

2019 RiSE June Conference

University of Maine, Orono, Maine

Integrating Research & Practice: Strategies for interdisciplinary teaching and learning across the STEM+C disciplines

Workshop D (Tuesday, June 25, 10:20-11:50am)

Workshop on instruction and assessment in middle-school science: Useful comparisons with college-level instruction

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There is great potential for science learning in the middle-school and high school grades, but many challenges as well, some of which are often underappreciated. This workshop will address both the potential, and the challenge. I will describe how I have modified and adapted research-based instructional and assessment materials developed at the college level for use in K-12 classrooms. Workshop participants will have the opportunity to use some of the materials, and to work together to discuss how best to adapt and implement the materials within their own classroom setting. We will also break up into smaller groups to discuss some key issues, including (1) the appropriate amount of instructional time and effort needed to achieve significant learning outcomes at the middle-school level; (2) the degree to which mandated grade-level standards and expectations are matched to the realities of the science learning process; and (3) the nature of “decay” in middle-school student learning gains over time (e.g., from one grade to the next), and how that can and should impact the nature of instruction and assessment.