

UMD-MRSEC Summer Camps

Donna Hammer and Carolyn Garvey
Materials Research Science and Engineering Center
University of Maryland, College Park

The University of Maryland MRSEC has made an impact on the pre-college community through a dedicated program of summer camps. In collaboration with the University of Maryland GK-12 program, 8 camps have been developed and implemented under the MRSEC's direction. The camps are carefully aligned with program goals, which are developed during the academic year with teachers and students. Outcomes are assessed through evaluation processes during the summer as well as through measuring indicators used during the academic year where appropriate. In addition, camps are designed to sustain our relationships with our partner schools, while reaching out to the broader community.

Each camp design is either an extension of an academic year activity, or a camp designed to help prepare students for upcoming science and engineering content during the next academic year. For example, Math for Physics is designed to help prepare high school students for physics. Lessons for the workshop were developed in accordance with the county math and physics curriculum in order to help reinforce math concepts and better prepare students for physics courses during the upcoming academic year. MRSEC camps have included:

- ◆ Science, Engineering, and You (elementary)
- ◆ Aeronautics and the Age of Flight (middle)
- ◆ Materials of Sports (middle)
- ◆ All About Circuits (high)
- ◆ Roller Coaster Camp (high)
- ◆ Web Design (middle/high)
- ◆ Math for Physics (high)
- ◆ Engineering Design Camp (high)



Results have shown that students apply skills covered in the camps and extension activities during the academic year. In addition, surveys have shown improved student attitude toward coursework and confidence in abilities. A positive community response to the camps has helped publicize our MRSEC efforts and given the program additional influence.