POGIL is a student centered, guided inquiry teaching method that has been shown to increase student engagement and achievement in the classroom by having students work in self-managed teams to analyze data and draw conclusions, modeling the way a team of scientists function in the research laboratory. This talk is a report on a new NSF-funded project to develop a set of POGIL learning materials for Calculus and Pre-Calculus and to build faculty expertise within the mathematics community to implement these new materials. The talk will include a discussion of the POGIL project as well as examples of learning materials currently being tested in the classroom. (Received September 19, 2011)