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The Use of Inquiry Based Learning in Electricity and Magnetism Laboratories: Having Students Explore Charging by Induction.[1] STEVEN KREFT, ANDREW BOUDREAUX, Western Washington University — Traditionally, university physics is taught in a lecture dominated style in which students are expected to passively absorb ideas that are presented in class. During the laboratory component, students often verify formulas given to them and expect that instructors will provide answers to their questions. In the Physics Department at Western Washington University we have implemented inquiry based labs in our calculus based introductory course. In these labs, instructors do not give students answers, but use guiding questions to help students develop their own understanding. In this poster, we present an example of an inquiry activity in which students use previously learned concepts of charge, conductors, polarization and grounding to build their own understanding of charging by induction. The goal is to promote not only conceptual understanding, but also student abilities to engage in multiple step reasoning involving more then one concept. After giving a brief synopsis of the activity, some data will be presented as a preliminary assessment of the effect of inquiry instruction on student learning.

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