Unit 01: Intro to Technology

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **FY**
Status: **Published**

Standards Alignment

New Jersey Student Learning Standards

AAAA.K-12.1	Inquire, think critically, and gain knowledge.
AAAA.K-12.1.1	Skills
AAAA.K-12.1.1.2	Use prior and background knowledge as context for new learning.
AAAA.K-12.1.4	Self-Assessment Strategies
AAAA.K-12.1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
AAAA.K-12.1.4.4	Seek appropriate help when it is needed.
AAAA.K-12.2.3	Responsibilities
AAAA.K-12.2.3.1	Connect understanding to the real world.

Integration of Career Readiness, Life Literacies and Key Skills

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP3	Attend to personal health and financial well-being.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Technology / Integration of Computer Science and Design Thinking

TECH.8.1.2	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to

	create and communicate knowledge.
TECH.8.1.2.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations
TECH.8.1.2.A.1	Identify the basic features of a digital device and explain its purpose.
TECH.8.2.2	Technology Education, Engineering, Design, and Computational Thinking - Programming: All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.
TECH.8.2.2.A	The Nature of Technology: Creativity and Innovation: Technology systems impact every aspect of the world in which we live.
TECH.8.2.2.A.1	Define products produced as a result of technology or of nature.
TECH.8.2.2.B	Technology and Society: Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society.
TECH.8.2.2.B.1	Identify how technology impacts or improves life.

Interdisciplinary Connections: NJSLS for ELA, Social Studies, Science and/or Math Section

LA.K-12.NJSLSA.SL	Speaking and Listening
	Comprehension and Collaboration
LA.K-12.NJSLSA.SL1	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
LA.K-12.NJSLSA.SL2	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
LA.K-12.NJSLSA.SL3	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.
LA.K-12.NJSLSA.SL6	Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.
LA.K-12.NJSLSA.L	Language
LA.K-12.NJSLSA.L6	Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.
LA.SL.2.1	Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
LA.SL.2.1.A	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
LA.SL.2.1.B	Build on others' talk in conversations by linking their explicit comments to the remarks of others.
LA.SL.2.1.C	Ask for clarification and further explanation as needed about the topics and texts under discussion.
LA.SL.2.2	Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
LA.SL.2.3	Ask and answer questions about what a speaker says in order to clarify comprehension,

	gather additional information, or deepen understanding of a topic or issue.
LA.SL.2.6	Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.
LA.L.2.6	Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy that makes me happy).

Integration of Diversity, Equity and Inclusion; Climate Change; Informational and Media LiteracyNew Section

see Crosswalks

21st Century Life and Careers

Stage I: Desired Results

Transfer/Overview/Rationale

Transfer / Overview / Rationale

Unit Rationale

The purpose of this unit…

21st-Century learners understand the usefulness of computers in our society.

Meaning

Essential Questions

Essential Questions

- In a world of constant change, what skills should we learn?

- How can we demonstrate a sound understanding of the nature and operation of technology systems?
- How can we practice responsible use of technology systems, information, and software?
- How can we apply what we already know about technology to learn new technologies?

Enduring Understanding/Indicators of Understanding

Enduring Understanding/Indicators of Understanding

- 21st-Century learners can identify the parts of a computer.
- 21st-Century learners can identify uses of technology in society.
- 21st-Century learners can identify and demonstrate proper use of equipment (computers and peripherals).
- 21st-Century learners understand and adhere to district and school procedures.
- 21st-Century learners work cooperatively and collaboratively with others when using technology.

Acquisition (Student Learning Objectives)

Knowledge

Knowledge

Students will know…

- Computer terms and use (e.g. monitor/screen, computer/laptop, Internet, mouse, keyboard, printer, CPU, and hard drive).
- To work cooperatively and collaboratively with others when using technology.

Skills

Skills

Student will be skilled at …

- Using the Internet to explore and investigate a site, with teacher support.
- Demonstrating proper usage of equipment (computers and peripherals).

Stage 3: Learning Plan

Resource and Mentor Texts

Resources and Mentor Texts

- Web browser (e.g. Google Chrome)
- Videos and links (see attached)

Intro to Technology - Grade 2
Parts of a Computer Game - Grade 2
Good Computer Kids Video - "Parts of a Computer" - Ads Removed
Good Computer Kids Video - "Parts of a Computer" - Original Link

Formative Assessment Strategies

Formative Assessment Strategies

- Hand signals
- Web or concept map
- Analogy prompt
- Misconception check
- Student conference
- Observation
- Quiz
- Choral response
- Debriefing
- Think-pair-share
- Ticket to leave
- Turn to your partner
- Oral questioning

Learning Activities/Unit of Study

Learning Activities/Unit of Study

- Computer lab rules and procedures presentations
    - Students will view and discuss classroom rules and procedures.

- Technology and computer discussions

    - Students will discuss technology systems, including advantages and disadvantages.

- Computer parts videos and/or songs
    - Students will view and discuss videos and/or songs which identify several parts of a computer. Students will be asked to identify the parts of their workstation. Students will discuss similarities and differences between computers in the lab, the student's homes, and the videos.

- Computer parts presentations and discussions
    - Students will work with partners to investigate, discuss, and identify several computer parts.

Modifications and/or Accommodations

Suggested Modifications (ELL, Sp. Ed, GIfted, At-risk of Failure)

English Language Learners

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students.

Special Education Students

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for

clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.