

Tech Gr 4 Unit 1 - Educational Technology

Content Area: **Technology**
Course(s): **STEM-Technology**
Time Period: **Six Weeks**
Length: **1st Marking Period**
Status: **Published**

Stage 1 - Learning Outcomes

Unit Overview

Standard 8.1 Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

Strand A. Technology Operations and Concepts: *Students demonstrate a sound understanding of technology concepts, systems and operations.*

Enduring Understandings

- Digital tools allow for collaboration anytime/anyplace worldwide.
- Digital tools allow me to create and share original ideas.
- Digital tools help me gather, evaluate, use and synthesize information.
- Digital tools must be used responsibly.
- Lifelong learners use technology effectively.

Essential Questions

- How do I choose a digital tool to help me learn?
- How do I use digital tools responsibly?
- How do I use digital tools to communicate?
- How do I work with others using digital tools?
- How does a lifelong learner integrate technology into his/her life?

Interdisciplinary Connections

1. Common Core Literacy

LA.4.CCSS.ELA-Literacy.CCRA.R.7	Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
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LA.4.CCSS.ELA-Literacy.CCRA.W.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
LA.4.CCSS.ELA-Literacy.CCRA.W.6	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
LA.4.CCSS.ELA-Literacy.CCRA.W.10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
LA.4.CCSS.ELA-Literacy.CCRA.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.4.CCSS.ELA-Literacy.CCRA.SL2	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
CCSS.ELA-Literacy.W.4.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
CCSS.ELA-Literacy.W.4.10	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
CCSS.ELA-Literacy.RF.4.4	Read with sufficient accuracy and fluency to support comprehension.
CCSS.ELA-Literacy.RF.4.4.a	Read grade-level text with purpose and understanding.
CCSS.ELA-Literacy.RI.4.7	Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.
CCSS.ELA-Literacy.SL.4.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

2. Common Core Math

- CCSS.MATH.PRACTICE.MP5 Use appropriate tools strategically
- CCSS.MATH.PRACTICE.MP6 Attend to precision

3. Career Ready Practices

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP11. Use technology to enhance productivity.
- CRP4. Communicate clearly and effectively and with reason
- CRP6. Demonstrate creativity and innovation.

Stage 2 - Assessment

Formative Assessment

Teacher observation of students' progress logging into the Chromebook and accessing appropriate websites

Teacher observation of completed projects

Teacher observation of student cooperation and class discussion

Matrix of skill development

End of Unit/Benchmark Assessments

Stage 3 - Learning Plan

Suggested Activities

4th Grade Unit 1

- Select appropriate digital tool to complete a task or solve a problem (For example: Choose Google Doc, Presentation app, Wiki, StoryBird.com).
- Independently access and use online learning tools (i.e. FactCite Biography for Beginners for biography research, Wonderopolis.org for inquiry research, Newsela for current events).
- Create and format a document with the purpose of enhancing text and including graphics (For example: Writing / ELA piece, presentation, or Google Doc).
- Use a graphic organizer to organize information about a problem or issue. (Venn Diagram)
- Create a pamphlet explaining appropriate and responsible use of computers, including copyright and cyber bullying
- Use digital tools to research information for biographies. Share the information and collaborate using a Google document.
- Research natural problems caused by the water cycle, such as drought and hurricanes.
- Graph data using a spreadsheet and produce a report that analyzes the results. Example: Take a survey of the class, enter information into a spreadsheet, graph the information and analyze the data.
- Participate in online survey (Google Forms), export data into spreadsheet, analyze and produce report to explain results.

LESSON STRATEGIES:

- Interactive mini lecture/notes – Students take notes, answer questions, turn and talk, participate in class discussions, look up information in text/online.
 - Do Nows – At start of class, students answer questions, reflect on learning, work on typing.com
 - Video Clips- Shown to aid learning by providing a visual, engage the class
 - Demonstrations- To enhance student learning, ignite curiosity, spur discussion, provide a visual, engage the class
 - Research questions- Students are given a broad question to research. Students answer the question and provide evidence for their responses. (Independent or collaborative)
 - Journaling- Responses to various ideas, thoughts, class activities, and content.
 - Reflecting on Learning- Students self reflect on their learning and “rate” themselves on a learning scale.
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Supportive Strategies

1. Special Education

- Employ assistive technology as needed (For example, use of Dyslexie font, high contrast or screen magnification on Chromebook, or spoken text features)
- Graphic Organizers
- Modifications on IEP
- Providing written and oral directions, utilizing visuals and exemplars. (For example, teacher will model on the ActivBoard and provide step by step directions)
- Reduction in workload
- Repetition and Reinforcement of classroom material
- Strategic Grouping for all group work

2. ESL

- Employing assistive technology as needed (For example, online translation or Language text settings on Chromebook)
- For collaborative assignments, appropriate roles will be assigned. (For example, time-keeper, activity starter)
- Making content culturally relevant
- Partner English Learners with Strong English Speakers
- Providing written and oral directions for all lessons, utilizing visuals and exemplars
- Repeating classroom procedure and routines as much as possible to reinforce language learning
- Visual Aids

3. Student at risk of failure

- Employing assistive technology as needed (For example, use of Dyslexie font, high contrast or screen magnification on Chromebook, or spoken text features)
- Flexible acceptance of missing/lost/incomplete assignment
- Strategic Grouping for all group work

4. Gifted and Talented

- Higher level learners will be provided with more intellectually demanding learning activities. (For example, timeline can be created using a movie format. Timeline could also be written in first person format)
- Higher Order Questioning
- Utilizing different reading levels appropriate for students

Core Instructional Materials/Resources

- Chromebooks, iPads or other internet-connected devices
- Google Apps for Education accounts for each student
- Paid subscription to any online resources needed such as BrainpopJr.com or PebbleGo
- See websites listed in “Suggested Activities” section.