopropyl alcohol or white vinegar. *Headphones and Ear Buds* How to clean headphones: ▪ Step 1: Wash the foam or rubber pieces with isopropyl alcohol. Do not overly soak the towel you're using, but simply dab a corner into the rubbing alcohol. ▪ Step 2: Scrape ▪ Step 3: Dry thoroughly before using.			

Content	Suggested Activities	Suggested Assessment(s)	Resources
Game Consoles How to clean game consoles like Xbox: ▪ Step One: Use a microfiber cloth for the outside ▪ Step Two: Use compressed air to blow dust out of the vents. ▪ Step Three: Use the compressed air to blow dust out of game cartridges and controller ports as well. *Flash Drive* How to clean your flash drive: ▪ Step One: Use rubbing alcohol and a Q-tip to clean your flash drive. ▪ Step Two: Make sure it's completely dry before plugging it into the computer. *Alexa, Google Home, Amazon Echo* How to clean your Alexa, Google Home, or Amazon Echo: ▪ Step One: Use a dry cloth to remove any dust that builds up on your voice assistant. ▪ Step Two: Do not use any cleaners as moisture can easily damage your device. *Printers* How to clean your printer: ▪ Step One: Use			

Content	Suggested Activities	Suggested Assessment(s)	Resources
rubbing alcohol, a clean cloth, and compressed air to wash it down. ▪ Step Two: Avoid using paper towels as these can leave streaks.			

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Objective 5.1.2: Compare and contrast Internet browsers and search engines.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Internet Browsers A browser is a software that we use to access the internet, view webpages, and websites on the computer, tablet or phone. Examples of Popular Internet Browsers ▪ Internet Explorer ▪ Google Chrome ▪ Opera ▪ Safari ▪ Mozilla Firefox *Search Engines* A search engine is a software program that helps people find the information they are looking for online using keywords or phrases. *Examples of Search Engines* ▪ Kidtopia ▪ Kiddle ▪ KidRex *Creating an Email Account* There are several web firms that provides free services for using and maintaining an email account like, Google (www.gmail.com), Yahoo (www.yahoomail.com), Hotmail (www.hotmail.com)	Short answer questions Puzzles (Crossword, Word Search, Unscramble) Multiple Choice Computer Vocabulary Role Play True and False Questions Digital Matching pairs Appropriate presentation/videos Oral Type Quizzes *Extension Activity* ▪ Students will create an email account using Gmail	Variety of game-based learning platforms such as Quizizz and Kahoot Peer assessment such as online quizzes, polls, graphic organizers Research three (3) Commonwealth Countries, including The Bahamas. Using Magisto, create a two (2) minute video describing population, leadership, government, culture, food, and music Integrate Science/Social Studies topic such as the 'Water Cycle' as research project. Collaborate with home- room teacher to obtain content.	Safety Champion https://www.safetychampion.com.au/what-are-the-main-web-browsers-and-how-do-they-differ/ BDC Glossary https://www.bdc.ca/en/articles-tools/entrepreneur-toolkit/templates-business-guides/glossary/search-engine Nearpod https://np1.nearpod.com/presentation.php?id=124196690 Kidtopia https://www.kidtopia.info/ Kiddle https://www.kiddle.co/ KidRex https://www.alarms.org/kidrex/ Magisto https://www.magisto.com/ Learning Management System https://bahamas.1on1lms.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
How to Create an Email Account Using Gmail 1. Log on to Gmail website by typing www.gmail.com in the address bar of your internet browser. 2. Click on sign now or create a new account. 3. Fill in your information in the required fields, this includes identity (name and surname), password, date of birth, phone number. 4. Accept their terms and conditions. 5. Click save. 6. A verification code might be sent to you. 7. Enter the code and click submit.			

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Objective 5.1.3: Explain the appropriate use of communications tools - email, discussion forums, and video conference.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Use of Communication Tools in the Classroom Digital tools help to ease and enhance several different aspects of communication. *Tech Tools to Help Enhance Communication in and out of the Classroom* *Remind 101:* an app and website used for communication between teachers, parents, and students. *Social Media:* Twitter and Instagram are the top choices to keep parents and students and even the people in the community involved in the goings on of the school and the classroom. *GoSoapBox:* a chat room designed for classrooms. *Kidblog*: a safe place for students to manage their own blog. They can write blog posts and create digital portfolios under teacher supervision. *Google Docs*: a wonderful	Watch appropriate presentation/ Videos Practice skim reading -- take one minute to read a short article. Discuss what stood out in the article. Headings? Bold words? Quotes? Use ten minutes to read the same article and discuss deep reading. *Extension Activities* Using Kidblog, students will create a digital portfolio about an article from 'Time for Kids' Write down ten (10) words to describe a person, place, or topic. Come up with synonyms for each word.	Research article on the environment from 'Time for Kids' --'Kid Heroes for the Planet' (observing Earth Day) Use a communication tool like Remind 101 and Google Docs to pair and collaborate with other computer students from a family island school to discuss the article Use a picture that represents the environment from the Internet. Include the picture along with a short fifty (50) word report to describe the picture	Schoology Exchange https://www.schoology.com/blog/6-tech-tools-enhancing-communication-classroom-and-out Twitter https://twitter.com/ Instagram https://www.instagram.com/ GoSoapBox https://www.gosoapbox.com/ Kidblog https://go.fan.school/kidblog Pen Pal Schools Blog https://blog.penpalschools.com/home/teaching-with-tech Teaching Students Research Skills https://cpb-ap-se2.wpmucdn.com/global2.vic.edu.au/dist/8/5256/files/2019/02/50-Mini-Lessons-For-Teaching-Students-Research-Skills-Kathleen-Morris-1qxevz5.pdf Time for Kids https://www.timeforkids.com/g56/?age=child

Content	Suggested Activities	Suggested Assessment(s)	Resources
way for students and teachers to collaborate on assignments. *EdPuzzle*: an interactive video given by the teacher where students watch a video that pauses along the way for students to answer a question based on the video.			Google Doc https://accounts.google.com/ServiceLogin/signinchooser?service=wise&passive=1209600&continue=https%3A%2F%2Fdocs.google.com%2Fdocument%2Fu%2Fo%2F%3Ftgif%3Dd&followup=https%3A%2F%2Fdocs.google.com%2Fdocument%2Fu%2Fo%2F%3Ftgif%3Dd&ltmpl=docs&flowName=GlifWebSignIn&flowEntry=ServiceLogin EdPuzzle https://edpuzzle.com/ Learning Management System https://bahamas.1on1lms.com/

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Objective 5.1.4: Describe digital citizenship and potential risks and dangers.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Digital citizenship is the ability to access digital technologies safely and responsibly, as well as being an active and respectful member of society, both online and offline. *Dangers Associated with Poor Digital Citizenship* A lack of digital citizenship or poor digital citizenship can result in cyberbullying, irresponsible usage of social media, sharing sensitive personal details, and a lack of knowledge of Internet safety. Online Activities That Contribute to Digital Footprint ▪ Favorite Apps ▪ Websites Visited ▪ Messages Sent ▪ Videos Downloaded ▪ Pictures Uploaded ▪ Music Downloaded ▪ Games Played ▪ Comments Posted	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play Appropriate presentation/videos *Extension Activities* Students will play Digital Passport games: ▪ Security (Password Protect) ▪ Privacy (Share Jumper) ▪ Search (Search Shark) ▪ Upstander (E-volve) ▪ Creative Credit (Mix –n-Mash) Create a post card that highlights good and bad digital footprint practices	Digital Citizenship Assessment Worksheet	What is Digital Citizenship-A Guide for Teachers https://www.futurelearn.com/info/blog/what-is-digital-citizenship-teacher-guide#What_is_digital_citizenship My Media Balance Video https://www.commonsense.org/node/4650821 Digital Citizenship Assessment Worksheet https://code.org/curriculum/course3/20/Assessment20-DigitalCitizenship.pdf Digital Citizenship – Being Responsible Online https://gateway.aurorak12.org/2021/04/11/digital-citizenship-being-responsible-online/#:~:text=However%2C%20a%20lack%20of%20digital,of%20knowledge%20of%20Internet%20safety. Digital Passport https://www.digitalpassport.org/ Google, 2022 https://www.google.com

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Objective 5.1.5: Define cyberbullying

Content	Suggested Activities	Suggested Assessment(s)	Resources
Cyberbullying is the use of digital media (such as websites, apps, and text messages) to intimidate, upset, or harm someone. It includes repeatedly sending, posting, or sharing negative, harmful, or mean content about someone else on purpose.	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play Appropriate presentation/videos *Extension Activity* Students will watch'Vicky's Party' animation video along with your parents. Use GoSoapBox to engage in a chat about the kind of message Siobhan could send to either Vicky or to the other girls to help resolve the situation.	Using the Frayer Model, fill out the diagram for the term, 'cyberbullying' Provide responses for: Definition, Characteristics, Examples, and Non-Examples *Differentiation* Using the Frayer Model, fill out the diagram for the term Cyberbullying Provide responses for: Definition, Characteristics, Examples, Non-Examples A pictorial representation may be used for responses	Teachers' Essential Guide to Cyberbullying Prevention https://www.commonsense.org/education/articles/teachers-essential-guide-to-cyberbullying-prevention#What%20is%20cyberbullying? Webwise Animation: Vicky's Party https://www.webwise.ie/teachers/myselfielesson2/ GoSoapBox https://app.gosoapbox.com/ Cyberbullying Frayer Model Activity https://nearpod.com/t/technology-and-computer-science/kindergarten/cyberbullying-frayer-model-k12-L80113982 What Can I Say? Worksheet file:///C:/Users/BTVI%20User/Downloads/WorksheetsLesson2%20(3).pdf Learning Management System https://bahamas.1on1lms.com/

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Objective 5.1.5: List the effects of cyberbullying and strategies in preventing it.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Negative Effects of Cyberbullying There are many detrimental outcomes associated with cyberbullying that reach into the real world. Many targets report feeling: ▪ Depressed ▪ Sad ▪ Angry ▪ Frustrated ▪ Low Self esteem ▪ Anxiety ▪ Family problems ▪ Academic difficulties ▪ School violence ▪ Suicidal thoughts/attempts *Cyberbullying Prevention* ▪ Educate yourself on what cyberbullying is ▪ Protect your password ▪ Keep photos PG ▪ Pause before you post ▪ Raise awareness ▪ Set up privacy controls ▪ Never open messages from people you don't know ▪ Log out of accounts on public computers	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos *Extension Activity* Students will play a Cyberbullying BINGO game	Using the Poster My Wall template, create 'Stop Cyberbullying' and 'What to Do?" posters	Cyberbullying: Identification, Prevention, Response https://cyberbullying.org/Cyberbullying-Identification-Prevention-Response-2021.pdf Cyberbullying Lesson Plan http://kamaron.org/PDFs/Cyber-Bullying-Teens.pdf Learning Management System https://bahamas.1on1lms.com/ Cyberbullying BINGO Card https://bingobaker.com/view/3764004 Poster My Wall: https://www.postermywall.com/index.php/posterbuilder/copy/85d2077749e571d0581ff69090bfccaf 10 Tips for Teens to Prevent Cyberbullying https://www.momsteam.com/health-safety/10-tips-teens-prevent-cyberbullying

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Objective 5.1.7: Create a project integrating best technology and online communications tools.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Online Communications Tools ▪ Skype ▪ Google Hangouts ▪ WhatsApp Group Video	Project-Based Learning Activity: Students will formulate a group of three to complete group project. Create a video on topic, 'Gender Stereotypes: How does gender stereotypes shape our experiences online Use the Gender Stereotypes Lesson Slides guide.	Group presentation on video topic, 'Gender Sterotypes: How does gender stereotypes shape our experiences online Beyond Gender Stereotypes Lesson Quiz	Beyond Gender Stereotypes https://www.commonsense.org/education/digital-citizenship/lesson/beyond-gender-stereotypes Beyond Gender Stereotypes Lesson Slides https://docs.google.com/presentation/d/1iiQ1S452xTTHdobSYNWCvmWUUb4-040pp9jav2vR2F8/edit#slide=id.g3da2b01426_1_0 Beyond Gender Stereotypes Lesson Quiz https://www.commonsense.org/education/digital-citizenship/quiz/beyond-gender-stereotypes-lesson-quiz

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Objective 5.2.1a: Describe a computer and state types of digital computers

Content	Suggested Activities	Suggested Assessment(s)	Resources
A **computer** is an electronic device that manipulates information, or data. Computers come in many shapes and sizes, and they perform many different functions in our daily lives. Computers exist in many digital devices that we use on a day-to-day basis. When you withdraw cash from an ATM, scan groceries at the store, or use a calculator, you're using a type of computer. *Desktop Computers* Computers designed to be placed on a desk and used in that spot. They need a constant supply of electricity to function. *Laptop Computers* Battery-powered all-in-one computers that are more portable than desktops, allowing you to use them almost anywhere. *Tablet Computers* Handheld computers that are even more portable than laptops. *Embedded Computers* Many of today's electronics are basically specialized computers, though we don't	Think-Pair-Share: Have students share with a partner their thoughts on what makes a device a computer. Have students watch the *'What is a Computer'* video. Have students complete a compare and contrast worksheet on the types of computers. Have students complete an interactive on identifying embedded computers. Have students read/listen to the book 'Goodnight iPad' and list the digital devices mentioned.	*Write the Room* Paste numbered descriptions and images of the types of personal computers around the room. Have students walk around and write the number along with the matching name on a paper or in their book. This can also be done in reverse. Have students write a description for a posted name or picture. *Journal Writing/Blogging* In at least three sentences, describe a computer in your own words. Have students create a slideshow/video showcasing types of computers and a few examples.	What is a Computer Video: https://youtu.be/Cu3R5it4cQs Types of Personal Computers: https://www.youtube.com/watch?v=sHyA_Q9dzoI Embedded Computers Interactive: https://quizizz.com/admin/presentation/5fbcda6199cd38001be66ff8 Goodnight iPad Read Aloud: https://www.youtube.com/watch?v=-ouOwpYQqic Padlet Platform: https://padlet.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
always think of them that way. They are designed to complete one specific task. Like, smartphones, wearables, game consoles, smart TVs, washing machines, microwaves, and smart speakers.[1]			

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Objective 5.2.1b: Identify digital devices and their parts

Content	Suggested Activities	Suggested Assessment(s)	Resources
The basic parts of a desktop computer are the system unit, monitor, keyboard, and mouse. Laptop computers have all their parts in one case – screen, keyboard, and touchpad. Instead of a keyboard and mouse, tablet computers use a touch-sensitive screen for typing and navigation.[1] While some of their external parts may be different, they all have similar internal components. Some internal components of a computer are: - central processing unit (CPU) - mother board - RAM - hard drive - power supply - video card - sound card[8]	Have students watch the 'Basic Parts of a Computer' video. Have students complete the 'Computer Parts Hangman' game. Complete the 'Find the Technology' interactive search. [Whole Class/Group/Individual] Have students watch the 'Inside a Computer' video. Have students read/listen to the book 'Little Red Hen Builds a Computer' and list the internal components mentioned. Then, research to discover the function of the parts. Have students complete the 'Build your own Computer' activity.	Have students complete a worksheet labeling the parts of digital devices. [Print/Digital]	Basic Parts of a Computer Video: https://www.youtube.com/watch?v=mLgTnkw558w Computer Parts Hangman: https://www.quia.com/hm/866691.html Find the Technology Interactive Game: https://www.abcya.com/games/find_the_tech Name that Device Quizlet: https://quizlet.com/_300qy7?x=1jqt&i=1hxrsm Inside a Computer Video: https://youtu.be/HB4I2CgkcCo Little Red Hen Builds a Computer Read Aloud: https://www.youtube.com/watch?v=hF7-koBFpeI&t=1s Build Your Own Computer Instructional Video: https://www.youtube.com/watch?v=cQuF1i-ORjM&t=433s Brittany Washburn: https://www.teacherspayteachers.com/Product/Build-

Content	Suggested Activities	Suggested Assessment(s)	Resources
Inquiry Prompt: Can you identify internal components of digital devices?			Your-Own-Computer-Activity-2949758?st=0d97f6a44e6905264cc15cb53d4ceed8

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Objective 5.2.2: Define and classify hardware components

Content	Suggested Activities	Suggested Assessment(s)	Resources
A computer is made up of many parts that work together. The parts of the computer that can be seen and touched are called hardware.[2] Each hardware component has a specific job it does to help the digital device work. Five groups that hardware components can be divided into are: - Input Devices – used to enter data into the computer. Data can be letters, numbers, sounds, or images. *Examples: mouse, keyboard, stylus, smart pencil, touchscreen, joystick, remote control, touchpad, scanner, digital camera, web camera, microphone, drawing tablet, and interactive whiteboard.* - Output Devices – used to hear and see information from the computer. You use an output device to see or hear information from the computer. Information can be sound through speakers,	Have students watch the video 'Computer Devices'. *Clarify for students that a CPU is a chip found inside of the system unit/tower.* Have students complete a Quizizz identifying hardware components for each group. [Individual]	<u>*Peer Assessment*</u>: Have students share with a partner their definition of hardware and provide examples. Have students complete a sorting worksheet with a collection of hardware components. [Print/Digital] Have students create a crossword puzzle that contains the names and clues for 5 input devices, 5 output devices, 5 storage devices. They may also include devices that can have two functions.	Password 2: Chapter 6 – Computer Devices video: https://www.youtube.com/watch?v=b54KFerOsHI Input, Output, or Storage Quizizz: https://quizizz.com/admin/quiz/5ee83e8d346bc6001f455ee7 ABCya Puzzle Maker: https://www.abcya.com/games/crossword_puzzle_maker Discovery Education Puzzle Maker: https://puzzlemaker.discoveryeducation.com/criss-cross

