



# Pine-Richland - Eaton Partnership



February 27, 2019



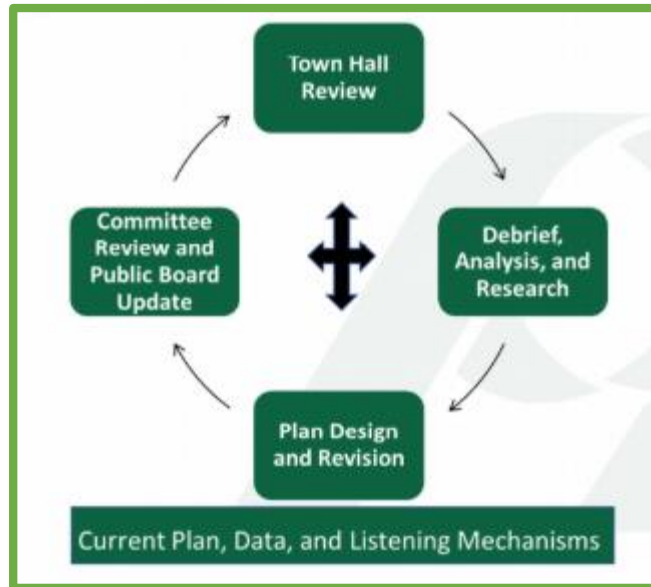
## Eaton Intro Clip

# EATON

Eaton is a power management company with 2017 sales of \$20.4 billion. We provide energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton is dedicated to improving the quality of life and the environment through the use of power management technologies and services. Eaton has approximately 98,000 employees and sells products to customers in more than 175 countries. For more information, visit [www.eaton.com](http://www.eaton.com).



# Connection to Strategic Plan



2019 - 2020	2020 - 2021	2021 - 2022	2022 - 2023
Refine and strengthen each element of the model for teaching and learning with a focus on integration.			
Identify Course and/or Content Priorities for STEAM Integration (One Per Grade Level)	Design and Implement STEAM Integration Activity or Project (One Per Grade Level)	Refine and Improve STEAM Integration Activity or Project (One Per Grade Level)	Expand STEAM Integration Beyond One Per Grade Level



# 8-Word Story



Knowledge

Skills

Characteristics

Health &  
Wellness



17 PARTNERSHIPS  
FOR THE GOALS







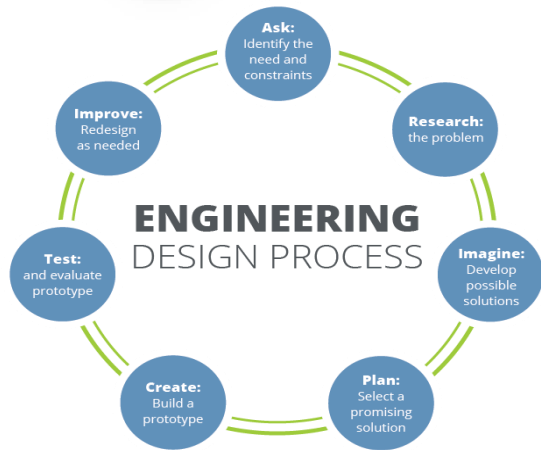
# K-12 Sustainability Theme

## SUSTAINABLE DEVELOPMENT GOALS



Image source: <https://www.un.org/sustainabledevelopment/blog/2015/12/sustainable-development-goals-kick-off-with-start-of-new-year/>

# Authentic Learning & Integration K-3



In grades K-3, our goal is to establish a foundation of the engineering design process through authentic learning experiences, related to sustainability.

## Authentic Learning Examples

- **Kindergarten** - How can we use recycled goods to create something new?
- **Grade 1** - How can we measure energy savings in our daily lives?
- **Grade 2** - How can we design an object to travel a set distance?
- **Grade 3** - How can we create and measure energy without electricity?

