

1106-G5-2071 **Chris L Rasmussen*** (chris.rasmussen@sdsu.edu), Department of Mathematics and Statistics,
5500 Campanile Drive, San Diego, CA 92182-7720. *Creating and Sustaining Productive Whole
Class Discussions.*

In order to create a learning environment that encourages students to ask good questions, an instructor needs to initiate, sustain, and facilitate substantive and rigorous whole class discussions. However, creating such inquiry-oriented classrooms is no easy task. In this presentation I draw on insights from research projects in linear algebra and differential equations to highlight five goals for student participation and corresponding instructor discourse moves that can be used to achieve these goals. The five goals for student participation are: (1) helping individual students share their own thoughts, (2) helping students orient to and listen carefully to one another, (3) helping students deepen their reasoning, (4) helping students engage with others' reasoning, and (5) building on and extending students' ideas. For each of these goals, prototypical instructor prompts, questions, and requests will be tendered provided using examples from research projects in linear algebra and differential equations. These prototypical instructor moves constitute a set of routines that others can adapt in their efforts to create inquiry-oriented classrooms, whether the content be linear algebra or abstract algebra or real analysis. (Received September 15, 2014)