

NCLT SEMINAR

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Using Construct-Centered Design to Align Curriculum, Instruction, and Assessment Development in Emerging Science

Speakers:

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Abstract:

The National Center for Learning and Teaching in Nanoscale Science and Engineering was established to conduct research on how to effectively introduce emergent sciences into K-16 classrooms, using nanoscale science and engineering (NSE) as an example. One of the NCLT's main goals is to develop an approach to map out the knowledge domains (constructs) associated with NSE and use these domains to guide learning research and the development of instructional materials, assessment, and teacher education. These efforts have been aligned through the development and institution of Construct-Centered Design (CCD), a principled process that is based largely on evidence-centered assessment design (Mislevy, Steinberg, Almond, Haertel, & Penuel, 2003) and learning goal-driven design (Krajcik, McNeill & Reiser, 2007). This session will provide an overview of the CCD process and discuss how the use of this process has afforded alignment of learning research with the development of instructional materials and assessments in the NCLT.