Problem Solving

Use essential knowledge and skills to demonstrate critical, creative, and adaptive thinking to solve problems with real-world applications.

Standards: Science SEP 1-6; Math MP1-3, MP6, HSS.IC, HSS.ID; FACS AOS6, AOS9, AOS12, AOS15; Art: 2,3,4; Tech Eng.H25,H29,H32

Criteria	Mastering 4	Proficient 3	Developing 2	Emerging 1
Describes the Problem	Student clearly identifies and describes the problem, defining issues and/or variables in context.	Student identifies and describes the problem; issues and/or variables are defined.	Student identifies key words and attempts to describe the problem using defined variables.	Student makes no attempt to identify or describe the problem; issues and variables are not identified.
Articulates Strategies and Procedures	Student chooses or designs a thorough problem solving process informed by prior knowledge and demonstrates a keen understanding of the components of the problem, including accurately labeled visuals when appropriate.	Student chooses or designs a problem solving process informed by prior knowledge and demonstrates a general understanding of the components of the problem, including accurately labeled visuals when required.	Student chooses or designs a problem solving process that is somewhat informed by prior knowledge and demonstrates a basic understanding of the components of the problem, including labeled visuals containing some errors.	Student chooses or designs an insufficient or inaccurate problem solving process that does not demonstrate understanding of the components of the problem.
Implements Strategies and Procedures	Student accurately and precisely implements the strategies and procedures in a highly effective and organized manner.	Student completely implements the strategies and procedures in an acceptable and organized manner with minimal errors.	Student implements the strategies and procedures with some notable omissions, errors, and/or inadequate organization.	Student partially implements the strategies and procedures with fundamental omissions, errors, and/or poor organization.
Draws Conclusions	Student draws meaningful and accurate conclusions that are fully supported by evidence and thoroughly explained.	Student draws accurate conclusions that are generally supported by evidence and explained.	Student draws incomplete conclusions that are partially supported by evidence and/or inadaquately explained.	Student draws incomplete or inaccurate conclusions that are not supported by evidence.
Reflects and Evaluates	Student thoroughly reflects on the appropriateness of strategies and procedures used, as well as the reasonableness of the conclusion in context to the problem. Student suggests modifications to improve the process.	Student completely reflects on the appropriateness of strategies and procedures used, as well as the reasonableness of the conclusion in context to the problem.	Student reflects on the strategies, procedures, and/or reasonableness of conclusion, but fails to provide sufficient detail.	Student provides minimal reflection on the strategies, procedures, and/or conclusion.