Abstract Submitted for the NWS09 Meeting of The American Physical Society

Meta-cognitive student reflections BRITT BARQUIST, JIM STEW-ART, Western Washington University — We have recently concluded a project testing the effectiveness of a weekly assignment designed to encourage awareness and improvement of meta-cognitive skills. The project is based on the idea that successful problem solvers implement a meta-cognitive process in which they identify the specific concept they are struggling with, and then identify what they understand, what they don't understand, and what they need to know in order to resolve their problem. The assignment required the students to write an email assessing the level of completion of a weekly workbook assignment and to examine in detail their experiences regarding a specific topic they struggled with. The assignment guidelines were designed to coach them through this meta-cognitive process. We responded to most emails with advice for next week's assignment. Our data follow 12 students through a quarter consisting of 11 email assignments which were scored using a rubric based on the assignment guidelines. We found no correlation between rubric scores and final grades. We do have anecdotal evidence that the assignment was beneficial.

> Andrew Boudreaux Western Washington University

Date submitted: 10 Apr 2009

Electronic form version 1.4