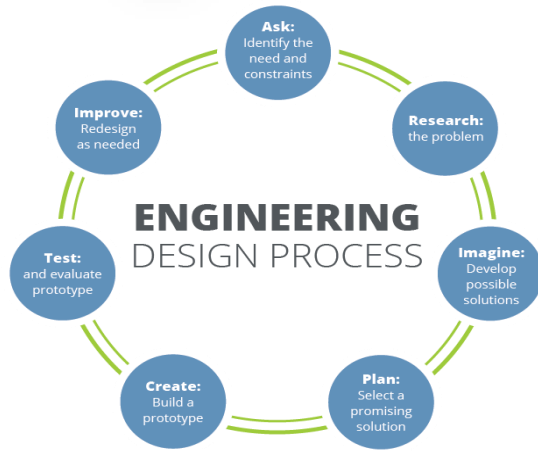
## Integration

- Utilize STEAM/FAB Lab or MakerSpace resources
- Align to Pine-Richland curricular, STE, and ISTE standards

Practices in Different Disciplines		
<b>Math</b> M1. Make sense of problems and persevere in solving them. M2. Reason abstractly and quantitatively. M3. Construct viable arguments and critique the reasoning of others. M4. Model with mathematics. M5. Use appropriate tools strategically. M6. Attend to precision. M7. Look for and make use of structure. M8. Look for and express regularity in repeated reasoning.	<b>Science</b> S1. Asking questions (for science) and defining problems (for engineering). S2. Developing and using models. S3. Planning and carrying out investigations. S4. Analyzing and interpreting data. S5. Using mathematics, information and computer technology, and computational thinking. S6. Constructing explanations (for science) and designing solutions (for engineering). S7. Engaging in argument from evidence. S8. Obtaining, evaluating, and communicating information.	<b>English Language Arts</b> E1. They demonstrate independence. E2. They build strong content knowledge. E3. They respond to the varying demands of audience, task, purpose, and discipline. E4. They comprehend as well as critique. E5. They value evidence. E6. They use technology and digital media strategically and capably. E7. They come to understanding other perspectives and cultures.



# Authentic Learning & Integration 4-6



**How can the Eden Hall school community reduce consumption of electricity?**

**Grade 4: Curricular Connection: Electricity**

- Warrendale Power Systems Experience Center

**All Grades (4-6): Cross Curricular Integration**

- Eden Hall Energy Consumption Data Project

Practices in Different Disciplines		
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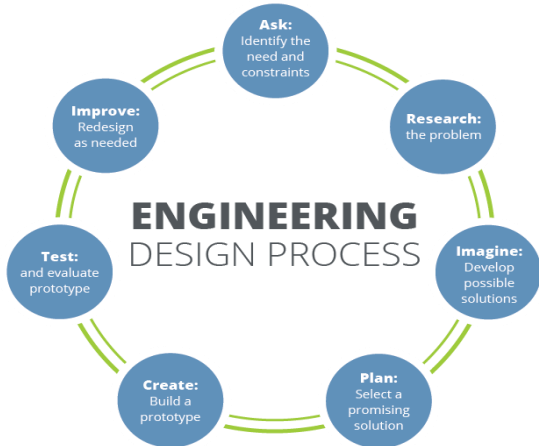
# Authentic Learning & Integration 7-12

## Grades 7-8

- **Engineering and Technology:** Redesign an enclosure to mount on the outside of houses around current electrical hardware
  - Specifications: Appealing to the eye, wire bending requirements, locking mechanism, safety measures, weather resistant, environmental impact of selected plastic

## Grades 9-12

- **Computer Science (HCP and/or APCS)**
  - How can we utilize big data collected from the Eden Hall school community reduce the consumption of electricity?
  - Students use Engineering Design process and CS data structures to analyze and summarize results
- **Webpage Design**
  - As partnership evolves, WPD students create website showcasing our progress/results







# Culminating Projects: Essential (Soft) Skills

Culminating Events for each Grade Span (CEW Standards)

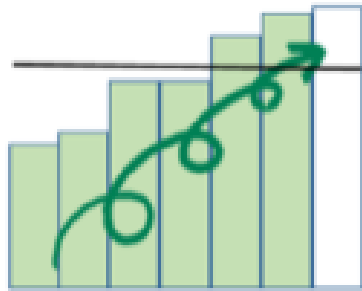
- Collaborative Teams (teamwork)
- Design Guidelines (limitations)
- Presentations (speaking, writing, engaging)
- Feedback from Eaton and PRSD Staff





# Sustaining the Partnership

- Planting the Seeds of Tomorrow (Sustainable Growth)
- Collaborative Reflection
- Continuous Improvement





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Questions? Discussion?