IMPACT- STEAM Standards & Key Concepts

Science:

Key Concepts:
- Supporting an argument
- Making observations
- Representing data
- Revealing patterns
- Developing a model
- Supporting evidence
- Measure & graph
- Plan & Conduct
- Obtain & Combine information
- Compare & Contrast

Technology: Standards retrieved from https://www.iste.org/standards/for-students

1a Students articulate and set personal learning goals

1c Students use technology to seek feedback

3a Students plan and employ effective research strategies

3b Students evaluate the accuracy, perspective, credibility and relevance of information

3d Students build knowledge by actively exploring real-world issues and problems

4a Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems

4c Students develop, test and refine prototypes

5d Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions

6b Students create original works

7a Students use digital tools to connect with learners from a variety of backgrounds and cultures

7c Students contribute constructively to project teams

7d Students explore local and global issues and use collaborative technologies to work with others to investigate solutions
Engineering:

5.ETS1.A Define a simple problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time or cost.

5.ETS1.B 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.

5.ETS1.C Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Arts: Studio Habits of Mind/ National Core Standards

VA:Cr1.1.5 Combine ideas to generate an innovative idea for art-making

VA:Cr2.1.5 Experiment and develop skills in multiple techniques and approaches

VA:Re.8.1.5 Interpret art by analyzing characteristics of form and structure, contextual information, subject matter, visual elements, and use of media

VA:Cr3.1.5 Create artists statements

VA:Cn.10.1.5 Apply formal and conceptual vocabularies

VA:Re.9.1.5 Recognize differences in criteria used to evaluate work

VA:Re.7.2.5 Identify and analyze cultural associations suggested by visual imagery

VA:Cn11.1.5 Identify how art is used to inform or change beliefs, values, or behaviors of an individual or society

Math:

Key Concepts-

- Read, write, and identify
- Compare
- Evaluate & interpret
- Understand
- Estimate
- Justify
- Extend
- Investigate, generate, translate & identify
- Classify
- Analyze
- Define
- Convert
- Solve
- Create
- Represent data