



The MSU GK-12 *Fellows in the Middle* Program wrapped up its first year with an exciting Math/Science Day field trip, hosted three sets of visitors from China, chose and trained new graduate Fellows and cooperating middle school teachers, and had a field trip to the Newark Museum's Dreyfuss Planetarium and Science Center.

### Math/Science Day:

On June 6 the 300 students from all four participating schools were bused to MSU for Math/Science Day. Between the opening and closing ceremonies there were seven 30 minute time slots with over thirty interactive sessions. Groups of about 15 students each had chosen the topics of most interest to them. Presenters included all 8 GK-12 Fellows, 7 GK-12 research advisors, 9 other MSU faculty, Dean Prezant, two visitors from China, a community veterinarian, four other graduate students, and the MSU undergraduate Physics Club. Topics included the mathematics of epidemics, Antarctic marine sediments, Frog diversity, Dealing with missing data, Glacial history of NJ, How to control a particle's escape, Magnetic fluids, Imaging with earthquake waves, Science and math Jeopardy game, Amphibians and reptiles, Liquid crystals, Embryonic development, Air quality, Short tour of China, Your metabolism, Killer plants, Cell signaling, Genetics and you, Mathematics of ID numbers, Mathemagics, Fossils and minerals, Marine invertebrates, Creating stories with Alice software, Discover your body, Searching for asteroids, Math puzzles, and Physics demos. All students also took a campus tour. GK Fellows and teachers had helped students prepare posters on earth science topics. Many were very beautiful and informative. Each student took notes in a field notebook and voted for posters from other schools. The students cheered when we told them that the crews to go to Mars are alive already, and that we hope that one of them might be on that mission to Mars crew twenty years from now.



### China/US Activities:

Dr. Xiaoying Teng from Beijing was a visiting scholar in our department for five months studying how introductory physics is taught in the USA. In May Chunxia Qi and Lina Qui came from Beijing to interact with mathematicians and biologists in the GK-12 program. A large delegation came in September to set up collaborations with CSAM. Ken Wolff, Mika Munakata, Mary Lou West, and Xiaoying Teng were invited to a summer conference at Middle Tennessee State University on Sino-American Collaborations in science and Mathematics Education.

### Field Trip to the Newark Planetarium:



The theme for the 2008-09 school year is planetary science. In October the new Fellows and teachers led the first fieldtrip of the year to the Dreyfuss Planetarium at the Newark Museum.

Activities included Robots in Space (hands-on maneuvering of toy Martian rovers and identifying rocks and minerals), Comets (states of matter and making dry-ice comets), Impacts (crater images from spacecraft and measuring craters made in flour), and a planetarium show on planets and moons. Fellows had written lessons on modeling the planets, modeling the solar system's spatial scale, planetary Olympics, Venus topography, Martian rovers, speeds in the universe, and the Drake equation.

Our website [www.csam.montclair.edu/gk12](http://www.csam.montclair.edu/gk12) has innovative lessons for grades 6 – 8 as well as our recruitment flyer and application for graduate students due January 15. We encourage strong (3.5 GPA) seniors or first year graduate students who could use \$40,500 to consider this program.