K-12 Summer Teacher Workshop
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The Renewable Energy MRSEC at the Colorado School of Mines in collaboration with the outreach division at the National Renewable Energy Laboratory held a two week workshop for math and science teachers from public school catering to underrepresented minorities. The teachers were given hands-on experiences for projects in renewable energy to incorporate into their lesson plans.

Middle school teacher measuring the output of an inexpensive solar cell.

The REMRSEC K-12 outreach team, which is led by Dr. Barbara Moskal (Mathematics), currently works with sixteen school districts in the Denver metro area and on the Western Slope of Colorado. Two local school districts, Adams County District 50 (AC50) and Aurora Public Schools (APS), are the primary focus of our K-12 outreach activities, while fourteen additional districts receive secondary benefits through the dissemination efforts. AC50 and APS both have large minority populations and a high percentage of students receiving free or reduced cost lunches. The other partner districts have similar demographics.

The Center's approach to K-12 outreach in AC50 and APS is to provide the opportunity for elementary, middle school, and high school students and teachers to become immersed in activity-based, hands-on mathematics, science, and engineering activities. These activities are also supported by the Bechtel Foundation, Denver Foundation, and JP Morgan Foundation, Shell Corporation, and several NSF grants [NSF, CNS-0739233; NSF, DGE-0533879; NSF, DUE-0530888]. Several of these grants support graduate students who provide fifteen hours of direct classroom support each week to participating K-12 math and science teachers. In the summer of 2009, REMRSEC introduced renewable energy concepts to 27 elementary school teachers through a two-week summer workshop. The workshop schedule included lectures, demonstrations, hands-on projects targeted toward specific grades, and field trips. This workshop reflected the joint efforts of CSM, NREL, and the participating school districts Graduate Student Fellows follow each teacher during the school year and help them to present the lessons they learned at the workshop. This step is critical to ensure that the teachers actually use the material in their classes.