Content	Suggested Activities	Suggested Assessment(s)	Resources
art displayed on the screen, or text and graphics on a paper. *Examples: monitor, screen, printer, speaker, headphones, and projector.* - Storage Devices – used to save work to be retrieved later. *Examples: flash drive, CD, DVD, hard drive, external hard drive, memory cards, and the cloud*. - Processing Devices – reads the input and determines what it needs to do - System Unit – protects the internal components of the computer, like the CPU, motherboard, and hard drive.[2]			

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Objective 5.2.3: Construct a representation of an IPO cycle

Content	Suggested Activities	Suggested Assessment(s)	Resources
A computer helps us generate information from raw data. It follows the **Input-Process-Output** (IPO) cycle: - We use an input device to enter data into a computer. This data is called the **input**. - The CPU converts the data into meaningful information. This is called **processing**. - During the processing, the data or information are stored in the computer's memory - After the data is processed, the result is conveyed through an output device. This is the **output**.[5]	Have students watch the 'How Does a Computer Work?' video. Have students complete a Quizizz identifying the input, process, and output of various IPO cycles. [Whole Class/ Group/ Partner/Individual] Present students with a variety of IPO cycles and have them identify the activity at each stage. [Print or Digital Worksheet /Notebook]	Have students create a PowerPoint to display a representation of an IPO cycle.	How Does a Computer Work video: https://youtu.be/3e0aN_pPhME IPO Cycle Quizizz: https://quizizz.com/admin/quiz/60ee7229fa248c001e16c0ad

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Objective 5.2.4: Explain the purpose of software

Content	Suggested Activities	Suggested Assessment(s)	Resources
Software are instructions that tell the computer what to do. There are two main types: system software and application software. **System Software** are the programs that run behind the scenes to ensure the computer functions properly, like the operating system and utility programs. An operating system is the most important software that runs on a computer. It manages the computer's memory and processes, as well as all its software and hardware. Without an operating system, a computer is useless.[9] **Application Software** are the programs used to perform specific computer tasks. They can be divided into two groups – general purpose and special purpose. General Purpose software to carry out lots of different tasks using that application. Special Purpose software perform one specific task	Round Robin Question – What is software? Share with students the 'What is Software' video. Share with students the 'Understanding Operating Systems' video. *Scavenger Hunt* Use your Internet sleuthing skills to match the name of the operating system to its logo. Have students perform a digital research scavenger hunt to find examples of application software based on their uses. Using a T-Chart, have students sort general-purpose and special-purpose software.	Have students create a short video (Flipgrid) explaining the purpose of the different types of software.	What is Software Video: https://youtu.be/PBDlbSAddAI Understanding Operating Systems video: https://youtu.be/fkGCLIQx1MI Types of Application Software: https://technostacks.com/blog/types-of-application-software Flipgrid Platform: https://info.flipgrid.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
like a flight simulator or payroll software. The word 'app' is short for application software. This is a piece of software that allows us to do an everyday task.[4]			

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Objective 5.2.5a: Discuss the role of GUI

Content	Suggested Activities	Suggested Assessment(s)	Resources
Modern operating systems use a graphical user interface, or GUI (pronounced gooey). A GUI lets you use your mouse to click icons, buttons, and menus, and everything is clearly displayed on the screen using a combination of graphics and text.[9]	Share with students the 'What is GUI' video. Share a PowerPoint of different icons and have students identify their role. *Examples: power, trash, Wi-Fi, signal strength, volume, and battery.* [Whole Class]	*Journal Writing/Blogging* Agree or disagree? GUI is a critical part of computers.	What is GUI video: https://www.youtube.com/watch?v=9SMmbc-TFrQ Kids React to Old Computers Video: https://www.youtube.com/watch?v=PF7EpEnglgk Learning.com: Symbols of Technology: https://www.learning.com/

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Objective 5.2.5b: Identify functions of technology based on their symbols.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Pictures and words work together all the time. Many pictures in the real world give you information. Many of these pictures are symbols. Symbols are very simple pictures that tell you something, like which bathroom to use, where to throw your trash, or when something is not allowed. They are easily understood by people around the world. When you use technology, you will see even more symbols.[6]	Explore the Zoom or Teams platform with students, identifying the functions of the various symbols. [PowerPoint/Quizizz/Kahoot] Explore the Google Chrome platform with students, identifying the functions of the various symbols. [PowerPoint, Quizizz/Kahoot] Explore icons on the desktop/mobile device, identifying their functions.	Have student's complete worksheets on icons and symbols. [Print/Digital]	

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Objective 5.2.6a: Evaluate cloud computing.

Content	Suggested Activities	Suggested Assessment(s)	Resources
The cloud (cloud computing or cloud storage) is the Internet - more specifically, it's all the things you can access remotely over the Internet. When something is in the cloud, it means it's stored on Internet servers instead of your computer's hard drive. Two main reasons people use the cloud are convenience and reliability. They can store files, share files, back up data for future use.[7]	Have students watch the 'What is a Cloud?' video. Have students create a poster on cloud computing.	Have students research and debate the pros and cons of cloud computing.	What is a Cloud video: https://youtu.be/4OO77HFcCUs

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Objective 5.2.6b: Model how to use cloud computing

Content	Suggested Activities	Suggested Assessment(s)	Resources
Microsoft 365 is a cloud service that allows you to use different software and save your work in the cloud.	Explore the Office365 platform with students, highlighting the different applications [Whole Class/Group/Partner]	Have students upload a file to a shared folder or class notebook.	Office365: https://www.office.com/

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Objective 5.5.1: Define coding and programming

Content	Suggested Activities	Suggested Assessment(s)	Resources
Coding is writing commands to tell the computer to do something in a programming language it can understand. To start coding, you have to know a programming language, but you also have to understand how a computer thinks so that you can give it the right kinds of instructions. Code is a special language that a computer understands. An algorithm written in code is called a program.[20] *Examples of Coding Languages* *- Scratch: a visual coding system that uses colored blocks and premade graphics to create games and apps.* *- Lego Mindstorms NXT: a language used by the FIRST Robotics League* *- Python: a general-purpose language that can be used for different tasks* *- HTML/CSS: These are markup languages and not programming languages. A markup language is a way to design and present text.*	*During Teaching* Have students watch the *'What is computer programming'* video. Blindfold one student and have the class direct them around the room.[13] [Whole Class] Have students write instructions on how to get to a mystery location around the school using such instructions as "Go forward x steps", "turn left", and "turn right".[15] [Group/Partner]	Have students create a poster or infographic explaining coding and programming. Have students create a mind map highlighting different programming languages.	BrainPop: What is computer programming: https://youtu.be/pKBwg8uHOyk Bitesize: What is programming: https://www.bbc.co.uk/bitesize/guides/zts8d2p/revision/1 Piktochart: https://piktochart.com Canva: https://www.canva.com Popplet: https://www.popplet.com/ Bubbl: https://bubbl.us/

Content	Suggested Activities	Suggested Assessment(s)	Resources
- JavaScript: a language used to make the web interactive.[17]			

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Objective 5.5.2: Describe computational thinking.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Computational thinking means planning, problem-solving, and analyzing information the way a computer does.[17] The cornerstones of computational thinking are decomposition, pattern making, abstraction, and algorithms. **Vocabulary** 1. *decomposition: break a problem down into smaller pieces* 2. *pattern making: finding similarities between things* 3. *abstraction: pulling out specific differences to make one solution work for multiple problems* 4. *algorithm: a list of steps that you can follow to finish a task*[13] Each cornerstone is as important as the others. They are like legs on a table - if one leg is missing, the table will probably collapse. Correctly applying all four techniques will help when programming a computer.[16]	Have students journal their thoughts on computational thinking and its importance. [Individual] Have students view the 'Computational Thinking for Children' video. Discuss the terms explained in the video. [Whole Class/Partner] *Tut, Clap, or Jive* Show students a sequence of hand movements (hand jive, tutting, or clapping). Make sure the sequence is relatively complex or long so that it is not easily remembered without breaking it down. Model how to break down the sequence into smaller parts. Show how to number and/or name each part and draw an image of each part. Show another video of hand movements and have students decompose the sequence on a paper.[14] [Individual/Partner]	Have students create an infographic that will explain computational thinking to the class.	Computational Thinking for Children Video: https://www.youtube.com/watch?v=mUXo-S7gzds Decomposition unplugged activity KS2. https://www.barefootcomputing.org/resources/decomposition-unplugged-activity-ks2 Tutting Video: https://www.youtube.com/watch?v=axpDFvUz8Eo Hand Jive Video: https://www.youtube.com/watch?v=elozjNOgrm8 Clapping Video (00:58): https://www.youtube.com/watch?v=ibr1OVTZNIU

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An algorithm lists the steps needed to complete a task. Computer scientists use algorithms to plan out the steps they want a computer to follow. Programs are created to implement algorithms. Algorithms can be represented as pseudocode or a flowchart, and programming is the translation of these into a computer program. If an algorithm has been designed, the computer program will follow this algorithm, step-by-step, which will tell the computer exactly what it should do. Examples of algorithms in everyday life are: recipes, traffic lights, GPS, brushing your teeth, and planting a seed.	Round Robin: What are algorithms? Have students view the 'Algorithms' video. What are some of the algorithms they see in the day-to-day living? [Whole Class Discussion] Write the steps for folding a paper airplane on the board out of order. Have the students unjumble the steps and then create a paper airplane. Have students complete page 3 in the Act 2 workbook by drawing a line from each step in the Algorithm to the matching code block. Have students identify the algorithms for getting to class from the front of the school. [Partner/Group]	Have students develop an algorithm to solve an assigned problem using a specific set of commands and use peer review to critique the solution. [Peer Evaluation]	GCF – Algorithms: https://edu.gcfglobal.org/en/computer-science/algorithms/1/ Computer Science Basics – Algorithms Video: https://www.youtube.com/watch?v=sHyA_Qgdzol ECforAll Act 2 Unit 1 Workbook: https://docs.google.com/presentation/d/12w6xuBpJ8RO8jU8JejISWnmJz76MjY-lons7w7Ag6mM/edit#slide=id.gef0079471f_0_661

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Objective 5.5.4: Demonstrate knowledge of the Scratch interface

Content	Suggested Activities	Suggested Assessment(s)	Resources
Scratch is an environment where you can build algorithms by combining code blocks together. You can create interactive stories, animations, artwork, and games. There are three main sections of the Scratch interface. On the left-hand side we have tools to control or change our characters. The main way is through our code blocks. There are different types of block categories or ways to control our characters. We can also change the way our characters look under the "costumes" tab. We can also add sound under the "sounds" tab. In the middle we have our scripts area. This is where we put together code blocks to create our algorithms, or instructions, for our character. We *"drag and drop"* the code blocks we want to use.	Have students view the 'Scratch Basics' video. Discuss products that can be made in Scratch, and the method used. Open a New Project (click on "create" on the top left) and explain the different components of the Scratch Interface. Have students view the Exploring Scratch 3.0 sheet of the student workbook as a reference. [Individual] Pair and Share: Have students share with a partner what they would like to create in Scratch. Have a few students share their thoughts with the class. [Partner] Have students log into their accounts and explore the interface. Introduce the menu options: My Stuff; My Class; Studio. [Individual] Have students access the Hello Mr. Scratch project and use the blocks available. [Individual/Partner]	Have students complete a LiveWorksheet, Kahoot, or Quizizz identifying the parts of the Scratch interface.	Pinnguaq Scratch Basics Video: https://www.youtube.com/watch?v=NqMd44Oi2l4 ScratchECForAll Act 1 Student Workbook: https://docs.google.com/presentation/d/189Vg1wejcISlMatwfrtftfWIfrYTi1F3sMmeTxLlaLs/edit#slide=id.gba823378e5_0_365 ScratchECforAll Teachers' Guide: https://docs.google.com/document/d/18GgFajp8nmSqoy6WZBsANkCvGtVxJ4Jj64D87Szrz3k/edit# Hello Mr. Scratch Project: https://scratch.mit.edu/projects/404899091/editor/ Scratch Tutorial Links: https://docs.google.com/presentation/d/1FGkEaUi-dEqjyiZN7AweMLg97OxxgE5UsKzsTYYVnfw/edit#slide=id.gdf19f5b3e4_0_84

Content	Suggested Activities	Suggested Assessment(s)	Resources
The *code blocks are shaped like puzzles* to help you know what you can put together. When you put code blocks together, you create a script. On the right-hand side we have our stage, where we can see how our algorithms work and add backdrops for our story. The characters we use are called sprites.[20]	Have students practice using the platform by completing tutorials.		

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Objective 5.5.5a: Use sequences in an algorithm

Content	Suggested Activities	Suggested Assessment(s)	Resources
Sequence is a set of instructions that follow one another in order. Understanding that computers use sequence to follow instructions will help you as you code. An example of a sequence is instructions to brush your teeth.	Have students watch the 'What is a Sequence' video. [0:00 – 2:23] Have students share the steps for brushing their teeth. Encourage them to use transition or ordinal words first, next, then, last or first, second, third, etc. while putting the steps in order. [Whole Class]	Have students brainstorm everyday tasks (eating breakfast, getting dressed, getting to school, etc.). Then write down the sequence of instructions in their workbook for completing one of these tasks.	Kodable: What is a Sequence Video: https://youtu.be/v_Pc3UnePZY ECforAll Sequence Engage Video: https://www.youtube.com/watch?v=vq8GVg4J31w ECforAll Act 2 Unit 1 Teacher Guide: https://docs.google.com/document/d/1qLcw9ZmfXcmMl_YDJdqaOW_ySt4BpRtLHUz88RszO4/edit#

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Objective 5.5.5b: Identify events

Content	Suggested Activities	Suggested Assessment(s)	Resources
An Event is an action that causes something to happen. Think of the comprehension strategy of Cause and Effect. The Cause is the Action (Event) the Effect is the action(s) that Happen(s). Events occur in many places in your life: pressing the play button on a video, knocking on a door, tapping someone on the shoulder… A script in Scratch always begins with an event block (sometimes called an event hat).[20]	Have students view the 'Events' video. Complete the 'Big Event' activity from the Teachers Guide. [Whole Class] *Pair and Share*: Have students to brainstorm other events and share an example with a partner. Then have persons to share with the class.	Have students complete page 4 in the ECforAll Act 2 workbook.	ECforAll Events Engage Video: https://www.youtube.com/watch?v=zKlrffvqhLQ ECforAll Setting X and Y Coordinates Video: https://www.youtube.com/watch?v=TFEgNFGOEpk ScratchECForAll Act 2 Unit 1 Student Workbook: https://docs.google.com/presentation/d/12w6xuBpJ8RO8jU8JejISWnmJz76MjY-lons7w7Ag6mM/edit#slide=id.gef0079471f_0_698 ECforAll Act 2 Unit 1 Teachers Guide: https://docs.google.com/document/d/1qLcw9ZmfXcmMl_YD-JdqaOW_ySt4BpRtLHUz88RszO4/edit#

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Objective 5.5.5c: Demonstrate loops and animation

Content	Suggested Activities	Suggested Assessment(s)	Resources
A loop is a sequence of instructions that is repeated. The repeat loop block in Scratch looks like a sandwich. All of the blocks inside the loop (sandwich) are run in order (sequence) and repeated the number of times listed in the repeat oval. *Inquiry Prompt* What kinds of things can you program Sprites to do using loops? *[moving, jumping, changing color, etc]* Just like in real life, in order for these actions to occur in a computer program, animation is needed to show them happening. Animation cycles through a sequence of images of the characters that look slightly different. As you move quickly through the pictures, it looks like the character is moving. Animation in programming works the same way that we think of animation in real life.	Introduce the concept of loops with the 'Loopy Dance' activity. Have students think about things they do in a loop. Discuss. *Examples: blinking, breathing, heart beating, jumping jacks, walking.* *Journal Writing/Blogging*: What are some examples of animation? (Possible responses: *cartoons, flip books, animated movies)* Have students view the 'Suni Lee Olympic Flipbook' Video Have students compile the flipbook from page 7 in the ECforAll Act 2 student workbook or have them design their own. Discuss how they would animate the	Have students complete page 5 in the ECforAll Act 2 student workbook. Have students complete page 6 in the ECforAll Act 2 student workbook.	Loopy Dance Tutorial for Teachers: https://www.youtube.com/watch?v=JoKTqHCnioM ScratchECForAll Act 2 Unit 1 Student Workbook: https://docs.google.com/presentation/d/12w6xuBpJ8RO8jU8JejISWnmJz76MjY-lons7w7Ag6mM/edit#slide=id.gef0079471f_0_698 ECforAll Act 2 Unit 1 Teachers Guide: https://docs.google.com/document/d/1qLcwgZmfXcmMl_YD-JdqaOW_ySt4BpRtLHUz88RszO4/edit# Suni Lee Olympic Flipbook Video: https://youtu.be/OxnBInjKNbo

