

Grades K, 1, 2, 3, 4, 5

Adopted 2019

Problem-Resolution Skills

1. Investigate real-world problems or challenges requiring the synthesis of multiple sources of information [PR.1](#)

2. Use content-specific and precise vocabulary when communicating ideas related to STEM content [PR.2](#)

3. Develop collaboration skills in problem solving in order to construct explanations, design solutions, or achieve common goals [PR.3](#)

4. Explore and use models of engineering design to develop solutions to engineering problems [PR.4](#)

5. Identify and understand technologies needed to develop solutions to problems [PR.5](#)

6. Understand and use technology in a responsible and ethical manner [PR.6](#)

7. Understand and use appropriate safety procedures for conducting STEM investigations [PR.7](#)

Critical Thinking in Context

1. Engage in critical reading and communicating of technical information [CT.1](#)

2. Develop claims and use evidence to form arguments [CT.2](#)

3. Engage in investigations through science and engineering practices to identify and define global issues, challenges, and real-world problems [CT.3](#)

4. Use research data to refine existing questions, problems, models, and arguments and/or to develop new questions, problems, models, and arguments [CT.4](#)

5. Discuss grade appropriate systemic methodology (e.g. scientific or engineering design practices, etc.) to investigate global challenges and real-world problems [CT.5](#)

6. Analyze the limitations, risks, and impacts of technology [CT.6](#)

Cause and Effect Relationships between STEM Disciplines

1. Analyze interdisciplinary connections that exist within the STEM disciplines as appropriate to the grade level to answer complex questions and to investigate/develop solutions to real-world problems [CE.1](#)

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- 2. Identify and analyze the impact of emerging global STEM trends and real-world challenges with local, state, national, and international implications** CE.2
 - 3. Explore, develop, test, and refine models used by scientists and engineers to solve problems** CE.3
 - 4. Identify community challenges and apply STEM content and practices to construct creative and innovative responses and solutions** CE.4
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STEM Fields Exploration

- 1. Investigate real-world problems or challenges that exist in different STEM fields synthesizing multiple sources of information** FE.1
- 2. Analyze career opportunities and occupations that exist in a variety of STEM fields** FE.2
- 3. Explore how technology is integrated into different career fields and occupations** FE.3
 - Use Geographic Information Systems (GIS) tools to capture, store, manipulate, analyze, manage, and present spatial or geographic data. FE.3.A
 - Explore coding fundamentals and concepts with engaging opportunities and applications. FE.3.B
 - Use bioinformatics tools to capture, store, manipulate, analyze, manage, and present biological data. FE.3.C