

Abstract Submitted
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Using Invention Tasks to Promote Sense-making an Proportional Reasoning ANDREW BOUDREAUX, Western Washington University, STEPHEN KANIM, New Mexico State University, SUZANNE BRAHMIA, AJ RICHARDS, JOSH SMITH, Rutgers University — Dan Schwartz and colleagues have developed invention instruction as a means to prepare students for future learning. Invention tasks present students with open-ended situations in which they must invent a procedure or quantity in order to make meaningful comparisons. Through creative thinking and struggle, students become primed to make sense of the accepted scientific solution. A collaboration between Rutgers, WWU, and NMSU has developed sequences of invention tasks designed to promote proportional reasoning, a set of skills emphasized in math and science education in primary through undergraduate levels. This workshop will engage participants in invention work and discuss classroom applications.

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