**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. | | |
| **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 Process  Prototype Development  Employability skills and time management | **Vocabulary:**  Engineering design process  Pendant light  Prototype | **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 Project  Final Presentations |
| WEEK 3 |  |  |  |  |  |
| WEEK 4 |  |  |  |  |  |