

Abstract Submitted  
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**Research as a guide for developing curricula on waves and physical optics**<sup>1</sup> MILA KRYJEVSKAIA, MACKENZIE R. STETZER, PAULA R.L. HERON, LILLIAN C. MCDERMOTT, Department of Physics, University of Washington — The Physics Education Group at the University of Washington has been developing and modifying research-based instructional materials on waves and physical optics for *Tutorials in Introductory Physics*<sup>2</sup>. Student performance on many types of post-test questions is very good. In order to assess the effectiveness of the current tutorials, several new research questions have been administered in the calculus-based introductory course at the University of Washington. The results suggest that students need additional help with certain concepts in order to be able to apply what they have learned in tutorials in different contexts.

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<sup>2</sup>*Tutorials in Introductory Physics*, L.C. McDermott, P.S. Shaffer and the Physics Education Group at the University of Washington, Prentice Hall (2002).

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