Content	Suggested Activities	Suggested Assessment(s)	Resources
In Scratch, costumes of sprites are "changed" quickly in order to create the appearance of movement. You can use loops to animate the actions of sprites either in place or as they move on the screen!	monkey and snake if they were sprites in their Scratch project? Have students complete the 'Dragon Boat Festival' Scratch project using the TIPP&SEE worksheet (page 9-11). Have students complete page 12 in Student Workbook.		Dragon Boat Festival Scratch Project: https://scratch.mit.edu/projects/506127505 Dragon Boat Festival TIPP&SEE Google Form: https://docs.google.com/forms/d/1dwE3vBxQoudz31_-MgClJ6Ob8fb4k9yZOx09JnejM-Q/copy

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Objective 5.5.5d: Create an animation in Scratch

Content	Resources
Have students create an animated story of their choice that showcases loops and animation. (Teacher's Guide, pages 19 – 22)	ScratchECForAll Act 2 Unit 1 Student Workbook: https://docs.google.com/presentation/d/12w6xuBpJ8RO8jU8JejISWnmJz76MjY-lons7w7Ag6mM/edit#slide=id.gef0079471f_0_902 ECforAll Act 2 Unit 1 Teachers Guide: https://docs.google.com/document/d/1qLcw9ZmfXcmMl_YD-JdqaOW_ySt4BpRtLHUz88RszO4/edit#

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
KEYBOARDING AND WORD PROCESSING
GRADE 5

Objective 5.3.1: Define the term keyboarding and label the parts of the keyboard

Content	Suggested Activities	Suggested Assessment(s)	Resources
Keyboarding is the process of inputting text (type) into a keyboard by pressing keys on a keyboard. A keyboard is an input device. A keyboard has letter keys, number keys and special keys. The letters, numbers and symbols are called characters. You type letters, numbers and symbols to create documents. You use a keyboard to work on the Internet, play some games, and when you use most software. The most commonly used keyboard is the "**Qwerty**". It is named after the top row of letters on the keyboard. It was invented in 1864 by Christopher Latham Sholes.	Watch videos of different shapes and types of keyboards. Explain the parts of the keyboards on different devices. Label the keyboard and explain their various parts	Label the keyboard. Explain the various parts of the keyboard. Matching the keys with their functions.	Parts and functions of the keyboard worksheet: https://www.liveworksheets.com/zl2394360jb Keyboarding Matching Worksheet: https://www.liveworksheets.com/oj2322222mb Proper Keyboarding Techniques Slide Show: https://slideplayer.com/slide/12743406/ https://www.youtube.com/watch?v=4UJ9BkSbR-I&t=275s

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SCOPE OF WORK
KEYBOARDING AND WORD PROCESSING
GRADE 5

Objective 5.3.2: Demonstrate proper keyboarding posture

Content	Suggested Activities	Suggested Assessment(s)	Resources
How you sit when you use a keyboard is important. How you sit is called posture. Good posture is important because not sitting correctly can result in injuries to your body. You should sit up straight when you use the keyboard. You should face the computer screen. Your arms should rest in front of you. Your hands should be clean. You should place your fingers gently on the keys. When typing your work area should be arranged as follows: Keyboard directly in front of chair; front edge of keyboard even with edge of desk Monitor placed for easy viewing Book at right of keyboard	Show video to demonstrate proper/correct posture. Explain the importance of having good posture.	*Differentiation* Identify good and bad posture from pictures using **yes** and **no** responses. *Collaboration* Create short videos to demonstrate the Do's and Don'ts of proper posture.	Proper Keyboarding Techniques: https://www.youtube.com/watch?v=eegeIsUzEOM

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KEYBOARDING AND WORD PROCESSING
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Objective 5.3.3: Demonstrate correct finger placement and reach techniques

Content	Suggested Activities	Suggested Assessment(s)	Resources
Finger Placement When you use a keyboard: Curve your fingers upright over the home keys, Keep your wrists low but not touching the keyboard, Hold your forearms parallel to the slant of the keyboard, Keep your body erect, sitting back in the chair Keep your feet flat on the floor The keys on the middle row of the keyboard are called the **home row keys**. The home keys are a s d f for the left hand and j k l ; for the right hand When you are ready to keyboard, you rest your fingertips on the home row keys. When you type a character that is	Show video to demonstrate correct finger placement. Observe students placing fingers correctly on home row keys. Students will practice typing the characters from the home row keys without looking at the keyboard Students may use printed keyboard replicas to practice home row finger placing and practice. Teacher may call characters from the home row keys as student type. Provide reinforcement exercises.	Touch type home row keys lessons. Touch type simple words and sentences from the home row. Classwork Quiz	Introduction to Typing: https://www.typingclub.com/sportal/program-3/116.play https://www.youtube.com/watch?v=Ito-SiS8XTE Printable keyboard for practice: https://www.educationworld.com/tools_ https://www.shutterstock.com/image-vector/104-keys-pc-keyboard-layout-vector-1102032 https://www.teacherspayteachers.com/Product/Printable-Keyboard-for-Typing-Practice-3869496 Mnemonic for remembering keys on the keyboard: https://www.youtube.com/watch?v=EebWkecsW38 Practice for typing skills : http://primarygamesarena.com/Play/Keyboard-2030

Content	Suggested Activities	Suggested Assessment(s)	Resources
not typed with a home row key, you move a finger from the home row key to the key on the top or bottom rows. After you press the key, you return your finger to its place on the home row. You look at the screen when you keyboard, not the keys			

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GRADE 5

Objective 5.3.4: Identify and use special keys

Content	Suggested Activities	Suggested Assessment(s)	Resources
Backspace - Deletes a character to the left of the cursor *Caps Lock* – Capitalizes all letters. *Delete* – Deletes a character to the right of the cursor. *Enter* – Completes or enters a command. Moves cursor down to the next line. *Shift Keys* – Capitalizes letters. Inserts symbols. Press and hold the Shift key, then press another key to capitalize a letter or to insert a symbol. *Tab* – Indents *Esc* - Short for Escape, Esc is a key found on the top-left corner of a computer keyboard. It allows the user to abort, cancel, or close an operation. *The spacebar* - the longest bar at the bottom of the keyboard. *The Backspace Key* - helps you to erase a mistake on your screen, just like you would use an eraser in your book.	Watch appropriate video of special keys. Have students explain the functions of the special keys and features on the different devices. Provide reinforcement activities.	Identify the special keys on the keyboard Match the keys with their functions. Type lists of simple words using the special keys. Classwork Quiz	Special Keys https://www.youtube.com/watch?v=geKIJEghaqU Special Keys https://www.youtube.com/watch?v=4XS1_j1XhCE

Content	Suggested Activities	Suggested Assessment(s)	Resources
The Directional or Arrow Keys - help you to move the cursor up, down, left and right without erasing any of your work. *Shift Keys* - The keyboard has 2 shift keys. Hold down the shift key on the left side when you want to type capital letters with your right hand. Hold down the shift key on the right side when you want to type capital letters with your left hand. You hold down the shift key then press a letter key to type a capital letter. Lower case letters are small letters (such as a, e, or t). These letters will be obtained by pressing the assigned key. Upper case are capital letters (such as A, E, or T). They are obtained by using the caps lock key or the shift keys. To do this, hold down the shift key while pressing the letter to make it capitalized or press the Caps lock key which would also allow letters to also be typed in uppercase. When new keys are introduced, you are required to take your time in order to get used to the position of the keys. The movement to and from each key should be quick and a part of the act of			

Content	Suggested Activities	Suggested Assessment(s)	Resources
striking. Return your fingers to the home keys immediately after striking the new keys.			

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KEYBOARDING AND WORD PROCESSING
GRADE 5

Objective 5.3.6: Define term word processing and give examples of word processing software.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Word processing is writing and editing words and sentences on the computer or other computerized device. Word Processing Software • Microsoft Word • Google Docs • LibreOffice Writer • OpenOffice Writer • WPS Office Writer • Word Pad • WordStar Microsoft Word is one of the most popular and widely used word-processing software.	Show examples of the different word processing software. Students will model accessing the MS Word.	Identify the different word processing software. Match software names with their icons.	Word Processing Display Board Ideas https://www.teachingideas.co.uk/word-processing/word-processing-display https://www.teachingideas.co.uk/word-processing/using-icons-in-microsoft-office Word Processing Software- Simple Explanation https://www.youtube.com/watch?v=RG85f4055Ug Live Worksheet https://www.liveworksheets.com/dc2343524fi Google Docs Lessons for Kids LESSON 1 https://www.youtube.com/watch?v=478TDzL1b3E LESSON 2 https://www.youtube.com/watch?v=jvV5SS6rP40 LESSON 3 https://www.youtube.com/watch?v=rd4Um5Ceywk

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KEYBOARDING AND WORD PROCESSING
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Objective 5.3.7a: Identify features and ribbon tabs of the Word interface.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Some of the features of MS Word are as follows: **Title Bar:** This contains the name of the document and the name of the program, as well as the minimize, maximize/restore down and close icons. **Quick Access Toolbar:** frequently used commands are placed in the quick access toolbar. **Ribbon:** this allows you to quickly locate the commands that you need in order to complete a task. **Ribbon Tabs:** a ribbon tab contains a series of related icons grouped together to access commands. **Scroll Bars:** moves the page up and down or left to right. **Minimize:** hides the window from the screen and places it in the taskbar. **Maximize/Restore Down:** expands the window to full screen/decrease the size of the window to only full part of the screen. **Close:** closes the window.	Open MS Word and explain the key features of a typical window. Explain Tabs on the Ribbon.	Label the diagram of a MS Word window. Explain the features of the MS Word window.	What is MS Word, its features, shortcuts, uses, and other related questions https://www.gadgetsnow.com/faqs/what-is-ms-word-and-its-features/articleshow/84464446.cms

Content	Suggested Activities	Suggested Assessment(s)	Resources
Work Area: is where users complete tasks **Cursor**: a symbol (as an arrow or blinking line) on a computer screen that shows where the user is working. **Zoom Controls:** this controls how much of a document is visible on your screen. **View Buttons:** this changes the layout view of the document to read mode, print layout view and web layout view. **Document Information:** tells you what page you are on, how many pages are in the document and how many words are in the document. **MS Word Windows Tabs/Menus** **File:** The File tab gives you access to file functions: Open, Save, Close, Properties, and Recent file options. **Home**: font, size, font style, font color, bullets, line spacing, an alignment are some of the elements included on the home tab. **Insert**: In your MS Word document, you can include graphs, shapes, images, charts, tables, footer, page number, and header, these may be found under the insert tab. **Design**: Under the design tab you get a list of			

Content	Suggested Activities	Suggested Assessment(s)	Resources
templates or design in which you want your document to be created to improve your documents appearance. **Page Layout**: You get options like columns, lines, margins, orientation spacing, identification under the page layout tab.			

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Objective 5.3.7b: Enter and format text.

Content	Suggested Activities	Suggested Assessment(s)	Resources
The Work Area After the Word window opens, there is a blank space for you to begin typing, similar to when you begin to write on a blank sheet of paper. There is a blinking black line on the screen called the ***cursor***. This cursor indicates where the next character will be typed. *Saving a Document* It is very important to save your document in the event that you may wish to edit it or use it at a later date. Save your document as soon as you begin typing, and then save the changes about every five minutes as you type so you don't lose your work. **Step 1:** Start a new document in Word and type your text. **Step 2:** Click **File** in the top left-hand corner of the screen. **Step 3:** From the menu, choose **Save**.	Teacher would demonstrate the use of the following: • add text • enter text • format text: font, style, size, and color • adjust line spacing • insert and format WordArt • insert and format clip art or picture file • modify the text wrap of an object • draw and format shapes • scale, move, and rotate objects • insert a simple page border • spell check a document • print preview • print a document • cut, copy, and paste a selection • copy formatting from a selection • Use spell check features in simple documents. Name, save, open, and print simple documents.	Create and format simple text documents using font, style, color, bold, italic, underline, alignment, select, cut, copy, and paste options.	Text formatting tools worksheet https://www.liveworksheets.com/md2049753ma Formatting fonts quiz worksheet https://www.liveworksheets.com/ri252880sd

Content	Suggested Activities	Suggested Assessment(s)	Resources
Step 4: A 'Save' dialogue box will come up. At the top and at the left-hand side in the list of folder options, it will show the folder where you'll be saving the document. If you wish to change this folder, navigate through the folders on the left-hand side of the dialogue box to choose the one where you want to save your document. **Step 5:** Word will automatically give your document a name, based on the first few words of your text. If you don't like the one given, type a name for your document in the 'File name' box. **Step 6:** Once you have typed in the name of your document, click **Save**. **Step 7:** Your document will now have a name, which will be shown at the very top of your document screen. If you make changes to your document and then save them after it have been saved originally, the dialogue box will not come up again. It will just save your changes without any visual notification being shown. **Printing a Document** **Step 1**: Click the **File** tab. **Step 2:** Click **Print**. **Step 3:** Examine the print preview on the right side of	Watch a YouTube video 'Word Printing'.		Word Printing Video: https://www.youtube.com/watch?v=7bLQFTCsH8Y&t=18s

Content	Suggested Activities	Suggested Assessment(s)	Resources
the screen to ensure the document appears correct. **Step 4:** Select the correct printer by clicking the **Printer** list arrow and selecting it from the list. **Step 5:** Adjust the printer settings using the options below the printer, described in the following table. **Step 6:** The document is sent to the printer. The shortcut to print a document - Press Ctrl + P.			

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
GRAPHICS AND MULTIMEDIA
GRADE 5

Objective 5.4.1: Define graphics and multimedia

Content	Suggested Activities	Suggested Assessment(s)	Resources
GRAPHICS Graphics are all around us. Our world is made up of colors, shapes and words. Graphics are drawings and pictures. Examples of graphics may be found on: ♦ product wrappers and packaging ♦ Story books and textbook covers ♦ t-shirts ♦ School bags ♦ Face painting Graphic designs creatively put together colors, shapes, and words to form meaningful and pleasing design. *MULTIMEDIA* Multi means more than one; many or multiple. Media is a means of conveying information. Multimedia is the presentation of information through text, audio, graphics, video, and	Identify and discuss the different types of graphics in surroundings and personal items Describe graphic designs created Research local graphic designers Watch appropriate videos *Extension Activities* Collaborate with Art Teacher to assist with graphic designs Collaborate with Junkanoo Artists Watch appropriate video Create a sign or poster adding text and graphics Create a short video with audio recording, video and photo images	Create a simple graphic design using shapes (a teddy bear, a house, a vehicle). Quiz- Multiple Choice, Matching, True/False	MS Paint Desktop Publishing Photoshop Adobe Illustrator Canva What Is Graphic Design? https://www.youtube.com/watch?v=oBnuvEoyaZo Multimedia Display Board https://www.teachingideas.co.uk/multimedia/multimedia-work-display Flipgrid Introduction to Multimedia https://www.youtube.com/watch?v=4ZM6pojgHOg Animation Ideas https://www.teachingideas.co.uk/multimedia/animation-ideas

Content	Suggested Activities	Suggested Assessment(s)	Resources
animation. The basic elements of multimedia are: ♦ *Text* – Characters that are used to create word, sentence and paragraphs. ♦ *Graphics* – are digital representation of non-text information such as drawings, charts, or photographs. ♦ *Audio* – Music, speech or any other sound. ♦ *Video* – photograph images that are played back at speeds of 15 – 30 frames per second and provide that appearance of full motion ♦ *Animation* – Clipping through a series of still images that create an illusion of motion.			

