The STEM Prep Pathway is designed as two one-semester courses created by the New Mathways Project that prepares students beginning at the elementary algebra-level to succeed in college-level calculus. All Lessons are designed to be contextual, meaningful, with guided student inquiry at the core. Each Lesson is 25 minutes long and is typically preceded by a short Preview Assignment, which students complete before class. The Preview reviews skills required for the upcoming Lesson, provides problems to orient the student and also asks a reflection question for the student to determine if they need additional support prior to class. Each Lesson begins with an easily accessible Opening Question designed to include the experience and opinions of all students. Students complete Practice Assignments to cement their learning. All lessons include detailed instructor notes suggesting pedagogical approaches, facilitating questions, and the lesson’s Constructive Persistence (CP) level. Early in the course Lessons are designated as CP 1 and 2 as students build their ability to work independently. CP 3 level promotes productive struggle with engaging problems that are more open-ended. For this talk we will share examples from the curriculum that exemplify these design principles. (Received September 21, 2015)