Unit 3-4-Tech: Research Project

Content Area: **Technology**
Course(s): **Technology 4**
Time Period: **MP3-4**
Length: **MP3-4; once a week**
Status: **Published**

Essential Questions

- Why is the evaluation an appropriate use of accurate information more important than ever in the technological age?
- Where can I find the information I'm looking for?
- How can I tell if the information I find is reliable?
- How do I search for reliable information?

Big Ideas

- Information is spread worldwide within seconds due to technological advancements and has an immediate impact.
- Plan strategies to guide inquiry.
- Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.
- Many factors influence the accuracy of inferences and predictions.
- Engineering design requirements include desired features and limitations that need to be considered.

Cross-Curricular Integration

English Language Arts

- RI.4.4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.
- 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.
- RI.4.10. By the end of year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.
- W.4.2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- W.4.6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.
- W.4.7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.

- W.4.8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.
- W.4.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.
- W.4.10. Write routinely over extended time frames (time for research, reflection, metacognition/self-correction and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.
- 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.
- L.4.6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).

Science

- 3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

Career Readiness, Life Literacies and Key Skills Inegration

Performance Expectations

- 9.4.5.CI.1: Use appropriate communication technologies to collaborate with individuals with diverse perspectives about a local and/or global climate change issue and deliberate about possible solutions (e.g., W.4.6, 3.MD.B.3,7.1.NM.IPERS.6).
- 9.4.5.CI.3: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity (e.g., 8.2.5.ED.2, 1.5.5.CR1a).
- 9.4.5.CI.4: Research the development process of a product and identify the role of failure as a part of the creative process (e.g., W.4.7, 8.2.5.ED.6).
- 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
- 9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem (e.g., 2.1.5.CHSS.1, 4-ESS3-1).
- 9.4.5.CT.3: Describe how digital tools and technology may be used to solve problems.
- 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).
- 9.4.5.DC.2: Provide attribution according to intellectual property rights guidelines using public domain or creative commons media.
- 9.4.5.DC.3: Distinguish between digital images that can be reused freely and those that have copyright restrictions.
- 9.4.5.IML.1: Evaluate digital sources for accuracy, perspective, credibility and relevance (e.g., Social Studies Practice - Gathering and Evaluating Sources).
- 9.4.5.IML.6: Use appropriate sources of information from diverse sources, contexts, disciplines, and cultures to answer questions (e.g., RI.5.7, 6.1.5.HistoryCC.7, 7.1.NM. IPRET.5).
- 9.4.5.IML.7: Evaluate the degree to which information meets a need including social emotional

learning, academic, and social (e.g., 2.2.5. PF.5)

Practices

- Act as a responsible and contributing community members and employee.
- Demonstrate creativity and innovation.
- Utilize critical thinking to make sense of problems and persevere in solving them.
- Use technology to enhance productivity increase collaboration and communicate effectively.
- Work productively in teams while using cultural/global competence.

Enduring Understandings

- 8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
- 8.2.5.ED.4: Explain factors that influence the development and function of products and systems (e.g., resources, criteria, desired features, constraints).

Activities and Assessments

- Understand how a newsletter can help you share news.
- Work together as a class to create a class newsletter. Students need to come up with the look and design of the newsletter, research/write articles, and include art and/or drawings.
- Evaluate the accuracy, relevance, and appropriateness of using print and non-print (electronic) information sources to complete a variety of tasks.

Additional Resources

- Creating a Class Newsletter, YouTube:https://youtu.be/n4qs4Gi-ZTI
- Collection: Ready to Learn Research: https://ny.pbslearningmedia.org/collection/ready-to-learn-research/