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Objective 5.4.2: Explain the use of presentation software

Content	Suggested Activities	Suggested Assessment(s)	Resources
A presentation lets you combine text, graphics, video, and sound on individual pages which are called slides. Many slides are saved into one file. This is called a presentation. Presentations are called slide shows. Presentation software enables users to present information, graphics, videos, etc. through slideshows in an attractive way. Popular Presentation software include Prezi, Google Slides, Keynote, Slides, Slide Dog, Canva, and PowerPoint.	Watch video introducing popular presentation software	Using a Venn Diagram compare and contrast popular presentation software. *Examples: Prezi, Google Slides, Keynote, Slides, Slide Dog, and PowerPoint*	Multimedia Software: https://www.youtube.com/watch?v=9Pdf8htIpgc&t=62s https://www.youtube.com/watch?v=vogydDBj7Dk

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SCOPE OF WORK
GRAPHICS AND MULTIMEDIA
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Objective 5.4.3: Explain PowerPoint

Content	Suggested Activities	Suggested Assessment(s)	Resources
PowerPoint is one of many software designed for making electronic slides/ presentations. The PowerPoint application lets you combine text, graphics, video, and sound on individual pages which are called slides. This file is called a presentation. A new blank presentation opens each time you start PowerPoint. You can use many devices to help make and give a presentation. Presentations are also called slide shows **NOTE:** The PowerPoint window, and the screen resolution may look different based on the device used. **Other Multimedia/Presentation Programs include:** Google Slides Slidebean Powtoon Prezi Emaze Canva SlideShare	Explain the Backstage View and the template themes Demonstrate proper design guidelines to use PowerPoint to create, save and view slides. Explain the different slide layouts Research and use another Presentation software to present a slideshow.	Produce a 3 slides presentation with text, pictures about an event. ♦ Format text using different fonts and colors for enhancements ♦ Add transition to the slide ♦ Display the slides using the slideshow feature	PowerPoint Software Introduction to Microsoft PowerPoint https://www.youtube.com/watch?v=pBG7crK-mRc Google Slides for Kids – Episode 1 https://www.youtube.com/watch?v=CDRoWBMUU5U Google Slides for Kids – Episode 2: Adding Style https://www.youtube.com/watch?v=E4Gl5Cq2siA&t=575s Google Slides for Kids – Episode 3: Adding Animations https://www.youtube.com/watch?v=eyQk-UF8f_s Google Slides Student Tutorial https://www.youtube.com/watch?v=vYpGoN6Pj5c How to Animate a Google Slide Presentation https://www.youtube.com/watch?v=cLBDEJLuVS8

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Objective 5.4.4: Identify the features of the PowerPoint interface

Content	Suggested Activities	Suggested Assessment(s)	Resources
The PowerPoint window has many of the same elements as other Microsoft programs. It has the same toolbar buttons and menus used to open, save, draw objects, cut, copy, paste, insert clipart, check spelling, preview, print, etc. The PowerPoint window also has many new features that you use to create, format and view slides. *Office button* – displays a drop-down menu for creating, opening, saving, and printing *Title Bar* – displays the filename and program *Ribbon* – displays tabs that organize program commands by groups. *Command buttons* – are displayed beneath the tabs. They are used to execute a command or to display a drop-down menu of command options *Outline tab* – used to create and view slides in an outline format, *Slides tab* – used to see a tiny version of each slide	Demonstrate and explain the features of the MS PowerPoint window. Labeling diagrams Watch appropriate video	Label the features of the PowerPoint window diagram.	Introducing the PowerPoint Window https://www.thetraininglady.com/powerpoint-window/ Diagram of PowerPoint window. https://techwaggin.files.wordpress.com/2013/03/ppt_screen.png?w=300&h=210 https://opentextbc.ca/learningpowerpoint/wp-content/uploads/sites/4/2013/05/pptwindow2-1024x664.png

Content	Suggested Activities	Suggested Assessment(s)	Resources
that have been created, called a thumb nail. *Slide pane* – contains the current slide. *Placeholders* – are boxes with dotted boarders that are part of most slide layouts. These boxes hold title and body text or objects such as charts, tables, and pictures Placeholders used to add text, drawings, clipart, video and sound to a slide. *Note pane* – is located below the slide pane and is used to type reference notes and additional comments about the slide. *Drawing toolbar* - Automatically displayed at the bottom of the window above the status bar. *Status bar* – shows the number of the slide in the slide pane and the total number of slides in the presentation.			

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GRADE 5

Objective 5.4.5: Name the various slide layouts

Content	Suggested Activities	Suggested Assessment(s)	Resources
Slide Layouts are the pre-formatted design of a slide in PowerPoint. These are: ♦ Title slide – first and main slide, to introduce the topic and presenter. ♦ Title and content slide ♦ Two Content ♦ Comparison ♦ Title Only When you create a slide, you choose a layout. The way objects are put on a slide is the layout. You need to decide on the layout of each new slide you insert	Explain the use of each layout		Different Types of Slide Layouts in PowerPoint https://www.pokeslide.com/en/different-types-of-slide-layout-in-powerpoint/

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Objective 5.4.6: Create a title slide and format text

Content	Suggested Activities	Suggested Assessment(s)	Resources
Whenever you create a new slide, you'll need to choose a slide layout. Slide layouts contain place holders. Place holders are pre-made boxes on a slide that allow you to enter information into a slide by clicking. The title slide is the first slide of a presentation. It usually contains a title and a subtitle. The title tells the main idea of the presentation. To create a title page: 1. Open PowerPoint. You are presented with a title slide. 2. Enter the Presentation title in the 'Click to Add Title' text box/placeholder. 3. Type your subtitle in the Click to Add Subtitle text box/placeholder.	Students will watch a video demonstrating how to create and format a title slide. Teacher will lead students in Creating a title slide inserting text and graphics.	Create a PowerPoint presentation Generate content for a 5-slide presentation	PowerPoint: Slide Basics https://www.youtube.com/watch?v=TZfcVbKJs1E&t=7s Create your first PowerPoint Presentation https://support.microsoft.com/en-us/office/video-create-your-first-powerpoint-2013-presentation-42229250-6c66-44cd-adf8-2f5802c63f74 Diagram of title slide http://www.baycongroup.com/powerpoint2007/images/PPwindow.jpg https://images.presentationgo.com/2018/11/01-Modern-Business-PowerPoint-Template-Title.jpg Diagram showing place holders: https://artofpresentations.com/wp-content/uploads/2021/09/M1S1-What-is-a-Placeholder-in-PowerPoint-768x434.jpg

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Objective 5.4.7: Insert and format new slides adding texts and graphics

Content	Suggested Activities	Suggested Assessment(s)	Resources
To create a new slide: 1. Choose the Home tab. 2. Click the New Slide button in the Slides group. The Office Theme dialog box appears and displays several layout templates. 3. Click the layout you want. The layout appears in the Slide pane of the PowerPoint window. To add text 1. To add text, click inside the placeholder and type. To add an additional slide to your presentation, do one of the following: 1. Right-click the slide layout. A menu appears. Click Layout and then click the layout you want. 2. Choose the Home tab, click the New Slide button			

Content	Suggested Activities	Suggested Assessment(s)	Resources
, and then choose the slide layout you want.			

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Objective 5.4.8: Add animation to text and graphics

Content	Suggested Activities	Suggested Assessment(s)	Resources
To add an animation effect to a PowerPoint slide, follow the steps below. 1. In a slide, highlight the text or image you want to animate. 2. On the Ribbon click the Animations tab. 3. On the Animations tab, in the Advanced Animation section, click the Add Animation option. 4. Select the desired type of animation effect. You can select an Entrance, Emphasis, and Exit animation effect. You can also select a Motion Path effect, if you want to change the motion path of the animation.			Adding Animation: https://www.computerhope.com/issues/pictures/powerpoint-add-animation.jpg

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Objective 5.4.9: Preview, save, print, and deliver a presentation.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Navigating the Slide Show If you want to go to the next slide do one of the following: Press the Right Arrow key. Press the Enter key. Press the Page Down key. Left click the slide. If you want to go to the previous slide do one of the following: Press the Left Arrow key. Press the Backspace key. Press the Page Up key. To end the slide show and return to PowerPoint press the Esc key.			

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
SPREADSHEET
GRADE 5

Objective 5.6.1: Explain the use of the Excel program

Content	Suggested Activities	Suggested Assessment(s)	Resources
Microsoft Excel (or Excel) is a program used to record, analyze, present reports that need calculations, such as a grade sheet, and to create charts. A spreadsheet is a table of rectangular grid, consisting of cells (rows and columns), that holds the data, which includes texts and numbers. Spreadsheets are used in business for budgeting, financial reporting, etc. Spreadsheet can be used for personal budgeting, tracking expenses, or creating a list of personal items. The advantage of an electronic spreadsheet is that the content can be easily edited and updated to reflect changes in the calculated data.	Project-Based Learning Activity PowerPoint presentations Appropriate presentation/videos Sample Personal Budget Spreadsheet Sample Fast-Food-Fun Spreadsheet	List personal items that are very important for life. Plan a Personal budget – identify needs, listing items, costs, and calculate total. Enter data from the Personal Budget list. Budget list to include the dollar signs and commas. Save the sketches to use in creating a new excel worksheet.	https://excelchamps.com/excelbasics/#Introduction_to_Microsoft_Excel https://excel-practice-online.com/ https://classroom.synonym.com/excel-activities-elementary-middle-school-5845242.html https://www.teacherspayteachers.com/Product/Spreadsheets-for-Beginners-Fast-Food-Fun-1436187?st=b952f02952d2d154fd76a4c5

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Objective 5.6.2: Demonstrate opening and closing a workbook and a worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
To start Excel: 1) On the Windows taskbar, click the **Start** button to open the Start menu. 2) On the Start menu, scroll through the list of apps, then click Excel. Excel will open in Backstage view. The Backstage view allows for the use of a blank workbook, open an existing workbook, or use a preset workbook called a template. The File tab on the Ribbon, shows various screens of commands that can be used to manage files and options in using Excel. *TOUCH SCREEN DEVICES* Point out the differences in the Office and windows interfaces. (Ribbon increases in height, buttons are bigger with more space around each, to move easily using the fingers or a stylus to tap the button.) *Closing a Workbook* 1) On the ribbon, click the File tab to display the Backstage view, and then click **Close** in the navigation bar (or press	Project-Based Learning Activity PowerPoint Appropriate Spreadsheet Videos Demonstrate Opening the Excel Program and explain the features of Backstage View Demonstrate Closing the Workbook and Worksheet.	Classwork: Students to open the Excel Program and Worksheet on their device. Students to describe the features of Backstage view Students to state differences in the interfaces of the various devices used. Practical Exercises Students to close the workbook and Worksheet on their devices Students to explain what happens after closing a worksheet and the workbook	**Textbook:** Shelly Cashman Series – Discovering Computers & Microsoft Office 365 Office 2016 **Textbook:** New Perspectives – Microsoft Office 365, Office 2019 Websites: https://technologyforlearners.com/a-fun-way-to-start-learning-about-spreadsheets/ Spreadsheet Challenge Exercises https://www.attechedu.com/single-post/teaching-spreadsheets-a-guide-to-introducing-spreadsheets-to-primary-students

CTRL + W) on the keyboard. 2) A dialog box may appear, asking you to save or not to save. Click **Don't Save.** The workbook closes without saving any entry made. Excel remains open, ready to create or open another workbook.[22,23]			

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Objective 5.6.3: Identify parts of the Excel worksheet and understand basic terminology

Content	Suggested Activities	Suggested Assessment(s)	Resources
Open a new, blank workbook; The parts are: • **Title Bar** -shows Book 1-Excel, when a worksheet is saved the file name will be displayed in the Title bar. • **Ribbon Display Options**: Minimize, Restore and Maximize buttons. The organizing of the Ribbon into Tabs and the related Command buttons • **Name Box** – shows the address of the active cell, Example A1 – this indicates the active cell is where column A and row 1 intersect. Data is entered in the active cell. • **Insert Function** – is used to choose and insert a built-in function. • **Active Cell** – The current cell with the thick rectangular border (green) around the cell. • **Column Headings** –	Project-Based Learning Activity Appropriate presentation/videos Spreadsheet vocabulary explained	Labeling parts of the worksheet Review Questions Fill-in the banks Matching	Textbook: Shelly Cashman Series – Discovering Computers & Microsoft Office 365 Office 2016 Textbook: New Perspectives – Microsoft Office 365, Office 2019 **Websites:** https://www.excelatwork.co.nz/2018/06/07/understanding-the-excel-screen-components/ Quizizz Nearpod

Identified by the letters at the top of each column – Column name. • **Row Headings** – The numbers along the left side of each row – the row number. • **Sheet Tabs** – Shows the name of the current or active worksheet. • **Zoom Controls –** Allows the user to increase or decrease the magnification of the page. • **Scroll Bars** – Used to move vertically or horizontally within the current or active worksheet. **Basic Terminology:** An excel file is called a **Workbook**. A workbook contains one or more individual worksheets. **Worksheet** – contains grid, make up of rows and columns. **Cell** – A cell is the intersection of a row and a column. (Contain text, number or formula) Cell Range **Label** – Texts entry or data **Values** – Numeric values; default at right aligned **Formulas** – calculation commands that perform operations on the data. (Cell references, arithmetic			

operators, and functions.)[22,23]			

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Objective 5.6.4: Navigate within a worksheet

Content	Suggested Activities	Suggested Assessments	Resources
Moving around the cells of a worksheet using the following methods: **Pointing and clicking** in a cell (block plus sign cursor) Scroll Bars arrows; **Directional Arrows or Cursor Control Keys** (Left, Right, Up, Down); Home Key and CTRL + Home, End, CTRL +G or F5 (Go To dialog box to move quickly to a cell address. TAB Key; PGUP, PGDN. **The horizontal and vertical scroll bar**s to move to other areas of the worksheet.	Project-Based Learning Activity Presentation videos Students should identify these keys on their device and practice moving around the worksheet	Practice Exercises Review Questions Labeling a diagram, naming the keys.	https://www.youtube.com/watch?v=w7GzZambT_0

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Objective 5.6.5: Create a blank worksheet or use a template to enter data

Content	Suggested Activities	Suggested Assessment(s)	Resources
Create a new workbook from the new screen in Backstage view. Use the blank workbook template or open an existing one. **Note:** using the CTRL + N or a new blank document in any Office application. To enter data into a cell, it must be selected. The easiest way to select a cell (make it active) is to use the mouse to move the block plus sign pointer to the cell and click it. Use the Arrow Keys. When the cell is selected, the thick border surrounds the cell, and the active cell reference appears in the Name Box. The active cell column and row headings color changes to a darker shade. Enter data into a cell and pressing the Enter key, moving the cell cursor to the next cell in the column.	Project-Based Learning Activity Presentation Video Create a worksheet, and enter texts, numbers and dates. Explain the different data types and their position/alignment in a cell. Selecting a cell, range of cells and to point out the active cell.	Classwork: Students to use their sample Personal Budget sketch spreadsheets and to enter the data in a new worksheet. Practical Tests: Students to work from other assigned tasks.	https://www.youtube.com/watch?v=MZimPlQ5v88 Project-based Activities: https://classroom.synonym.com/fun-classroom-projects-using-excel-8431821.html Spreadsheets Are My Superpower: https://www.commonsense.org/education/lesson-plans/spreadsheets-are-my-superpower

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Objective 5.6.6: Format, save, and print a worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
Formatting enhances the appearance of the worksheet data by changing font, size, color, alignment, and adding borders. Borders are useful when a worksheet is printed, to show the gridlines **Saving a wor**ksheet – This is done to keep the document for later use or to share with others. Using the Backstage view – File – Save or Save As. From the **Keyboard**: Ctrl +S in all Office Program. **Printing** is necessary for a paper-based copy of the worksheet. From the File – Backstage View. Excel has many tools to control the print layout and appearance of a worksheet. Preview before printing for correctness.	Project-Based Learning Activity Presentation Videos Sample formatted worksheet. Demonstrate the uses of the Save/Save As commands and print options.	Project: Finalizing a worksheet. Assigned exercise to format, save, preview, and print a hard copy or Screen Share Test/Quiz – Multiple choice, True/False, Matching, Fill-in the Blanks	https://www.youtube.com/watch?v=otdlR1rBwkM Additional Spreadsheet Activities: https://www.pinterest.com/thedigitalscoop/spreadsheet-activities/

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Objective 5.6.7: Perform simple calculations using formulas and the SUM function

Content	Suggested Activities	Suggested Assessment(s)	Resources
A formula is a calculation using numbers in a cell. Using a formula to calculate values allow you to focus on the data and allow Excel to automatically recalculate the results, if the data has to be changes. To begin a formula in any cell, it must begin with the equal (=) sign/symbol. Then a cell address, a mathematical operator, then another cell address. Example: = B2+C3 Enter a cell address into a formula by typing it directly into the cell. By clicking on the cell to be included. The cell into which you enter a formula will display the result. *Note*: the formula will be seen in the formula Bar. *Introduce Common Built-In Functions* A function is pre-set operator in Excel to accept the values/numbers, and cell references when selected for calculations. Examples: =SUM to add the total of the values. =AVERAGE to calculate an average of the values in a range. That is, Excel totals	Project-Based Learning Activity Review the symbols used in Excel that represent the standard mathematical operators: • Multiply (*) asterisk • Division / • Addition + • Subtraction – Use sample spreadsheet and demonstrate writing the formula to calculate values. Demonstrate the use of the SUM and AVERAGE Functions in calculating values/numbers	Classwork: Students to use their sample Personal Budget sketch spreadsheets and to enter the data in a new worksheet or open the existing worksheet. Students to carryout calculations by writing the formula to add the totals. Students to use the SUM Function to add the totals. Then use the AVERAGE Function to get the average expense of their budget.	Spreadsheets Are My Superpower: https://www.commonsense.org/education/lesson-plans/spreadsheets-are-my-superpower

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Objective 5.6.8: Create a simple chart with worksheet data

Content	Suggested Activities	Suggested Assessment(s)	Resources
A chart is a graphic (picture) representation of data in a worksheet, **Excel charts**. A chart can be used as a descriptive way of representing the data; to clearly show trends or patterns in the data. Pie charts show the combination of each piece of data to the whole, or total of the data. **Steps:** • A chart can be created by selecting the data from the worksheet, then select the type of chart to insert into the worksheet. • Select the cell range (s) for the chart in the worksheet, then, on the Insert Tab, in the Charts group, click the chart type. (Pie) • Save the chart with the worksheet.	Project-Based Learning Activity Use Google-sheets simple pie chart templates for interactivity and demonstrations Provide students with the instructions from the selected activities. Students to follow and plot the charts	Projects: Kyla's M & M Pie Chart. Budget Pie Chart Ari's Fruits Pie Chart Test/Quiz: • Multiple choice • True/False • Matching • Fill-in the Blanks	YouTube Video - Introduction to Pie Chart: https://www.youtube.com/watch?v=0G07I7cz0Ig Pie Chart Scenarios: - https://oakdome.com/k5/lesson-plans/google-classroom/google-sheets-simple-spreadsheet-and-chart-fruits.php Sample Pie Chart Exercises: https://www.google.com/search?source=univ&tbm=isch&q=K-5+Technology+Lab+%2B+Pie+charts/ https://www.pinterest.com/pin/google-classroom--518758450828625975/

