

Abstract Submitted
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Acceleration: Physical experience creates a better understanding

M.T. DOUGHERTY, S.A. LEE, University of Toledo — Many concepts of mechanics are familiar to students because of their everyday experiences. Though students have an intuitive idea about acceleration, their impressions are often misguided or poorly defined. Specifically, these students find difficulties in distinguishing between velocity and acceleration. In this project, we report physical activities in which students have the opportunity to measure their accelerations in an easy and straight-forward manner. Students then compare their data to the acceleration due to gravity. The pairing of these quantitative results with the qualitative experience of the student draws a connection which is essential to internalizing the concept of acceleration.

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