

Engineering Connections Aligned with the STEM Attribute Principles Summary

Elementary School _____

Middle School _____

High School _____

STEM Attributes * Reference STEM Implementation Rubric	Early →	Developing →	Prepared ●	Model ●	Course	Clarifying Objectives
Integrated Science, Technology, Engineering and Mathematics (STEM) curriculum, aligned with state, national, international and industry standards						
1) Engineering Habits of Mind						
1.1 Professional Development (Not a Habit of Mind)						
1.2 Collaboration (teamwork)						
1.3 Optimization						
1.4 Communication						
1.5 Creativity						
1.6 Attention to ethical Consideration						
1.7 Systems Thinking (See section Systems Thinking)						
2) Design Process						
2.1 Professional Development						
2.2 Problem Solving						
2.3 Communication						
2.4 Model						
2.5 Viewpoints						
3) Systems Thinking						
3.1 Systems						



STEM Attributes * Reference STEM Implementation Rubric	Early →	Developing →	Prepared ●	Model ●	Course	Objective
4) Problem Solving						
4.1 Optimization						
4.2 Tradeoffs						
4.3 Interdisciplinary Solutions						
On-going community and industry engagement						
5) Engineering Habits of Mind						
5.1 Partnerships						
5.2 Funding Partnerships						
6) Design Process						
6.1 Mentorships						
7) Systems Thinking						
7.1 Analysis						
8) Problem Solving						
8.1 Implementation						
Connections with postsecondary education						
9) Engineering Habits of Mind						
9.1 Resources						
10) Design Process						
10.1 Outcomes						
11) Systems Thinking						
11.1 Career Development						
12) Problem Solving						
12.1 Relationship Building						