Technology Education for Primary School

Scope of Work

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Objective 6.1.1: Demonstrate proper use and care of devices and classroom rules.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Classroom Technology Rules ♦ Only visit approved internet sites. ♦ Never give out your personal information. ♦ Leave your workspace as you found it! ♦ Print only if you have permission. ♦ Touch the mouse and keyboard gently. ♦ Tell your teacher if you see something uncomfortable or inappropriate. ♦ Never change settings without permission. ♦ Never download anything without teacher permission. ♦ Do NOT eat or drink near devices. ♦ Place devices (Tablets, Laptops) on chargers when not in use.	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play Appropriate presentation/videos *Extension Activity* Using Magisto, students will collaborate in small groups to create a video using classroom technology rules to demonstrate appropriate behavior Share videos on Instagram	*Think Tweet Share* Collaborate as a group to tweet possible problem and solution in caring for digital devices	Classroom Technology Rules https://nikolicl.educatorpages.com/pages/classroom-technology-rules Quality Logo Products, https://www.qualitylogoproducts.com/promo-university/how-to-take-care-of-your-gadgets.htm Magisto https://www.magisto.com/ Instagram https://www.instagram.com/ Think-Pair-Share https://www.plymouth.k12.in.us/formative/think-pair-share#:~:text=Think%20%2D%20Pair%20%2D%20Square%20%2D%20Share&text=Think%3A%20Students%20are%20set%20a,why%20it%20is%20the%20best. Learning Management System https://bahamas.1on1lms.com/ ▪ PowerPoint Presentation ▪ Laptop/Tablet ▪ Smartphone ▪ Internet ▪ White Board ▪ Microsoft Teams

Content	Suggested Activities	Suggested Assessment(s)	Resources
How to Care for Various Digital Devices *Laptops and Tablets* Follow these steps to clean your laptop: ▪ **Step One:** Detach your battery, wipe it down with a dry cloth, and blow out the dust using a can of compressed air. ▪ **Step Two:** Wipe down the screen with the same cloth to remove any smudges. *Cell Phones* The best way to clean and disinfect your phone: ▪ **Step One:** Remove the phone from its case and turn the power off. ▪ **Step Two:** For a deeper clean, dip the corner of a soft cloth in isopropyl alcohol or white vinegar. *Headphones and Ear Buds* How to clean headphones: ▪ **Step 1:** Wash the foam or rubber pieces with isopropyl alcohol. Do not overly soak the towel you're using, but simply dab a corner into the rubbing alcohol. ▪ **Step 2:** Scrape ▪ **Step 3:** Dry thoroughly before using.			▪ Zoom ▪ Google Classroom

Content	Suggested Activities	Suggested Assessment(s)	Resources
Game Consoles How to clean game consoles like Xbox: ▪ **Step One:** Use a microfiber cloth for the outside ▪ **Step Two:** Use compressed air to blow dust out of the vents. ▪ **Step Three:** Use the compressed air to blow dust out of game cartridges and controller ports as well. *Flash Drive* How to clean your flash drive: ▪ **Step One:** Use rubbing alcohol and a Q-tip to clean your flash drive. ▪ **Step Two:** Make sure it's completely dry before plugging it into the computer. *Alexa, Google Home, Amazon Echo* How to clean your Alexa, Google Home, or Amazon Echo: ▪ **Step One:** Use a dry cloth to remove any dust that builds up on your voice assistant. ▪ **Step Two:** Do not use any cleaners as moisture can easily damage your			

Content	Suggested Activities	Suggested Assessment(s)	Resources
device. *Printers* How to clean your printer: ▪ **Step One:** Use rubbing alcohol, a clean cloth, and compressed air to wash it down. ▪ **Step Two:** Avoid using paper towels as these can leave streaks.			

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Objective 6.1.2: Compare and contrast Internet browsers and search engines

Content	Suggested Activities	Suggested Assessment(s)	Resources
Internet Browsers A browser is a software that we use to access the internet, view webpages, and websites on the computer, tablet or phone. *Examples of Popular Internet Browsers* ▪ Internet Explorer ▪ Google Chrome ▪ Opera ▪ Safari ▪ Mozilla Firefox *Creating Email Account* There are several web firms that provides free services for using and maintaining an email account like, Google (www.gmail.com), Yahoo (www.yahoomail.com), Hotmail (www.hotmail.com) *How to Create an Email Account Using Gmail* 1. Log on to Gmail website by typing www.gmail.com in the address bar of your internet browser. 2. Click on sign now or create a new account. 3. Fill in your information in the required fields, this	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play Appropriate presentation/videos Oral Type Quizzes *Extension Activity* Students will create an email account using Gmail	Variety of game-based learning platforms such as Quizizz and Kahoot Peer assessment such as online quizzes, polls, graphic organizers Using a Venn Diagram students will sort by category, the various types of Web Browsers and Search Engines Students will collaborate with homeroom teacher to use integrated Science/Social Studies topic such as; 'Growing Plants' as a research project Students will present their product to the class *Differentiation* Using a Venn Diagram students will sort by category, the various types of Web Browsers and Search Engines Students can use a pictorial representation of various Web Browsers and search engines	Safety Champion https://www.safetychampion.com.au/what-are-the-main-web-browsers-and-how-do-they-differ/ Venn Diagrams https://arbs.nzcer.org.nz/venn-diagrams#:~:text=Venn%20diagrams%20are%20used%20to,with%20information%20about%20students'%20thinking. Magisto https://www.magisto.com/ Learning Management System https://bahamas.1on1lms.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
includes identity (name and surname), password, date of birth, phone number. 4. Accept their terms and conditions. 5. Click save. 6. A verification code might be sent to you. 7. Enter the code and click submit.			

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Objective 6.1.3: Explain the appropriate use of communications tools - email, discussion forums, and video conference

Content	Suggested Activities	Suggested Assessment(s)	Resources
Digital tools help to ease and enhance several different aspects of communication. *Tech Tools to Help Enhance Communication in and out of the Classroom* *Remind 101:* an app and website used for communication between teachers, parents, and students. *Social Media:* Twitter and Instagram are the top choices to keep parents and students and even the people in the community involved in the goings on of the school and the classroom. *GoSoapBox*: a chat room designed for classrooms. *Kidblog:* a safe place for students to manage their own blog. They can write blog posts and create digital portfolios under teacher supervision. *Google Docs:* a wonderful way for students and teachers to collaborate on assignments. *EdPuzzle:* an interactive video given by the teacher	Appropriate presentation/videos *Extension Activity* Using Bublup, students will create a collage of Bahamian leaders Discuss who they are and the impact they made on The Bahamas using a communication tool like Twitter or Instagram	Using a template, pair share to create a post card about a Bahamian historians-- from one historian to another describing a historical event. Both historians can chat about the event using a communication tools like, Remind 101 or Google Hangouts Conduct a video conference call to make the experience more personable Post the post cards to a platform like Class Dojo or Instagram	Schoology Exchange https://www.schoology.com/blog/6-tech-tools-enhancing-communication-classroom-and-out Bublup https://www.bublup.com/landing/photos/?utm_campaign=photo-storage_Personal_Search_Acquisition_US&utm_source=google&utm_medium=paid&gclid=CjwKCAjwrqqSBhBbEiwAlQeqGsPoR4cB2syUJqyVXpV2wQVlPYg17yIlQ_7Yy6vkziPqloN7E2FPEBoCtBgQAvD_BwE Twitter https://twitter.com/ Instagram https://www.instagram.com/ GoSoapBox https://www.gosoapbox.com/ Kidblog https://go.fan.school/kidblog Pen Pal Schools Blog https://blog.penpalschools.com/home/teaching-with-tech Time for Kids https://www.timeforkids.co

Content	Suggested Activities	Suggested Assessment(s)	Resources
where students watch a video that pauses along the way for students to answer a question based on the video.			m/g56/?age=child Teaching Students Research Skills https://cpb-ap-se2.wpmucdn.com/global2.vic.edu.au/dist/8/5256/files/2019/02/50-Mini-Lessons-For-Teaching-Students-Research-Skills-Kathleen-Morris-1qxevz5.pdf Google Docs https://accounts.google.com/ServiceLogin/signinchooser?service=wise&passive=1209600&continue=https%3A%2F%2Fdocs.google.com%2Fdocument%2Fu%2F0%2F%3Ftgif%3Dd&followup=https%3A%2F%2Fdocs.google.com%2Fdocument%2Fu%2F0%2F%3Ftgif%3Dd&ltmpl=docs&flowName=GlifWebSignIn&flowEntry=ServiceLogin EdPuzzle https://edpuzzle.com/ Learning Management System https://bahamas.1on1lms.com/

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Objective 6.1.4: Describe digital citizenship and potential risks and dangers

Content	Suggested Activities	Suggested Assessment(s)	Resources
Digital citizenship is the ability to safely and responsibly access digital technologies, as well as being an active and respectful member of society, both online and offline. *Dangers Associated with Poor Digital Citizenship* A lack of digital citizenship or poor digital citizenship can result in cyberbullying, irresponsible usage of social media, sharing sensitive personal details, and a lack of knowledge of Internet safety.	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play Appropriate presentation/videos *Extension Activity* Students will complete a reflection exercise after watching the video, Teen Voices: Who You're Talking to Online Debate the benefits and drawbacks of posting from multiple accounts.	Using Chatting Safely Online Lesson Slides, pair share to evaluate one online chat Submit your answers to the questions for each online chat on Class Dojo Watch another pair video and comment on their response	What is Digital Citizenship-A Guide for Teachers https://www.futurelearn.com/info/blog/what-is-digital-citizenship-teacher-guide#What_is_digital_citizenship My Media Balance Video https://www.commonsense.org/node/4650821 Digital Citizenship Assessment Worksheet https://code.org/curriculum/course3/20/Assessment20-DigitalCitizenship.pdf Teen Voices: Who You're Talking to Online https://www.commonsense.org/education/videos/teen-voices-who-youre-talking-to-online Chatting Safely Online Activity Guide https://docs.google.com/document/d/1UOkBAabgQthEAxHAMmu_H_7ZE6pHXeNEqrS7nDi-hCs/edit Chatting Safely Online: Lesson Slides https://docs.google.com/presentation/d/1-v7Gh5Samz0bFQ0H6sz0K3SpT2d3HrBD19gXkJB7SJo/edit#slide=id.g4499870716_0_0 Digital Citizenship – Being

Content	Suggested Activities	Suggested Assessment(s)	Resources
			Responsible Online https://gateway.aurorak12.org/2021/04/11/digital-citizenship-being-responsible-online/#:~:text=However%2C%20a%20lack%20of%20digital,of%20knowledge%20of%20Internet%20safety. Digital Passport https://www.digitalpassport.org/

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Objective 6.1.4: Define cyberbullying

Content	Suggested Activities	Suggested Assessment(s)	Resources
Cyberbullying includes sending, posting, or sharing negative, harmful, false, or mean content about someone else. It can include sharing personal or private information about someone else causing embarrassment or humiliation. Some cyberbullying crosses the line into unlawful or criminal behavior.	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play Appropriate presentation/videos *Extension Activity* While working in small groups, use 'postermywall' to design a poster. Have a poster competition where the best posters will be posted around school and the winning poster will be featured in a local newspaper.	Using template in Book Creator, create a 'Stop Cyberbullying comic strip *Differentiation* Using comic pages template, design a 'Stop Cyberbullying comic strip	What is Cyberbullying? https://www.stopbullying.gov/cyberbullying/what-is-it Is It Cyberbullying? YouTube Video https://www.youtube.com/watch?v=vtfMzmkYp9E Poster My Wall https://www.postermywall.com/index.php/posterbuilder/copy/85d2077749e571d0581ff69090bfccaf Cyberbullying Lesson 1 https://kidshelpline.com.au/sites/default/files/document/Cyberbullying%20Lesson%201.pdf Book Creator https://bookcreator.com/2021/01/you-can-now-create-with-templates-in-book-creator/ Comic Pages https://p16cdn4static.sharpschool.com/UserFiles/Servers/Server_27050313/File/Parent%20Resources/Digital%20Citizenship/comic_pages.pdf Learning Management System https://bahamas.1on1lms.com/

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Objective 6.1.5: List the effects of cyberbullying and strategies to prevent it

Content	Suggested Activities	Suggested Assessment(s)	Resources
Negative Effects of Cyberbullying There are many detrimental outcomes associated with cyberbullying that reach into the real world. Many targets report feeling: ▪ Depressed ▪ Sad ▪ Angry ▪ Frustrated ▪ Low Self esteem ▪ Anxiety ▪ Family problems ▪ Academic difficulties ▪ School violence ▪ Suicidal thoughts/attempts *How to Avoid Cyber Abuse* ▪ Delete inappropriate photos ▪ Words have consequences. Be careful what you say to others online ▪ Don't post anything mean online ▪ Don't respond to a cyberbully ▪ Stand up for persons who are abused online	Puzzles (Crossword, Word Search, Unscramble) Computer Vocabulary Role Play True and False Questions Appropriate presentation/videos *Extension Activity* Students will play a Cyberbullying BINGO game Create a colorful, creative card to help stop cyberbullying	Using Flip Grid share a video enacting the negative effects of cyberbullying. Include prevention strategies on how to avoid cyberbullying.	Cyberbullying: Identification, Prevention, Response https://cyberbullying.org/Cyberbullying-Identification-Prevention-Response-2021.pdf Cyberbullying Lesson Plan http://kamaron.org/PDFs/Cyber-Bullying-Teens.pdf Learning Management System https://bahamas.1on1lms.com/ Cyberbullying BINGO Card https://bingobaker.com/view/3764004 Cyberbullying – How to Avoid Cyber Abuse YouTube Video https://www.youtube.com/watch?v=dMdKmHjpgFk Flip Grid https://info.flipgrid.com/ Common Sense Education https://www.commonsense.org/education/digital-citizenship/lesson/is-it-cyberbullying

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Objective 6.1.7: Create a project integrating best technology and online communication tools

Content	Suggested Activities	Suggested Assessment(s)	Resources
Online Communications Tools ▪ Skype ▪ Google Hangouts ▪ WhatsApp Group Video	*Project-Based Learning Activity* Students will watch 'Presenting Yourself Online Video' Formulate a group of three to complete group project Answer discussion questions on Who Are You Online Create a video on topic, Presenting Yourself Online	Group presentation on video topic, Presenting Yourself Online Post video on Class Dojo	Teen Voices: Presenting Yourself Online Video https://www.commonsense.org/education/videos/teen-voices-presenting-yourself-online Who Are You Online Activity Guide https://docs.google.com/document/d/1fxkpqrHNUJjZ9vzVxsYW-tN5LTXyPoDZwAkuv077nSM/edit

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
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Objective 6.2.1a: Examine how computers have changed society.

Content	Suggested Activities	Suggested Assessment(s)	Resources
A **computer** is an electronic device that manipulates information, or data. Computers come in many shapes and sizes, and they perform many different functions in our daily lives. Computers exist in many digital devices that we use on a day-to-day basis. When you withdraw cash from an ATM, scan groceries at the store, or use a calculator, you're using a type of computer. *Desktop Computers* Computers designed to be placed on a desk and used in that spot. They need a constant supply of electricity to function. *Laptop Computers* Battery-powered all-in-one computers that are more portable than desktops, allowing you to use them almost anywhere. *Tablet Computers* Handheld computers that are even more portable than laptops.	Think-Pair-Share: Have students share with a partner their thoughts on what makes a device a computer. Have students watch the *'What is a Computer'* video. Have students complete a compare and contrast worksheet on the types of computers. Have students complete a Plickers activity to identify various digital devices. . Share with students a video on 'The Jetsons' – the family of the future. Discuss which things are similar to what	Have students create an interactive timeline on the evolution of a chosen product with an embedded computer	What is a Computer Video: https://youtu.be/Cu3R5it4cQs Types of Personal Computers: https://www.youtube.com/watch?v=sHyA_Q9dzoI Embedded Computers Interactive: https://quizizz.com/admin/presentation/5fbcda6199cd38001be66ff8 Plickers: https://get.plickers.com/ Interactive Timeline Creator: https://www.sutori.com/en/ The Jetsons: https://www.youtube.com/watch?v=oJQbeCAlF6s Padlet Platform: https://padlet.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
Embedded Computers Many of today's electronics are basically specialized computers, though we don't always think of them that way. They are designed to complete one specific task. Like, smartphones, wearables, game consoles, smart TVs, washing machines, microwaves, and smart speakers.[1]	we use today.	*Journal Writing/Blogging* Have students share how computers and digital devices will shape society in the future.	

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Objective 6.2.1b: Connect technology devices to their jobs.

