Physics Instruction at the Davidson Academy of Nevada

BRETTE GUISTI, Davidson Academy — There are three physics offerings at the Davidson Academy: 1) Physical Science - a middle school class which focuses on basic mechanics. 2) Physics - a high school class covering mechanics, waves, optics, thermodynamics, fluids, and special relativity. 3) Advanced Physics - a calculus-based course with a semester each of mechanics and electricity and magnetism. Basic concepts guiding all classes include conceptual understanding, computational practice, and comprehensive experiences. For the first time this year, the high school physics class is being taught using a “Flipped Classroom” approach where students watch videos of lectures at home and use class time to work on problem solving and labs. An emphasis on special relativity drawing heavily from the materials in Brian Greene’s online World Science U course will also be added to the physics curriculum this year.