

Abstract Submitted
for the TS4CF08 Meeting of
The American Physical Society

Transfer from classical mechanics context to electricity and magnetism context MARIA D. GONZALEZ, STEPHEN KANIM, New Mexico State University — Some classical mechanics concepts, like density, vectors use, conservative fields, 3rd Newton Law, velocity and acceleration physical and mathematical relations, are the basis for the development of related concepts that are central to the subsequent electricity and magnetism course. We believe that if students and instructors involved recognize the underlying features that are common to the two contexts, a better understanding and performance will be achieved. We are developing a pre- and post-test that is intended to measure the extent to which (1) students enter the electricity and magnetism course with a sufficient mechanics foundation; (2) there is a correlation between student responses to similar questions in mechanics and electrostatics contexts; and (3) mechanics understanding is strengthened through reintroduction of physics principles in a second context. We will give examples of “paired” questions and give data from administrations of the pre- and post-tests.

Maria Gonzalez
New Mexico State University

Date submitted: 09 Sep 2008

Electronic form version 1.4