Content	Suggested Activities	Suggested Assessment(s)	Resources
The basic parts of a desktop computer are the **system unit, monitor, keyboard,** and **mouse**. Laptop computers have all their parts in one case – **screen, keyboard,** and **touchpad**. Instead of a keyboard and mouse, tablet computers use a **touch-sensitive screen** for typing and navigation.[1] While some of their external parts may be different, they all have similar internal components. Some internal components of a computer are: - central processing unit (CPU) - mother board - RAM - hard drive - Power supply - video card - sound card[8]	Have students read/listen to 'Hello Ruby: Journey Inside the Computer'. Have students disassemble and assemble an old digital devices, looking for and naming key components.	One and Two: Have students share (verbally/written) one thing they already knew and two things they learned from Ruby's adventure. Have students create an infographic connecting computer parts to the tasks that are accomplished when they are used.	Hello Ruby: Journey Inside the Computer: Hello Ruby - Journey Inside the Computer: https://www.youtube.com/watch?v=K1D3_eI1lVM Inside a Computer Video: https://youtu.be/HB4I2CgkcCo Find the Technology Interactive Game: https://www.abcya.com/games/find_the_tech Infographic Maker: https://piktochart.com/formats/infographics/

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Objective 6.2.2: Classify hardware components.

Content	Suggested Activities	Suggested Assessment(s)	Resources
A computer is made up of many parts that work together. The parts of the computer that can be seen and touched are called hardware.[2] Each hardware component has a specific job it does to help the digital device work. Five groups that hardware components can be divided into are: - Input Devices – used to enter data into the computer. Data can be letters, numbers, sounds, or images. *Examples: mouse, keyboard, stylus, smart pencil, touchscreen, joystick, remote control, touchpad, scanner, digital camera, web camera, microphone, drawing tablet, and interactive whiteboard.* - Output Devices – used to hear and see information from the computer. You use an output device to see or hear information from the computer. Information can be sound through speakers, art displayed on the screen, or text and graphics on a paper. *Examples: monitor, screen, printer, speaker, headphones, and projector.*	Have students watch the video 'Input, Output, and Storage Devices' video. Have students complete the input/output/storage/processing interactive worksheet.	Have students complete a Mind Map classifying the hardware components with examples	Input, Output, and Storage Devices video: https://www.youtube.com/watch?v=b7uwVe7M8Pg Input, Output, Storage, Processing Interactive Worksheet: https://docs.google.com/presentation/d/1ljMBMcZJkLkYGA-AJJaBuQCXeKXPR3EAXCvwf9eUEH8/edit?usp=sharing Mind Map Software: https://bubbl.us/ https://canva.com

Content	Suggested Activities	Suggested Assessment(s)	Resources
- Storage Devices – used to save work to be retrieved later. *Examples: flash drive, CD, DVD, hard drive, external hard drive, memory cards, and the cloud*. - Processing Devices – reads the input and determines what it needs to do. - System Unit – protects the internal components of the computer, like the CPU, motherboard, and hard drive.[2]			

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Objective 6.2.3: Explain the IPO cycle.

Content	Suggested Activities	Suggested Assessment(s)	Resources
A computer helps us generate information from raw data. It follows the **Input-Process-Output** (IPO) cycle: - We use an input device to enter data into a computer. This data is called the **input**. - The CPU converts the data into meaningful information. This is called **processing**. - During the processing, the data or information are stored in the computer's memory - After the data is processed, the result is conveyed through an output device. This is the **output**.[5]	Have students watch the 'How Does a Computer Work?' video. Have students complete a Quizizz identifying the input, process, and output of various IPO cycles. [Whole Class/ Group/ Partner/Individual] Present students with a variety of IPO cycles and have them identify the activity at each stage. [Print or Digital Worksheet /Notebook]	Have students create a slideshow explaining how the IPO cycle works. Have students create a digital diorama showing how the IPO cycle works.	How Does a Computer Work video: https://youtu.be/3eoaN_pPhME IPO Cycle Quizizz: https://quizizz.com/admin/quiz/60ee7229fa248c001e16coad Digital Diorama software: https://www.tinkercad.com/teach

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Objective 6.2.4a: Explain the purpose of software.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Software are instructions that tell the computer what to do. There are two main types: system software and application software. **System Software** are the programs that run behind the scenes to ensure the computer functions properly, like the operating system and utility programs. An operating system is the most important software that runs on a computer. It manages the computer's memory and processes, as well as all its software and hardware. Without an operating system, a computer is useless.[9] **Application Software** are the programs used to perform specific computer tasks. They can be divided into two groups – general purpose and special purpose. General Purpose software to carry out lots of different tasks using that application. Special Purpose software perform one specific task like a flight simulator or	Round Robin Question – What is software? Share with students the 'What is Software' video. Share with students the 'Understanding Operating Systems' video. *Scavenger Hunt* Use your Internet sleuthing skills to match the name of the operating system to its logo. Have students perform a digital research scavenger hunt to find examples of application software based on their uses. Using a T-Chart, have students sort general-purpose and special-purpose software.	Have students create a short video (Flipgrid) explaining the purpose of the different types of software.	What is Software Video: https://youtu.be/PBDlbSAddAI Understanding Operating Systems video: https://youtu.be/fkGCLIQx1MI Types of Application Software: https://technostacks.com/blog/types-of-application-software Flipgrid Platform: https://info.flipgrid.com/

Content	Suggested Activities	Suggested Assessment(s)	Resources
payroll software. The word 'app' is short for application software. This is a piece of software that allows us to do an everyday task.[4]			

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Objective 6.2.4b: Discover contributions to software advancement by female pioneers.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Ada Lovelace is known as the first computer programmer. Rear Admiral Grace Hopper was one of the first people to work on/with the Harvard Mark 1. Her work was instrumental in the creation of the programming language COBOL. Hedy Lamarr, a Hollywood actress with a passion for science and engineering. Created a frequency-hopping software that became the basis of bluetooth and wireless technology.	Quick Write Name 5 female inventors and their inventions. Was it difficult to name these female inventors? If so, why? Have students watch videos on Ada Lovelace, Grace Hopper, and Hedy Lamarr. Journal Writing Have students share any ideas for inventions they have – whether it is something new or an improvement on a current device. Have students research and present on Katherine Johnson or other female computer pioneers.	Have students compose an email to Ada Lovelace telling her all about how computers - and the programs that drive them - have changed the world. Be specific! Describe the advances in computer technology that have had the biggest impact on your life. Explain how they can be traced back to Lovelace's work, or her predictions for what computers might be able to do in the future.[11] For each computer innovation (Harvard Mark 1, UNIVAC 1, and COBOL), briefly describe its original purpose, Grace Hopper's contribution to its development, and its impact on modern computing. Can be presented in any format - slideshow, video recording, infographic, speech, paper).[12]	Ada Lovelace: https://www.youtube.com/watch?v=mvHEq5_hedE Grace Hopper: https://www.youtube.com/watch?v=oN3C1FscM-w Hedy Lamarr https://www.youtube.com/watch?v=L-Rn6q4o_ko

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Objective 6.2.5a: Discuss the role of GUI.

Content	Suggested Activities	Suggested Assessment(s)	Resources
The way an interface is designed, dictates its ease of use to the user. Modern operating systems use a graphical user interface, or GUI (pronounced gooey). A GUI lets you use your mouse to click icons, buttons, and menus, and everything is clearly displayed on the screen using a combination of graphics and text.[9]	Have students view the 'Microwave Racing' video. Discuss how the interfaces of the various devices effected the task the user had to complete. Share with students the 'Kids React to Old Computers' video. Share with students the 'What is GUI' video. Share a PowerPoint of different icons and have students identify their role. *Examples: power, trash, Wi-Fi, signal strength, volume, and battery.* [Whole Class]	Have student's complete worksheets on icons and symbols. [Print/Digital]	Microwave Racing: https://www.youtube.com/watch?v=Bzy5hVvbei8 Learning.com: Symbols of Technology: https://www.learning.com/ Kids React to Old Computers Video: https://www.youtube.com/watch?v=PF7EpEnglgk What is GUI video: https://www.youtube.com/watch?v=9SMmbc-TFrQ

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Objective 6.2.5b: Identify functions of technology based on their symbols.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Pictures and words work together all the time. Many pictures in the real world give you information. Many of these pictures are symbols. Symbols are very simple pictures that tell you something, like which bathroom to use, where to throw your trash, or when something is not allowed. They are easily understood by people around the world. When you use technology, you will see even more symbols.[6]	Explore the Zoom or Teams platform, identifying the functions of the various symbols. [PowerPoint/Quizizz/Kahoot] Explore the Google Chrome platform, identifying the functions of the various symbols. [PowerPoint, Quizizz/Kahoot] Explore icons on a computer or mobile device, identifying their functions. Explore technology symbols students will face outside of the classroom. (stores, ATM machines, etc.)	Choose one symbol of technology and share its significance to society.	

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Objective 6.2.6: Evaluate cloud computing and model its use.

Content	Suggested Activities	Suggested Assessment(s)	Resources
The cloud (cloud computing or cloud storage) is the Internet - more specifically, it's all of the things you can access remotely over the Internet. When something is in the cloud, it means it's stored on Internet servers instead of your computer's hard drive. Two main reasons people use the cloud are convenience and reliability. They can store files, share files, back up data for future use.[7] Microsoft 365 is a cloud service that allows you to use different software and save your work in the cloud.	Have students watch the 'What is a Cloud?' video. Have students create a poster on cloud computing. Explore the Office365 platform with students, highlighting the different applications [Whole Class/Group/Partner]	Have students research and debate the pros and cons of cloud computing. Have students upload a file to a shared folder or class notebook.	What is a Cloud video: https://youtu.be/4OO77HFcCUs Office365: https://www.office.com/

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Objective 6.5.3: Define and identify algorithms

Content	Suggested Activities	Suggested Assessment(s)	Resources
An algorithm lists the steps needed to complete a task. Computer scientists use algorithms to plan out the steps they want a computer to follow. Programs are created to implement algorithms. Algorithms can be represented as pseudocode or a flowchart, and programming is the translation of these into a computer program. If an algorithm has been designed, the computer program will follow this algorithm, step-by-step, which will tell the computer exactly what it should do. Examples of algorithms in everyday life are: recipes, traffic lights, GPS, brushing your teeth, and planting a seed.	Round Robin: What are algorithms? Have students view the 'Algorithms' video. What are some of the algorithms they see in the day-to-day living? [Whole Class Discussion] Have students complete a Sudoku puzzle. The process of creating an "algorithm" to solve one of these puzzles lends itself nicely to computational thinking skills. Have students complete page 3 in the Act 2 workbook by drawing a line from each step in the Algorithm to the matching code block.	Have students develop an algorithm to solve an assigned problem using a specific set of commands and use peer review to critique the solution. [Peer Evaluation] Have students create a FlipGrid video as thought they were teaching someone about algorithms.	GCF – Algorithms: https://edu.gcfglobal.org/en/computer-science/algorithms/1/ Computer Science Basics – Algorithms Video: https://www.youtube.com/watch?v=sHyA_Q9dzoI Sudoku for Kids: https://www.sudokuonline.io/kids/numbers-6-6 ECforAll Act 2 Unit 1 Workbook: https://docs.google.com/presentation/d/12w6xuBpJ8RO8jU8JejISWnmJz76MjY-lons7w7Ag6mM/edit#slide=id.gef0079471f_0_661

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Objective 6.5.4: Demonstrate knowledge of the Scratch interface

Content	Suggested Activities	Suggested Assessment(s)	Resources
Scratch is an environment where you can build algorithms by combining code blocks together. You can create interactive stories, animations, artwork, and games. There are three main sections of the Scratch interface. On the left-hand side we have tools to control or change our characters. The main way is through our code blocks. There are different types of block categories or ways to control our characters. We can also change the way our characters look under the "costumes" tab. We can also add sound under the "sounds" tab. In the middle we have our scripts area. This is where we put together code blocks to create our algorithms, or instructions, for our character. We *"drag and drop"* the code blocks we want to use.	Have students view the 'Scratch Basics' video. Discuss products that can be made in Scratch, and the method used. Open a New Project (click on "create" on the top left) and explain the different components of the Scratch Interface. Have students view the Exploring Scratch 3.0 sheet of the student workbook as a reference. [Individual] Pair and Share: Have students share with a partner what they would like to create in Scratch. Have a few students share their thoughts with the class. [Partner] Have students log into their accounts and explore the interface. Introduce the menu options: My Stuff; My Class; Studio. [Individual] Have students access the Hello Mr. Scratch project and use the blocks available. [Individual/Partner]	Have students complete a LiveWorksheet, Kahoot, or Quizizz identifying the parts of the Scratch interface.	Pinnguaq Scratch Basics Video: https://www.youtube.com/watch?v=NqMd44Oi2l4 ScratchECForAll Act 1 Student Workbook: https://docs.google.com/presentation/d/189Vg1wejcISlMatwfrtftfWIfrYTi1F3sMmeTxLlaLs/edit#slide=id.gba823378e5_0_365 ScratchECforAll Teachers' Guide: https://docs.google.com/document/d/18GgFajp8nmSqoy6WZBsANkCvGtVxJ4Jj64D87Szrz3k/edit# Hello Mr. Scratch Project: https://scratch.mit.edu/projects/404899091/editor/ Scratch Tutorial Links: https://docs.google.com/presentation/d/1FGkEaUi-dEqjyiZN7AweMLg97OxxgE5UsKzsTYYVnfw/edit#slide

Content	Suggested Activities	Suggested Assessment(s)	Resources
The *code blocks are shaped like puzzles* to help you know what you can put together. When you put code blocks together, you create a script. On the right-hand side we have our stage, where we can see how our algorithms work and add backdrops for our story. The characters we use are called sprites.[20]	Have students practice using the platform by completing tutorials.		=id.gdf19f5b3e4_0_84

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Objective 6.5.5a: Describe conditions

Content	Suggested Activities	Suggested Assessment(s)	Resources
Selections are a bit different than sequences. Instead of following a specific order of events, they ask a question in order to figure out which path to take next. These questions are known as conditional statements. They tell the program what to do in the event the rule cannot be followed. A **rule** is something that tells your program the direction to run. A **condition** is an exception to a rule. It tells your program to change. It can be a true or false statement A **loop with conditions is** a loop that continually checks if a condition is true. **Sensing** entails noticing (or identifying) when a specific condition is true. When the bell rings at the end of the school day, what do you do? [*leave school, go home, go outside, go to after school activities*] What would you do if the bell doesn't ring? [*stay in*	Have students view the 'Kodable Conditions' video. Discuss. [Whole Class] Have students complete a vocabulary matching worksheet. [Individual] Have students write out an algorithm for what to do at a traffic light. Ensure that conditions are included.	Have students complete page 1 in the ECforAll Act 2 Unit 2 student workbook. [Whole Class/Partner/Individual]	Kodable Conditions Video: https://youtu.be/dJYIRcsdHWg ECforAll Act 2 Unit 2 Student Workbook: https://docs.google.com/presentation/d/1cWuCOGr_JQTpvwebegetZIV4qkx9R-zDn90JYaEEp44/edit#slide=id.g10a684c04a4_0_773 ECforAll Act 2 Unit 2 Teacher Guide: https://docs.google.com/document/d/1Jiuc4VQzDyuxRDESThJJpGRJsvRUrq6ivf-2nAHU20M/edit?usp=sharing

Content	Suggested Activities	Suggested Assessment(s)	Resources
class, not leave yet] The school bell is a condition that tells you to do the action of leaving class or school. In computer programming a condition is a statement that can be either true or false. When the school bell is true (it rings), you leave school. When the school bell is false (doesn't ring), you stay in school. There are some conditions that are always true.[20]			

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Objective 6.5.5b: Using loops with conditions

Content	Suggested Activities	Suggested Assessment(s)	Resources
Loops with conditions use 3 types of blocks in a script to control the actions of a sprite: a "forever" loop block, an "if then" conditional block, and a Sensing block. The "if then" condition is defined by using a Condition block with a blue Sensing block. The Sensing block tells the program to "sense" if the sprite is touching a color, touching another sprite, or if a key on the keyboard is pressed.[20]	Have students complete page 2 in the ECforAll Act 2 Unit 2 student workbook. [Teacher's Guide, page 4) Pair and Share: Have students discuss different examples of conditions that are always true, never true, and conditions that change (that are sometimes true). Have students complete page 7 in student workbook (with guidance). Have students complete the Loops with Conditions – Ice Cream Truck project (student workbook page 8). Have students complete page 16 in ECforALL Act 2 Unit 2 student workbook.	Have groups complete the Twister Maze (Student Workbook, page 3; Teacher's Guide, page 5). [Teacher Observation]	Scratch Loops with Conditions project: https://scratch.mit.edu/projects/521413322/ ECforAll Act 2 Unit 2 Student Workbook: https://docs.google.com/presentation/d/1cWuCOGr_JQTpvwebegetZIV4qkx9R-zDn9oJYaEEp44/edit#slide=id.g10a684c04a4_0_773 Scratch Loops with Conditions – Ice Cream Truck project: https://scratch.mit.edu/projects/506549676/ ECforAll Act 2 Unit 2 Teacher Guide: https://docs.google.com/document/d/1Jiuc4VQzDyuxRDESThJJpGRJsvRUrq6ivf-2nAHU20M/edit?usp=sharing

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Objective 6.5.5c: Design and build a Scratch project

Content	Resources
Have students experiment with Loops with Conditions in Scratch by planning and building a unique project of their own design (Teacher's Guide, pages 14).	ECforAll Act 2 Unit 2 Student Workbook: https://docs.google.com/presentation/d/1cWuCOGr_JQTpvwebegetZIV4qkx9R-zDn90JYaEEp44/edit#slide=id.g10a684c04a4_0_773 ECforAll Act 2 Unit 2 Teacher Guide: https://docs.google.com/document/d/1Jiuc4VQzDyuxRDESThJJpGRJsvRUrq6ivf-2nAHU20M/edit?usp=sharing

