**Unit Lesson Plan:** Pendant Light Design  **Teacher:** Schmitt **Course**: Engineering App

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| **Dates:** 8/29/16-9/9/16 | **Unit:** Pendant Light Design | **Duration:** 2 weeks |
| **GPS:*** STEM-EA-2 - Demonstrate and follow safety, health, and environmental standards related to the STEM workplace and apply specific engineering tools, machines, materials and processes in a safe and orderly manner to formulate, analyze, and verify engineering practices and solutions.
* STEM-EA-4 - Apply knowledge of the engineering design process to solve engineering/technological problems in the STEM workplace.
* STEM-EA-5 - Employ planning and time management skills and tools to enhance results and complete work tasks.
* STEM-EA-8 - Develop appropriate models.
* STEM-EA-9 - Design and construct a testable prototype.
 | **Essential Questions:*** How does an engineer create ideas?
* Demonstrate the steps of the engineering design process.
* Successfully design and construct a prototype of a pendant light.
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| **Enrichment/****Remediation** | **Assessment Strategies** | **Assessment Uses** | **Communication** |
| * Choice in design products and depth product design.
 | Summative Assessment – * + Students will create a final product and presentation for the class.
	+ Students demonstrate their knowledge of the design process through creating a OneNote document that communicates each step of the process as they completed the project.
	+ All projects are graded using a rubric.
 | Activity serves as a review for the steps of the design process.  | Design brief, product design, student presentations Weekly mailchimp to parents. Information posted on website.  |

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| **Differentiated Instruction** |
| * Final products can vary in materials based on the student’s ability level.
* Final products can vary by design based on the student’s interests and needs.
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| **Unit Topics:**Engineering Design ProcessPrototype DevelopmentEmployability skills and time management | **Vocabulary:**Engineering design processPendant lightPrototype  | **Materials:**Computer Projector Prototype supplies – based on team design |

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|  | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY |
| WEEK 1 | Introduction to the design brief | Research and prototype design | Research and prototype design | Research and prototype design | Research and prototype design |
| WEEK 2 | Research and prototype design | Research and prototype design | Research and prototype design | Research and prototype design | Design Project – Design Organizer ProjectFinal Presentations |
| WEEK 3 |  |  |  |  |  |
| WEEK 4 |  |  |  |  |  |