



## "Bridging the Gap" at UMR



Girl Scout Workshop

9:00 a.m. - 3:00 p.m.

April 13, 2002

Sponsored by the Helix Club (student chapter of a nation society), W.T. Schrenk Society (Chemistry and Chemical Engineering students), Kappa Mu Epsilon (national math honor society), the Mathematics Association of America (math majors) and the Society of Physics Students.

Our workshops will stress hands-on experience in scientific methods. The scouts will learn to observe and collect data, to use basic techniques from chemistry and biology, to solve problems and to observe and analyze results. Applications to everyday life as well as to careers in science and technology will be emphasized.

Disease Detectives: Helix will take the scouts through a simulation of how germs are spread through a group. Students will demonstrate how simple things such as washing your hands can help prevent the spread of disease.

Gummi Gumshoes: Schrenk Society will introduce scouts to food chemistry. Scouts will make and eat jello, pop, and gummi critters.

Planetary Explorers: Physics students will show the scouts how to construct a scale model of the solar system using girl scouts to simulate planets. The scouts will identify the planets and get to "model" them, wearing the picture. Scouts will also make a simulated solar system by measuring out the relative distances to the planets and "orbit" at the appropriate distance. Lastly the scouts will conduct some experiments to see how properties of matter would be different on a very cold planet like Pluto and eat "marshmallows from Pluto."

Shape Shifters: Kappa Mu Epsilon will help scouts use their knowledge of math to create birds, cups, bow ties, frogs, or butterflies out of paper. Scouts will also learn about how to make a mountain and valley fold.

Fractal The Math Association of America students will introduce the scouts to the fascinating world of fractals. They will discuss what fractals are, as well as how they are made. The scouts will then have an opportunity to color their own fractals.

For more information please contact Nick Havens (Workshop Coordinator, Helix Club) at (573) 341-4831; or Dr. Paula Lutz (573) 341-4819 or Dr. Dave Westenberg (573) 341-4798 (Workshop Advisors, Helix Club).