

Abstract Submitted
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Student Models of Electric Current and Electric Potential in Activity-Based Physics¹ TRECIA MARKES, University of Nebraska at Kearney — With a three-year FIPSE grant, it has been possible at the University of Nebraska at Kearney (UNK) to develop and implement activity-based introductory physics at the algebra level. It has generally been recognized that students enter physics classes with misconceptions about current and potential difference in simple series and parallel circuits. Many of these misconceptions persist after instruction. Pretest and posttest responses on the “Electric Circuit Concept Test” (ECCT) are analyzed to determine the models that students use. Responses are divided into expert model (correct answer), one or more student models (approximately equally common incorrect answers), and null model (all other answers) categories. A description of each student model is also given. Changes in the use of these models are used to identify persistent and non-persistent misconceptions.

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