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Objective 6.5.6: Design and build robots

Content	Suggested Activities	Suggested Assessment(s)	Resources
A robot is a mechanical device that can be programmed to follow a set of instructions. Robots have processing units, sensors to help them perceive things in the surrounding environment, and motors and actuators so that they can move. Robots may also have the added programmable functionality of lights, sounds or speech recognition.[21]	*Harold the Robot* In this activity children simply give directions to a "robot" (teacher/student) and find out which instructions the robot is able to follow, and how their instructions are taken literally: 1. Place a small collection of blocks/similar objects on a desk. 2. One person (perhaps the teacher or other adult for a start) plays the role of Harold the Robot. Harold can only respond to particular commands. These commands are not given to the children, and can be made up on the fly. 3. Have a child talk Harold through making a tower out of the blocks using instructions such as "Move your hand to the left", "Pick up the block beside your hand" and so on. If the child gives an instruction that is too complex or otherwise not in Harold's vocabulary (e.g. "put the three blocks on top of each other") then Harold expresses confusions by shaking his head or burying his head in his hands. 4. The task is completed when the tower is built. At	Have students write out a code using sequences, events, and loops, to program 'Harold the Robot'. Have students complete the Robotify course. [Observation]	CS Unplugged Harold the Robot: https://classic.csunplugged.org/documents/activities/community-activities/harold-the-robot/haroldtherobot.pdf Robotify Example Lesson Plans: https://robotify-production-media.s3-eu-west-1.amazonaws.com/educator_resources/edu-fundamentals/Fundamentals+1+Lesson+Plans.pdf

Content	Suggested Activities	Suggested Assessment(s)	Resources
	this point, discuss with the children about which commands it would be reasonable for the robot to respond to, which wouldn't make sense. Does a small vocabulary limit what can be done, or does it simply make more instructions necessary? Have students read or read aloud 'Emma Ren, Robot Engineer'. Discuss concepts and procedures mentioned in the story. Have students build a Lego robot. The goal here is to build a robot using Lego blocks from only verbal instructions. One student will have already built a robot and will be the "programmer." That student instructs the other student how to build the same robot without looking at the finished project. Have students complete the Coding Unplugged: My Robotic Friends activity.		Emma Ren Robot Engineer Read Aloud: https://youtu.be/8WJXbZQqmag Coding Unplugged My Robotics Friend: https://www.perkinselearning.org/technology/blog/coding-unplugged-my-robotic-friends-activity

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Objective 6.3.1: Define term keyboarding and label the parts of the keyboard.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Keyboarding is the process of inputting text (type) into a keyboard by pressing keys on a keyboard. A keyboard is an input device. A keyboard has letter keys, number keys and special keys. The letters, numbers and symbols are called characters. You type letters, numbers, and symbols to create documents. You use a keyboard to work on the Internet, play some games, and when you use most software. There are many types of keyboards. Some types include: • QWERTY • Dvorak • Colemak • UKQWERTY The most commonly used keyboard is the"**Qwerty**"keyboard. It is named after the top row of letters on the keyboard and was invented in 1864.	Watch videos of different shapes and types of keyboards. Explain the parts of the keyboards on different devices. Have students do research on the different types of keyboards. Label the keyboard and explain their various parts	Label the keyboard Explain the various parts of the keyboard. Matching the keys with their functions. Label the keyboard and explain their various parts	Parts and functions of the keyboard multiple choice worksheet https://www.liveworksheets.com/zl239436ojb Keyboarding Matching Worksheet https://www.liveworksheets.com/oj2322222mb Proper Keyboarding Techniques Slide Show Presentation https://slideplayer.com/slide/12743406/ https://www.youtube.com/watch?v=4UJ9BkSbR-I&t=275s

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Objective 6.3.2: Demonstrate proper keyboarding posture

Content	Suggested Activities	Suggested Assessment(s)	Resources
How you sit when you use a keyboard is important. How you sit is called posture. Good posture is important because not sitting correctly can result in injuries to your body. You should sit up straight when you use the keyboard. You should face the computer screen. Your arms should rest in front of you. Your hands should be clean. You should place your fingers gently on the keys. When typing your work area should be arranged as follows: Keyboard directly in front of chair; front edge of keyboard even with edge of desk Monitor placed for easy viewing Book at right of keyboard	Students will demonstrate proper/correct posture. Collaborate and create short videos to demonstrate the Do's and Don'ts of proper posture. *Extension Activity* Observe postures of others using computerized devices and create a video showing good and bad posture in use.	Identify good and bad posture from pictures. *Differentiation* Identify good and bad posture from pictures using **yes** and **no** responses.	Proper Keyboarding Techniques: https://www.youtube.com/watch?v=eegeIsUzEOM

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Objective 6.3.3: Demonstrate correct finger placement and reach techniques

Content	Suggested Activities	Suggested Assessment(s)	Resources
Finger Placement When you use a keyboard: Curve your fingers upright over the home keys, Keep your wrists low but not touching the keyboard, Hold your forearms parallel to the slant of the keyboard, Keep your body erect, sitting back in the chair Keep your feet flat on the floor The keys on the middle row of the keyboard are called the **home row keys**. The home keys are a s d f for the left hand and j k l ; for the right hand When you are ready to keyboard, you rest your fingertips on the home row keys. When you type a character that is not typed with a	Show video to demonstrate correct finger placement. Observe students placing fingers correctly on home row keys. Students will practice typing the characters from the home row keys without looking at the keyboard Students may use printed keyboard replicas to practice home row finger placing and practice. Teacher may call characters from the home row keys as student type.	Touch type home row keys. Touch type simple words from the home row. Classwork Quiz	Introduction to Typing https://www.typingclub.com/sportal/program-3/116.play https://www.youtube.com/watch?v=Ito-SiS8XTE Printable keyboard for practice https://www.educationworld.com/tools_templates/template_keyboard-download.pdf https://www.shutterstock.com/image-vector/104-keys-pc-keyboard-layout-vector-1102032 https://www.teacherspayteachers.com/Product/Printable-Keyboard-for-Typing-Practice-3869496 Mnemonic for remembering keys on the keyboard https://www.youtube.com/watch?v=EebWkecsW38 Practice for typing skills http://primarygamesarena.com/Play/Keyboard-2030

Content	Suggested Activities	Suggested Assessment(s)	Resources
home row key, you move a finger from the home row key to the key on the top or bottom rows. After you press the key, you return your finger to its place on the home row. You look at the screen when you keyboard, not the keys			

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Objective 6.3.4: Identify and use special keys

Content	Suggested Activities	Suggested Assessment(s)	Resources
Backspace - Deletes a character to the left of the cursor *Caps Lock* – Capitalizes all letters. *Delete* – Deletes a character to the right of the cursor. *Enter* – Completes or enters a command. Moves cursor down to the next line. *Tab* – Indents *Esc* - Short for Escape, Esc is a key found on the top-left corner of a computer keyboard. It allows the user to abort, cancel, or close an operation. *The spacebar* - the longest bar at the bottom of the keyboard. *The Backspace Key* - helps you to erase a mistake on your screen, just like you would use an eraser in your book. *The Directional or Arrow Keys* - help you to move the cursor up, down, left and right without erasing any of your work. *Shift Keys* - The keyboard has 2 shift keys. Hold down	Watch appropriate video of special keys. Have students explain the functions of the special keys. Provide reinforcement activities.	Identify the special keys on the keyboard Match the keys with their functions. Type lists of simple words using the special keys. Classwork Quiz	Special Keys https://www.youtube.com/watch?v=geKIJEghaqU Special Keys https://www.youtube.com/watch?v=4XS1_j1XhCE

Content	Suggested Activities	Suggested Assessment(s)	Resources
the shift key on the left side when you want to type capital letters with your right hand. Hold down the shift key on the right side when you want to type capital letters with your left hand. You hold down the shift key then press a letter key to type a capital letter. Lower case letters are small letters (such as a, e, or t). These letters will be obtained by pressing the assigned key. Upper case are capital letters (such as A, E, or T). They are obtained by using the caps lock key or the shift keys. To do this, hold down the shift key while pressing the letter to make it capitalized or press the Caps lock key which would also allow letters to also be typed in uppercase. When new keys are introduced, you are required to take your time in order to get used to the position of the keys. The movement to and from each key should be quick and a part of the act of striking. Return your fingers to the home keys immediately after striking the new keys.			

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
KEYBOARDING AND WORD PROCESSING
GRADE 6

Objective 6.3.6: Define term word processing

Content	Suggested Activities	Suggested Assessment(s)	Resources
Word processing is the writing, manipulating, and storing of textual material on a computerized medium. Word Processing Software • Microsoft Word • Google Docs • LibreOffice Writer • OpenOffice Writer • WPS Office Writer • Word Pad • WordStar Microsoft Word is one of the most popular and widely used word-processing software.	Show examples of the different word processing software. Students will model accessing the MS Word.	Identify the different word processing software. Match software names with their icons.	Word Processing Display Board Ideas https://www.teachingideas.co.uk/word-processing/word-processing-display https://www.teachingideas.co.uk/word-processing/using-icons-in-microsoft-office Word Processing Scoot Game file:///C:/Users/12424/Downloads/ElementaryWordProcessingScootGame-1.pdf Live Worksheet https://www.liveworksheets.com/dc2343524fi Google Docs Lessons for Kids LESSON 1 https://www.youtube.com/watch?v=478TDzL1b3E LESSON 2 https://www.youtube.com/watch?v=jvV5SS6rP40 LESSON 3 https://www.youtube.com/watch?v=rd4Um5Ceywk

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
KEYBOARDING AND WORD PROCESSING
GRADE 6

Objective 6.3.7a: Identify the features of the Word interface.

Content	Suggested Activities	Suggested Assessment(s)	Resources
Some of the features of MS Word are as follows: **Home**: font, size, font style, font color, bullets, line spacing, an alignment are some of the elements included on the home tab. **Insert**: In your MS Word document, you can include graphs, shapes, images, charts, tables, footer, page number, and header, these may be found under the insert tab. **Design**: Under the design tab you get a list of templates or design in which you want your document to be created to improve your documents appearance. **Page Layout**: You get options like columns, lines, margins, orientation spacing, identification under the page layout tab.	Open MS Word and explain the key features of a typical window.	Label the diagram of a MS Word window. Explain the features of the MS Word window.	What is MS Word, its features, shortcuts, uses, and other related questions https://www.gadgetsnow.com/faqs/what-is-ms-word-and-its-features/articleshow/84464446.cms

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
KEYBOARDING AND WORD PROCESSING
GRADE 6

Objective 6.3.7b: Enter and format text.

Content	Suggested Activities	Suggested Assessment(s)	Resources
The Work Area After the Word window opens, there is a blank space for you to begin typing, similar to when you begin to write on a blank sheet of paper. There is a blinking black line on the screen called the ***cursor***. This cursor indicates where the next character will be typed. **Saving a Document** It is very important to save your document in the event that you may wish to edit it or use it at a later date. Save your document as soon as you begin typing, and then save the changes about every five minutes as you type so you don't lose your work. **Step 1:** Start a new document in Word and type your text. **Step 2:** Click **File** in the top left-hand corner of the screen. **Step 3:** From the menu, choose **Save**. **Step 4:** A 'Save' dialogue box will come up. At the top and at the left-hand side in the list of folder options, it will show the folder where you'll be saving the	Teacher would demonstrate the use of the following: • add text • enter text • format text: font, style, size, and color • adjust line spacing • insert and format WordArt • insert and format clip art or picture file • modify the text wrap of an object • draw and format shapes • scale, move, and rotate objects • insert a simple page border • spell check a document • print preview • print a document • cut, copy, and paste a selection • copy formatting from a selection • Use spell check features in simple documents. Name, save, open, and print simple documents.	Create and format simple text documents using font, style, color, bold, italic, underline, alignment, select, cut, copy, and paste options.	Text formatting tools worksheet https://www.liveworksheets.com/md2049753ma Formatting fonts quiz worksheet https://www.liveworksheets.com/ri252880sd Word Printing https://www.youtube.com/watch?v=7bLQFTCsH8Y&t=18s

Content	Suggested Activities	Suggested Assessment(s)	Resources
document. If you wish to change this folder, navigate through the folders on the left-hand side of the dialogue box to choose the one where you want to save your document. **Step 5:** Word will automatically give your document a name, based on the first few words of your text. If you don't like the one given, type a name for your document in the 'File name' box. **Step 6:** Once you have typed in the name of your document, click **Save**. **Step 7:** Your document will now have a name, which will be shown at the very top of your document screen. If you make changes to your document and then save them after it have been saved originally, the dialogue box will not come up again. It will just save your changes without any visual notification being shown. **Printing a Document** **Step 1**: Click the **File** tab. **Step 2:** Click **Print**. **Step 3:** Examine the print preview on the right side of the screen to ensure the document appears correct. **Step 4:** Select the correct printer by clicking the **Printer** list arrow and selecting it from the list. **Step 5:** Adjust the printer settings using the options below the printer, described in the following table. **Step 6:** The document is sent to the printer.	Watch a YouTube video 'Word Printing'.		

Content	Suggested Activities	Suggested Assessment(s)	Resources
The shortcut to print a document - Press Ctrl + P.			

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
GRAPHICS AND MULTIMEDIA
GRADE 6

Objective 6.4.1: Define graphics and multimedia.

Content	Suggested Activities	Suggested Assessment(s)	Resources
GRAPHICS Graphics are all around us. Our world is made up of colors, shapes and words. Graphics are drawings and pictures. Examples of graphics may be found on: • product wrappers and packaging • Story books and textbook covers • t-shirts • School bags • Face painting Graphic designs creatively put together colors, shapes, and words to form meaningful and pleasing design. *MULTIMEDIA* Multi means more than one; many or multiple. Media is a means of conveying information. Multimedia is the presentation of information through text, audio, graphics, video, and animation. The basic elements of multimedia are: **Text** – Characters	Identify and discuss the different types of graphics in surroundings and personal items Describe graphic designs created Research local graphic designers Watch appropriate videos *Extension Activities* Collaborate with Art Teacher to assist with graphic designs Collaborate with Junkanoo Artists Watch appropriate video Create a sign or poster adding text and graphics Create a short video with audio recording, video, and photo images	Create a simple graphic design using shapes (a teddy bear, a house, a vehicle). Quiz- Multiple Choice, Matching, True/False	MS Paint Desktop Publishing Photoshop Adobe Illustrator Canva What Is Graphic Design? https://www.youtube.com/watch?v=oBnuvEoyaZo Multimedia Display Board https://www.teachingideas.co.uk/multimedia/multimedia-work-display Flipgrid Introduction to Multimedia https://www.youtube.com/watch?v=4ZM6pojgHOg Animation Ideas https://www.teachingideas.co.uk/multimedia/animation-ideas

Content	Suggested Activities	Suggested Assessment(s)	Resources
that are used to create word, sentence and paragraphs. **Graphics** – are digital representation of non-text information such as drawings, charts, or photographs. **Audio** – Music, speech or any other sound. **Video** – photograph images that are played back at speeds of 15 – 30 frames per second and provide that appearance of full motion **Animation** – Clipping through a series of still images that create an illusion of motion.			

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GRADE 6

Objective 6.4.2: Explain the use of presentation software

Content	Suggested Activities	Suggested Assessment(s)	Resources
A presentation lets you combine text, graphics, video, and sound on individual pages which are called slides. Many slides are saved into one file. This is called a presentation. Presentations are called slide shows. Presentation software enables users to present information, graphics, videos, etc. through slideshows in an attractive way. Popular presentation software include Prezi, Google Slides, Keynote, Slides, Slide Dog, Canva, and PowerPoint.	Watch video introducing popular presentation software	Using a Venn Diagram compare and contrast popular presentation software. Examples: Prezi, Google Slides, Keynote, Slides, Slide Dog, and PowerPoint	Multimedia Software https://www.youtube.com/watch?v=9Pdf8htIpgc&t=62s https://www.youtube.com/watch?v=vogydDBj7Dk

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SCOPE OF WORK
GRAPHICS AND MULTIMEDIA
GRADE 6

Objective 6.4.3: Explain PowerPoint.

