

Unit 3 Control Systems, Lesson 3.3 Design Problem: Materials Sorter Lesson Plan

COURSE:

TEACHER:

Understandings

Students will understand that:

- Design problems can be solved by individuals or in teams.
- Engineers use a design process to create solutions to existing problems.
- Design briefs are used to identify the problem specifications and to establish project constraints.
- Working in a team requires effective communication, clear responsibilities, and attention to interpersonal relationships.
- Design teams conduct research to develop their knowledge base, stimulate creative ideas, and make informed decisions.
- Effective presentations are the result of preparation, are tailored to suit the purpose and audience, and are improved by attending to posture, gestures, appearance, eye contact, and time constraints.

Knowledge and Skills

Knowledge: Students will:

- Know the purpose of each part of a design brief.
- Describe a step-by-

- Provide instructions for *Project 3.3.1 Marble Sorter*.
- Review and provide access to the *Project 3.3.1 Marble Sorter Rubric*.
- Assess student presentations/work.
- Provide instructions for the *Lesson 3.3 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.
-

- Complete *Project 3.3.1 Marble Sorter*.
- Complete the *Lesson 3.3 Test*.

Homework

The students will:

- Complete assignments that were not completed in class.
- Conduct research as needed for assignments.
- Review the lesson/unit concepts, content, and skills as needed to prepare for lesson/unit assessment.