

Reflection- Classroom Observation #4

Course: High School- Metals Engineering

Lesson: Final Exam Presentation- Mousetrap Vehicles

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My last classroom observation was easy and challenging at the same time. The high school seniors that made up half the class had early semester leave. My cooperating teacher and I had been preparing final exams for the other courses, and we had to design a hands-on exam for this course because there wasn't any text book material.

In order to prepare for the lesson, I had to develop a set of design limitations for the students to follow, as well as a grading rubric. The main challenge was to develop a car that could go the longest distance with one standardized mousetrap with all structural components made out of metal. They had to have parts lists, drawings, and step-by-step procedures. The students could demonstrate their knowledge of metal fastening by using pop rivets, nuts and bolts, or welds.

I found the students excited to take a final that was hands-on. As a teacher, you notice evidence of gears turning in the students' heads when they ask questions pertaining to what they can and can't do. One thing I can always improve on is matching the enthusiasm of the students. I find that my enthusiasm shines when I get one on one with the students in helping them come up with ideas and pointing out their strong points or when I am presenting new material that generates discussion, but not as much when I am presenting instruction.

I believe I have improved on relevance of the material. As I presented the lesson, I tried imagining my students as being a professional team of engineers when I offered them a problem that has almost infinite unique solutions. I told them that as engineers they would be expected to follow research and design procedures, safety considerations, and limitations that they would have to follow in a real life situation.

Because the semester was coming to a close, I found it easier to offer recognition for each student's strengths and point out how they can be valuable in completing their final exam project. The work ethic is very noticeable when the students can see that they have attributes that the teacher notices.

Overall, I think the lesson went well. Choosing appropriate limitations allowed me the chance to assess the students' knowledge and understanding of the course. Making the project entertaining, competitive, and challenging encouraged the students to give it their all.