



"Bridging the Gap" at UMR



Girl Scout Workshop

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

April 5, 2003

Sponsored by the Helix Club (student chapter of a national biology society), W.T. Schrenk Society (Chemistry and Chemical Engineering students), Society of Women Engineers, 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.

It's Easy Being Green: Helix will introduce the scouts to the many properties of chlorophyll, the chemical that makes plants green. The scouts will also use chlorophyll paint to decorate leaves to take home.

Analyze That: Schrenk Society will introduce scouts to the wonders of analytical chemistry. Scouts will learn about the tools chemists use to identify chemicals in everyday household materials.

Rockets 'n Cream: The UMR Physics Students will present the challenge of designing, constructing, and launching a water bottle rocket and experience the chilling effects of liquid nitrogen ice cream. During construction and launching of their water rocket, the Scouts will be presented with the basic ideas behind rockets. Lastly, they will explore the realm of the super cold by watching and eating ice cream made with liquid nitrogen

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.

Living in a Mathemagical World Have you ever wondered if it is possible to calculate the square root of a number without using a calculator? How might a card trick involve mathematical principles? What's so special about the number 153? Learn the answers to these questions and more as the Math Association of America students give you a glimpse of the "Magic" behind mathematics

Engineering your World The Society of Women Engineers will introduce the scouts to engineering activities like making polymers and metal plating.

For more information please contact Stacy Jones (Workshop Coordinator, Helix Club) at (573) 341-4831; or Dr. Dave Westenberg (573) 341-4798 (Workshop Advisors, Helix Club).