Students’ specific mathematical deficits in their preparation for calculus might be viewed as symptoms of deeper thinking issues rather than being the core problems. This talk will report on a project at UT Austin that is attempting to systematically help students learn effective practices of mind while they learn both pre-calculus and calculus meaningfully. Inquiry methods are central to this effort. This talk will describe instructional methods and assignments that were used and their successes and failures. (Received September 26, 2017)