

1145-VJ-300

William Corson*, william.corson@usma.edu, and **Andrew F. Plucker**,
andrew.plucker@usma.edu. *Striving for Gains: Implementing Growth Mindset in a Calculus
Classroom.*

For the average college student, taking a calculus course may seem like an insurmountable task. Here at West Point, where every Cadet takes single variable calculus, breaking down that barrier is an integral part to success. Getting students to believe they can succeed when presented with quantitative problems is just as important as having them arrive at a correct solution. We want them to embrace challenges and struggles in an effort to change their mindset to one where they value the work put forth. Outside of the typical tests that can be seen in most calculus classrooms we have implemented a growth mindset project. This project asks the student to engage in mathematics in some way not normally done as a class requirement. Some examples include becoming a tutor, teaching a Science Technology Engineering Mathematics (STEM) workshop to middle school students, a historical project, or a modelling competition. The goal of the project is to challenge the student and allow them to overcome that challenge. The student will then be rewarded not for obtaining some result but rather for putting forth an effort. This study aims to evaluate the outcomes of making this growth mindset project a mandatory assignment for one semester and making it optional for another. (Received August 29, 2018)