National Education Standards

Engineering Everywhere units are written with the goal of teaching engineering skills and critical thinking practices. Many Engineering Everywhere units also touch upon a variety of science topics and principles. The engineering standards taught *Engineering a Water Reuse Process*, and the science concept connections within this unit, are noted below.

ITEEA – STEL Core Disciplinary Standards Grades 6 – 8	Prep Activity 1: What is Engineering?	Prep Activity 2: What is Technology?	Activity 1: A Grey Area	Activity 2: Investigating Filters	Activity 3: Order Up!	Activity 4: Create a Process	Activity 5: Improve a Process	Activity 6: Engineering Showcase
Nature and Characteristics of Technology and Engineering	✓	✓	✓	✓	✓	✓	✓	✓
Core Concepts of Technology and Engineering	✓		✓	✓	✓	✓	✓	✓
Integration of Knowledge, Technologies, and Practices			✓	✓	✓	✓	✓	✓
Impacts of Technology			✓	✓		✓	✓	✓
Influence of Society on Technological Development			✓	✓	✓	✓	✓	✓
History of Technology								
Design in Technology and Engineering Education	✓		✓	✓	✓	✓	✓	✓
Apply, Maintain, Assess Technological Products and Systems								

Next Generation Science Standards Middle School Grades 6 – 8	Prep Activity 1: What is Engineering?	Prep Activity 2: What is Technology?	Activity 1: A Grey Area	Activity 2: Investigating Filters	Activity 3: Order Up!	Activity 4: Create a Process	Activity 5: Improve a Process	Activity 6: Engineering Showcase
MS-LS2-5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services.				✓	✓	✓	✓	✓
MS-ESS3-3 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.			✓	✓	✓	✓	✓	✓
MS-ESS3-4 Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.			✓	✓	✓			
MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	✓				✓	✓	✓	✓
MS-ETS1-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	✓				✓	✓	✓	✓
MS-ETS1-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	✓				✓	✓	✓	✓
MS-ETS1-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	✓		✓	✓		✓	✓	✓