The Center for Probing the Nanoscale held its Summer Institute for Middle School Teachers (SIMST) in July of 2014 with the goal of fostering middle school students’ interest in science through teacher training. Fifteen teachers from local middle schools participated in an intensive week-long program of nanoscience lectures, hands-on activities, lab tours and lesson planning. Each teacher received professional development credit as well as a collection of hands-on activities and lesson plans to take back to the classroom. Classroom implementation reports so far indicate that 841 new students were exposed to nanoscience activities and lessons as a result of last year’s teacher training. We expect more reports to be submitted as the school year progresses.