

Unit 1 Energy and Power, Lesson 1.3 Energy Applications Lesson Plan

COURSE:

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 instructions for *Project 1.3.1 Solar Hydrogen Systems (VEX)*.
- Lead a class discussion via the teacher-led PowerPoint presentation called "Introduction to Thermodynamics".
- Provide instructions for *Activity 1.3.3 Thermodynamics*.
- Assess student presentations/work.
- Provide instructions for the *Lesson 1.3 Test*.

Guided Practice

The teacher will:

- Review agenda, learning objectives, and essential questions daily.
- Lead students to recall prior knowledge / experience to make connections to new content.
- Introduce content to be learned.
- Clarify and check for understanding by asking open-ended questions (or by some other type of formative assessment) throughout instruction. Reteach material as needed.
- Pace the classroom instruction to clarify misunderstanding and provide opportunities for student feedback.
- Introduce new content to be learned and how it connects to learning objectives and answers some (or all) of the essential questions.
- Demonstrate skill practices students will gain from this lesson.
- Demonstrate assignment(s) outcome expectations.
- Review resources and equipment needed to problem-solve student assignments.
- Share safety instructions to students. *Safety Instructions: Students should only utilize equipment they have been fully trained to use.*
- Provide review material / resources for students to prepare for summative assessments.

Transition

- ☒ Classroom Expectations / Routines
- ☒ Review Questioning
- ☒ Stimulus or Signal (Example: "Pencil Drop", "Eyes on Me", etc.)
- ☒ Student Reflection
- ☒ Timer

