

TARGETING STUDENT MISCONCEPTIONS IN GENERAL CHEMISTRY Keily Heredia and Jennifer E. Lewis, Department of Chemistry, University of South Florida, 4202 E. Fowler Ave. CHE 205, Tampa, FL 33620.

Inspired by one of Treagust's diagnostic exams, the Targeted Misconception Inventory (TMI) was developed. The instrument covers three important concepts taught in General Chemistry I: Bond Energy, Phase Changes, and Ionic Bonding. The TMI includes three two-tier multiple-choice questions with a parallel structure that includes three consistent incorrect ideas as distracters. This structure allows for a detailed examination of how students are answering questions on a particular concept and for identifying which incorrect idea they are choosing consistently, if any. The instrument was given as a paper and pencil low-stakes assessment during the second week of class. Results from students' responses, including the most common incorrect idea for a particular sample, and implications for instruction are presented.