MP2b Communication and Collaboration

Content Area: **Technology**
Course(s): **Technology 4**
Time Period: **Marking Period 2**
Length: **MP2; once a week**
Status: **Published**

Essential Questions

- How has the use of digital tools improved opportunities for communication and collaboration?

Big Ideas

- Digital tools allow for communication and collaboration, any time/any place worldwide.
- Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media.
- Communicate information and ideas to multiple audiences using a variety of media and formats.
- Develop cultural understanding and global awareness by engaging with learners of other cultures.
- Contribute to project teams to produce original works or solve problems..
- The technology developed for the human designed world can have unintended consequences for the environment. Technology must be continually developed and made more efficient to reduce the need for non-renewable resources.

Cross-Curricular Integration

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.

English Language Arts

- RI.4.3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- 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.4.10. 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).

Career Readiness, Life Literacies and Key Skills Integration

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.2: Investigate a persistent local or global issue, such as climate change, and collaborate with individuals with diverse perspectives to improve upon current actions designed to address the issue (e.g., 6.3.5.CivicsPD.3, W.5.7).
- 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.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.GCA.1: Analyze how culture shapes individual and community perspectives and points of view (e.g., 1.1.5.C2a, RL.5.9, 6.1.5.HistoryCC.8).

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

- 8.2.5.ETW.1: Describe how resources such as material, energy, information, time, tools, people, and capital are used in products or systems.
- 8.2.5.ETW.2: Describe ways that various technologies are used to reduce improper use of resources.

- 8.2.5.ETW.4: Explain the impact that resources, such as energy and materials used to develop technology, have on the environment. **[R]**
- 8.2.5.ETW.5: Identify the impact of a specific technology on the environment and determine what can be done to increase positive effects and to reduce any negative effects, such as climate change. **[R]**

Activities and Assessments

- Engage other learners globally, online, to gain a better understanding of their perspectives on an issue.
- Practice appropriate online behavior
- Use Google Classroom to blog about a topic
- Investigate a problem or issue found globally through multiple perspectives, evaluate findings, and present possible solutions via a Podcast using Audacity.

Additional Resources

- Evidence | Facts-Climate Change: Vital Signs of the Planet, https://climate.nasa.gov/evidence/ **(Climate Change)**
- Thinkport | Displaying Data With Line Plots | PBS LearningMedia, https://ny.pbslearningmedia.org/resource/mmpt-math-ee-intsurvey1/displaying-data-with-line-plots/
- Summarize Numerical Data Sets Using Venn Diagrams, PBS LearningMedia: https://ny.pbslearningmedia.org/resource/mwnet-math-sp-venn/summarize-numerical-data-sets-using-venn-diagrams/
- Analyzing Data and Improving Design, PBS LearningMedia: https://ny.pbslearningmedia.org/resource/ngsseng14.sci.eng.paraimprov/designing-parachutes-analyzing-data-and-improving-design-engineering-is-elementary/