The teaching strategies instructors select can deepen student engagement and improve mathematical learning. What does it mean to say students are engaging in mathematical thinking, reasoning, or problem-solving? Part of the answer is what students might know or learn about mathematical ideas (cognitive engagement), another part is in what students might feel while using knowledge (affective engagement such as interest, anxiety, frustration), and part is in what students do (behavioral engagement like attentiveness, diligence, effort). This session digs into research on teaching strategies that productively influence these core aspects of engagement. The session includes research-based examples of effective approaches, in context, to illustrate the variety of ways college instructors choose and use strategies that foster student engagement. (Received September 25, 2018)