

Component 5 Presentation of Project Lesson Plan

COURSE:

Engineering Design and Development (Honors)

TEACHER:

Jason D. Redd

DURATION:

10 Days

STANDARDS:

This course connects to standards in the following:

- Common Core State Standards for English Language Arts Anchor Standards
- Common Core Standards for Mathematics
- Next Generation Science Standards
- Standards for Technological and Engineering Literacy

PLTW FRAMEWORK:

Provided by Project Lead the Way (PLTW), the PLTW Framework provides an overview of the levels of understanding that each student will build upon throughout the lesson/unit. It includes: Established Goals, Transfer, Understandings, Knowledge and Skills, and Essential Questions. The most fundamental level of learning is defined by course Knowledge and Skills statements. Each Knowledge and Skills statement reflects specifically what students will know and be able to do after they've had the opportunity to learn the course content. Students apply Knowledge and Skills to achieve Learning Objectives, which are skills that directly relate to the workplace or applied academic settings.

Established Goals

It is expected that students will:

- Demonstrate an ability to identify, formulate, and solve engineering problems.
- Demonstrate an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- Demonstrate an ability to design and conduct experiments, as well as to analyze and interpret data.
- Demonstrate an ability to apply knowledge of mathematics, science, and engineering.
- Demonstrate an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

EQUIPMENT / MATERIALS / RESOURCES:

Students will need or utilize:

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| ☒ Assignment Handouts / Instructions | ☒ Online Resources |
| ☒ CAD Software | ☒ Other Software |
| ☒ Classroom Materials / Equipment | ☒ Schoology |
| ☒ Computer / Device | ☒ Teacher Handouts |
| ☒ Internet Access | ☐ Other: |
| ☒ Microsoft Office Software | |

AGENDA / ACTIVITIES / INSTRUCTIONAL PROCEDURES:

Teacher Activity (Introduction to New Material)

The teacher will:

- Review the Learning Objectives and Essential Questions for the lesson (at the beginning and throughout).
- Lead a class discussion about the Learning Objectives and Essential Questions for the lesson.
- Provide an overview of assignments that will be worked on throughout the lesson.
- Demonstrate expectations / skills.
- Provide an example of a Technical Report for students to refer to throughout their project.
- Provide access to the resources for *Component 5 Presentation of Project* documents and PowerPoint presentations.

Element M Presentation of the Project and Project Portfolio

- *Element M Presentation of the Project and Project Portfolio Overview*
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- ☒ Class Participation
- ☒ Group Activity
- ☒ Hands On / Lab Activity
- ☒ Independent Practice
- ☒ Oral Responses
- ☒ Peer Evaluation / Reflection

- ☒ Project / Presentation
- ☒ Student Reflection
- ☒ Teacher Observation
- ☒ Test / Quiz
- ☐ Other:

TEACHER REFLECTION / ADDITIONAL NOTES:
