

Abstract Submitted
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Examining Student Attitudes in Introductory Physics via the Math Attitude and Expectations Survey (MAX) DEBORAH HEMINGWAY, MARK EICHENLAUB, WOLFGANG LOSERT, EDWARD F REDISH, Univ of Maryland — Student often face difficulties with using math in science, and this exploratory project seeks to address the underlying mechanisms that lead to these difficulties. This mixed-methods project includes the creation of two novel assessment surveys, the Mathematical Epistemic Games Survey (MEGS) and the Math Attitude and Expectations Survey (MAX). The MAX, a 30-question Likert-scale survey, focuses on the attitudes towards using mathematics of the students in a reformed introductory physics course for the life sciences (IPLS) which is part of the National Experiment in Undergraduate Education (NEXUS/Physics) developed at the University of Maryland (UMD). Preliminary results from the MAX are discussed with specific attention given to students' attitudes towards math and physics, opinions about interdisciplinarity, and the usefulness of physics in academic settings as well as in professional biological research and modern medicine settings.

Deborah Hemingway
Univ of Maryland-College Park

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