

Unit 2 Residential Design, Lesson 2.2 Cost and Efficiency Analysis Lesson Plan

COURSE:

Civil Engineering and Architecture (Honors)

TEACHER:

Jason D. Redd

DURATION:

7 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
- Common Core English Language Arts Standards
- 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 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

Understandings

- Demonstrate expectations / skills.
- Lead a class discussion via the teacher-led PowerPoint presentation called Estimating the Cost for the Concrete Pad
- Provide instructions for *Activity 2.2.1 Concrete Pad Estimate*.
- Provide instructions for *Activity 2.2.2 Shed Cost Estimate*.
- Lead a class discussion via the teacher-led PowerPoint presentation called Heat Loss and Gain
- Provide instructions for *Activity 2.2.3 Heat Loss and Gain*.
- Provide instructions for filling out the

