

Abstract Submitted
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Steam power as a teaching tool in introductory physics.¹ KAITLYN SHAW, JAMES OVERDUIN, DEEPIKA MENON, TREVOR LOWING, Department of Physics, Astronomy and Geosciences, Towson University — I describe how we have overhauled and revitalized two courses at Towson University by implementing field trips based on steam power. The two courses are Physical Science 101 (an introductory course for science education majors) and Physics 352 (an upper-level course in thermodynamics and statistical mechanics for physics majors). With the help of small internal grants, we brought these classes to the Baltimore and Ohio Railroad Museum and the Wilmington and Western Steam Train in Delaware. The physics majors spent an entire day learning how to apply their theoretical training about Carnot cycles, efficiency, etc., to the practical problem of mass transportation. In the process of learning how physics once changed the world by ushering in the Industrial Revolution, they were also challenged to imagine how it might change the world again today. This year we plan to repeat the exercise by spending a day in the engine room of the S.S. John W. Brown, one of only two steam piston-powered World War II Liberty Ships still in operation, during a dock trial in Baltimore.

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