Complex Assessment Activity Guidelines

PHYS 310 – *Readings for Teaching High School Physics*

In this activity you will develop a complex assessment that is a de facto "alternative assessment" – alternative to a paper-and-pencil test which is all too frequently used exclusively to assess student knowledge and skills.

Your task is to identify a complex task and then have students demonstrate content mastery of the subject matter. While a detailed car crash reconstruction activity is provided as an example through the course syllabus, you need not concern yourself with creating such a detail problem-based learning activity. Rather, you may choose a topic that is comparatively simple and develop an activity such as a lab practical, simulation, or real-life application to name but a few options.

Examples of simulation/animation resources from PHY 310 under Wenning:

- Interactive Simulations and Animations for Physics (https://bit.ly/377QbHO)
- PhET Interactive Simulations for Physics (https://bit.ly/30zUJUV)
- Simulation Worksheet Example (https://bit.ly/2RDEwdk)
- Interactive Simulation Worksheet Rubric (https://bit.ly/30C9FBH)

Examples of real-work problem solving resources from PHY 311 under Wenning:

- Analysis of an optical system such as telescope, binoculars, microscope.
- Analysis or development of a sophisticated apparatus (Rube Goldberg machine, etc.)
- Bridge building competition (do online search for ideas)
- Car-crash reconstruction (https://bit.ly/30yZRIT)
- "Float your boat" building competition (do online search for ideas)
- Mousetrap car competition (do online search for ideas)
- Problem-based Learning (https://bit.ly/3aqtAIi)
- Project-based Learning (do online search for ideas)

Your complex assessment must be associated with the content of the Simple Assessment Activity which is itself associated with this course including the associated student performance objectives.