Content	Suggested Activities	Suggested Assessment(s)	Resources
PowerPoint is one of many software designed for making electronic slides/ presentations. The PowerPoint application lets you combine text, graphics, video, and sound on individual pages which are called slides. This file is called a presentation. A new blank presentation opens each time you start PowerPoint. You can use many devices to help make and give a presentation. Presentations are also called slide shows *NOTE:* The PowerPoint window, and the screen resolution may look different based on the device used. **Other Multimedia/Presentation Programs include:** • Google Slides • Prezi • Canva • Prezi • Powtoon • SlideShare • Emaze • Slidebean	Explain the Backstage View and the template themes Demonstrate proper design guidelines to use PowerPoint to create, save and view slides. Explain the different slide layouts Research and use another Presentation software to present a slideshow.	Produce a 3 slides presentation with text, pictures about an event. Format text using different fonts and colors for enhancements Add transition to the slide Display the slides using the slideshow feature	PowerPoint Software Introduction to Microsoft PowerPoint https://www.youtube.com/watch?v=pBG7crK-mRc Google Slides Lessons for Kids LESSON 1 https://www.youtube.com/watch?v=CDRoWBMUU5U Lesson 2: Adding Style https://www.youtube.com/watch?v=E4Gl5Cq2siA Lesson 3: https://www.youtube.com/watch?v=eyQk-UF8f_s&t=142s

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GRADE 6

Objective 6.4.4: Identify the features of the PowerPoint interface

Content	Suggested Activities	Suggested Assessment(s)	Resources
The PowerPoint window has many of the same elements as other Microsoft programs. It has the same toolbar buttons and menus used to open, save, draw objects, cut, copy, paste, insert clipart, check spelling, preview, print, etc. The PowerPoint window also has many new features that you use to create, format and view slides. *Office button* – displays a drop-down menu for creating, opening, saving, and printing *Title Bar* – displays the filename and program *Ribbon* – displays tabs that organize program commands by groups. *Command buttons* – are displayed beneath the tabs. They are used to execute a command or to display a drop-down menu of command options *Outline tab* – used to create and view slides in an outline format, *Slides tab* – used to see a tiny version of each slide that have been created,	Demonstrate and explain the features of the MS PowerPoint window. Labeling diagrams Watch appropriate video	Label the features of the PowerPoint window diagram.	Introducing the PowerPoint Window https://www.thetraininglady.com/powerpoint-window/ Diagram of PowerPoint window. https://techwaggin.files.wordpress.com/2013/03/ppt_screen.png?w=300&h=210 https://opentextbc.ca/learningpowerpoint/wp-content/uploads/sites/4/2013/05/pptwindow2-1024x664.png

Content	Suggested Activities	Suggested Assessment(s)	Resources
called a thumb nail. *Slide pane* – contains the current slide. *Placeholders* – are boxes with dotted boarders that are part of most slide layouts. These boxes hold title and body text or objects such as charts, tables, and pictures Placeholders used to add text, drawings, clipart, video and sound to a slide. *Note pane* – is located below the slide pane and is used to type reference notes and additional comments about the slide. *Drawing toolbar* - Automatically displayed at the bottom of the window above the status bar. *Status bar* – shows the number of the slide in the slide pane and the total number of slides in the presentation.			

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GRADE 6

Objective 6.4.5: Name the various slide layouts

Content	Suggested Activities	Suggested Assessment(s)	Resources
Slide Layouts are the pre-formatted design of a slide in PowerPoint. These are: ♦ Title slide – first and main slide, to introduce the topic and presenter. ♦ Title and content slide ♦ Two Content ♦ Comparison ♦ Title Only When you create a slide, you choose a layout. The way objects are put on a slide is the layout. You need to decide on the layout of each new slide you insert	Explain the use of each layout		Different Types of Slide Layouts in PowerPoint https://www.pokeslide.com/en/different-types-of-slide-layout-in-powerpoint/

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Objective 6.4.6: Create a title slide and format text

Content	Suggested Activities	Suggested Assessment(s)	Resources
Whenever you create a new slide, you'll need to choose a slide layout. Slide layouts contain place holders. Place holders are pre-made boxes on a slide that allow you to enter information into a slide by clicking. The title slide is the first slide of a presentation. It usually contains a title and a subtitle. The title tells the main idea of the presentation. To create a title page: 1. Open PowerPoint. You are presented with a title slide. 2. Enter the Presentation title in the 'Click to Add Title' text box/placeholder. 3. Type your subtitle in the Click to Add Subtitle text box/placeholder.	Students will watch a video demonstrating how to create and format a title slide. Teacher will lead students in Creating a title slide inserting text and graphics.	Create a PowerPoint Presentation Generate content for a 5-slide presentation on	PowerPoint: Slide Basics https://www.youtube.com/watch?v=TZfcVbKJs1E&t=7s Create your first PowerPoint Presentation https://support.microsoft.com/en-us/office/video-create-your-first-powerpoint-2013-presentation-42229250-6c66-44cd-adf8-2f5802c63f74 Diagram of title slide http://www.baycongroup.com/powerpoint2007/images/PPwindow.jpg https://images.presentationgo.com/2018/11/01-Modern-Business-PowerPoint-Template-Title.jpg Diagram showing place holders https://artofpresentations.com/wp-content/uploads/2021/09/M1S1-What-is-a-Placeholder-in-PowerPoint-768x434.jpg

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Objective 6.4.7: Insert and format new slides adding texts and graphics

Content	Suggested Activities	Suggested Assessment(s)	Resources
To create a new slide: 1. Choose the Home tab. 2. Click the New Slide button in the Slides group. The Office Theme dialog box appears and displays several layout templates. 3. Click the layout you want. The layout appears in the Slide pane of the PowerPoint window. To add text: 1. To add text, click inside the placeholder and type. 2. To add an additional slide to your presentation, do one of the following: 3. Right-click the slide layout. A menu appears. Click Layout and then click the layout you want. 4. Choose the Home tab, click the New Slide button , and then choose the slide layout you want.			

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Objective 6.4.8: Add animation to text and graphics

Content	Suggested Activities	Suggested Assessment(s)	Resources
To add an animation effect to a PowerPoint slide, follow the steps below. 1. In a slide, highlight the text or image you want to animate. 2. On the Ribbon click the Animations tab. 3. On the Animations tab, in the Advanced Animation section, click the Add Animation option. 4. Select the desired type of animation effect. You can select an Entrance, Emphasis, and Exit animation effect. You can also select a Motion Path effect, if you want to change the motion path of the animation.			https://www.computerhope.com/issues/pictures/powerpoint-add-animation.jpg

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GRADE 6

Objective 6.4.9: Preview, save, print, and deliver a presentation

Content	Suggested Activities	Suggested Assessment(s)	Resources
Navigating the Slide Show If you want to go to the next slide do one of the following: Press the Right Arrow key. Press the Enter key. Press the Page Down key. Left-click the slide. If you want to go to the previous slide do one of the following: Press the Left Arrow key. Press the Backspace key. Press the Page Up key. To end the slide show and return to PowerPoint press the Esc key.			

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
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Objective 6.6.1: Explain the use of the Excel program

Content	Suggested Activities	Suggested Assessment(s)	Resources
Microsoft Excel (or Excel) is a program used to record, analyze, present reports that need calculations, such as a grade sheet, and to create charts. A spreadsheet is a table of rectangular grid, consisting of cells (rows and columns), that holds the data, which includes texts and numbers. Spreadsheets are used in business for budgeting, financial reporting, etc. Spreadsheet can be used for personal budgeting, tracking expenses, or creating a list of personal items. The advantage of an electronic spreadsheet is that the content can be easily edited and updated to reflect changes in the calculated data.	Project-Based Learning Activity PowerPoint presentations Watch appropriate videos Sample Expense Spreadsheet – School Supplies Sample Fast-Food-Fun Spreadsheet	Provide a list with School Supplies. Students to enter data in spreadsheet Plan a Personal Expense Spreadsheet – listing items, costs, and calculate total. Save the data to use in creating a new excel worksheet.	https://excelchamps.com/excelbasics/#Introduction_to_Mcrosoft_Excel https://excel-practice-online.com/ https://classroom.synonym.com/excel-activities-elementary-middle-school-5845242.html https://www.teacherspayteachers.com/Product/Spreadsheets-for-Beginners-Fast-Food-Fun-1436187?st=b952f02952d2d154fd76a4c5

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
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Objective 6.6.2: Demonstrate opening and closing a workbook and a worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
To start Excel On the Windows taskbar, click the **Start** button to open the Start menu. On the Start menu, scroll through the list of apps, then click Excel. Excel will open in Backstage view. The Backstage view allows for the use of a blank workbook, open an existing workbook, or use a preset workbook called a template. The File tab on the Ribbon, shows various screens of commands that can be used to manage files and options in using Excel. **TOUCH SCREEN DEVICES** Point out the differences in the Office and windows interfaces. (Ribbon increases in height, buttons are bigger with more space around each, to move easily using the fingers or a stylus to tap the button.) **Closing a Workbook** On the ribbon, click the File tab to display the Backstage view, and then click **Close** in the navigation bar (or press CTRL + W) on the keyboard. A dialog box may appear,	Project-Based Learning Activity PowerPoint Appropriate Spreadsheet Videos Demonstrate Opening the Excel Program and explain the features of Backstage View Demonstrate closing the workbook and worksheet.	Students open the Excel program and worksheet on their device. Students to describe the features of Backstage view Students state differences in the interfaces of the various devices used. Students close the workbook and worksheet on their devices Students explain what happens after closing a worksheet and the workbook	**Textbook:** Shelly Cashman Series – Discovering Computers & Microsoft Office 365 Office 2016 **Textbook:** New Perspectives – Microsoft Office 365, Office 2019 https://technologyforlearners.com/a-fun-way-to-start-learning-about-spreadsheets/ Spreadsheet Challenge Exercises https://www.attechedu.com/single-post/teaching-spreadsheets-a-guide-to-introducing-spreadsheets-to-primary-students

asking you to save or not to save. Click **Don't Save.** The workbook closes without saving any entry made. Excel remains open, ready to create or open another workbook.[22,23]			

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Objective 6.6.3: Identify parts and features of a worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
Open a new, blank workbook; The parts are: **Title Bar** -shows Book 1- Excel, when a worksheet is saved the file name will be displayed in the Title bar. **Ribbon Display Options**: Minimize, Restore and Maximize buttons. The organizing of the Ribbon into Tabs and the related Command buttons **Name Box** – shows the address of the active cell, Example A1 – this indicates the active cell is where column A and row 1 intersect. Data is entered in the active cell. **Insert Function** – is used to choose and insert a built-in function. **Active Cell** – The current cell with the thick rectangular border (green) around the cell. **Column Headings** – Identified by the letters at the top of each column – Column name. **Row Headings** – The numbers along the left side of each row – the row number. **Sheet Tabs** – Shows the name of the current or active worksheet. Zoom Controls **Scroll Bars** – Used to move vertically or horizontally	Project-Based Learning Activity Watch appropriate videos Spreadsheet Vocabulary explained	Labeling parts of the worksheet Review Questions Test/Quiz - Fill-in the banks Matching	Textbook: Shelly Cashman Series – Discovering Computers & Microsoft Office 365 Office 2016 Textbook: New Perspectives – Microsoft Office 365, Office 2019 https://www.excelatwork.co.nz/2018/06/07/understanding-the-excel-screen-components/ Quizizz Nearpod

within the current or active worksheet. **Basic Terminology:** An excel file is called a **Workbook**. A workbook contains one or more individual worksheets. **Worksheet** – contains grid, make up of rows and columns. **Cell** – A cell is the intersection of a row and a column. (Contain text, number or formula) Cell Range **Label** – Texts entry or data **Values** – Numeric values; default at right aligned **Formulas** – calculation commands that perform operations on the data. (Cell references, arithmetic operators, and functions.)[22,23]			

PRIMARY COMPUTER STUDIES CURRICULUM GUIDE
SCOPE OF WORK
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GRADE 6

Objective 6.6.4: Navigate within a workbook and worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
Moving around the cells of a worksheet using the following methods: **Pointing and clicking** in a cell (block plus sign cursor) Scroll Bars arrows; **Directional Arrows or Cursor Control Keys** (Left, Right, Up, Down); Home Key and CTRL + Home, End, CTRL +G or F5 (Go To dialog box to move quickly to a cell address. TAB Key; PGUP, PGDN. **The horizontal and vertical scroll bar**s to move to other areas of the worksheet.	Project-Based Learning Activity Presentation videos Students identify these keys on their device and practice movements around the worksheet.	Practice Exercises Review Questions Labeling a diagram; naming and explaining each of the keys.	https://www.youtube.com/watch?v=w7GzZambT_0

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Objective 6.6.5: Create a blank worksheet or use a template to enter data

Content	Suggested Activities	Suggested Assessment(s)	Resources
Create a new workbook from the new screen in Backstage view. Use the blank workbook template or open an existing one. *Note:* using the CTRL + N or a new blank document in any Office application. To enter data into a cell, it must be selected. The easiest way to select a cell (make it active) is to use the mouse to move the block plus sign pointer to the cell and click it. Use the Arrow Keys. When the cell is selected, the thick border surrounds the cell, and the active cell reference appears in the Name Box. The active cell column and row headings color changes to a darker shade. Enter data into a cell and pressing the Enter key, moving the cell cursor to the next cell in the column.	Project-Based Learning Activity Presentation Video Create a worksheet, and enter texts, numbers and dates. Explain the different data types and their position/alignment in a cell. Selecting a cell, range of cells and to point out the active cell.	Students to use their sample Personal Expense spreadsheet information, and to enter the data in a new worksheet. Students to work from other assigned tasks.	https://www.youtube.com/watch?v=MZimPlQ5v88 Project-based Activities: https://classroom.synonym.com/fun-classroom-projects-using-excel-8431821.html Spreadsheets Are My Superpower: https://www.commonsense.org/education/lesson-plans/spreadsheets-are-my-superpower

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Objective 6.6.6: Format, save, and print a worksheet

Content	Suggested Activities	Suggested Assessment(s)	Resources
Formatting enhances the appearance of the worksheet data by changing font, size, color, alignment, and adding borders. Borders are useful when a worksheet is printed, to show the gridlines **Saving a wor**ksheet – This is done to keep the document for later use or to share with others. Using the Backstage view – File – Save or Save As. From the **Keyboard**: Ctrl +S in all Office Program. **Printing** is necessary for a paper-based copy of the worksheet. From the File – Backstage View. Excel has many tools to control the print layout and appearance of a worksheet. Preview before printing for correctness.	Project-Based Learning Activity Presentation Videos Sample formatted worksheet. Demonstrate the uses of the Save/Save As commands and print options.	Project: Finalizing a worksheet: - Assigned exercises to enter data, perform calculations, format, save, preview, and print a hard copy or Screen Share Test/Quiz – Multiple Choice, True/False, Matching, Fill-in the Blanks	https://www.youtube.com/watch?v=otdlR1rBwkM Additional Spreadsheet Activities: https://www.pinterest.com/thedigitalscoop/spreadsheet-activities/

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SCOPE OF WORK
SPREADSHEETS
GRADE 6

Objective 6.6.7: Perform simple calculation using formula and the SUM function

Content	Suggested Activities	Suggested Assessment(s)	Resources
A formula is a calculation using numbers in a cell. Using a formula to calculate values allow you to focus on the data and allow Excel to automatically recalculate the results, if the data has to be changes. To begin a formula in any cell, it must begin with the equal (=) sign/symbol. Then a cell address, a mathematical operator, then another cell address. Example: = B2+C3 Enter a cell address into a formula by typing it directly into the cell. By clicking on the cell to be included. The cell into which you enter a formula will display the result. *Note:* the formula will be seen in the formula Bar. *Introduce Common Built-In Functions* A function is pre-set operator in Excel to accept the values/numbers, and cell references when selected for calculations. Examples: =SUM to add the total of the values. =AVERAGE to calculate an average of the values in a range. That is, Excel totals	Project-Based Learning Activity Review the symbols used in Excel that represent the standard mathematical operators: • Multiply (*) asterisk • Division / • Addition + • Subtraction – Use sample spreadsheet and demonstrate writing the formula to calculate values. Demonstrate the use of the SUM and AVERAGE Functions in calculating values/numbers	Students to use their sample Personal Expense spreadsheets and to enter the data in a new worksheet or open the existing worksheet. Students to carryout calculations by writing the formula to add the totals. Students to use the SUM Function to add the totals. Use the AVERAGE Function to get the average expense for their budget.	Spreadsheets Are My Superpower: https://www.commonsense.org/education/lesson-plans/spreadsheets-are-my-superpower

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SPREADSHEETS
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Objective 6.6.8: Create simple pie and column charts with worksheet data

Content	Suggested Activities	Suggested Assessment(s)	Resources
A chart is a graphic (picture) representation of data in a worksheet, **Excel charts**. A chart can be used as a descriptive way of representing the data; to clearly show trends or patterns in the data. Pie charts show the combination of each piece of data to the whole, or total of the data. **A column (vertical presentation)** or bar chart **(horizontal presentation)** is used to show comparison or ranking. **Steps:** • A chart can be created by selecting the data from the worksheet, then select the type of chart to insert into the worksheet. • Select the cell range (s) for the chart in the worksheet, then, on the Insert Tab, in the Charts group, click the chart type. (Pie/Column) • Save the chart with the worksheet.	Project-Based Learning Activity Use Google-sheets simple pie chart templates for interactivity and demonstrations, any other suitable application Provide students with the instructions from the selected activities. Students to follow and plot the Pie chart; explain each step and parts Students to follow creating a column or bar chart using the same data. Demonstrate the default standard layouts – Adding chart elements.	Projects: • Kyla's M & M Pie Chart. • Budget Pie Chart • Ari's Fruits Pie Chart Have students plot Column Charts using the data. Provide other suitable exercises as necessary Test/Quiz: • Multiple choice • True/False • Matching • Fill-in the Blanks	YouTube Video: Introduction to Pie Chart: https://www.youtube.com/watch?v=0G07l7cz0Ig Pie/Column Chart Scenarios: - https://oakdome.com/k5/lesson-plans/google-classroom/google-sheets-simple-spreadsheet-and-chart-fruits.php Sample Pie/Column Chart Exercises: https://www.google.com/search?source=univ&tbm=isch&q=K-5+Technology+Lab+%2B+Pie+charts/ https://www.pinterest.com/pin/google-classroom--518758450828625975/

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