



GIRL SCOUTS DAY

***“Engineers Make a World of Difference!”
February 20th 2016***

ABSTRACT

Girl Scouts Day is an annual event organized by WISE and sponsored by Lockheed Martin and the Girl Scouts of South Carolina Mountains-Midlands. The event brought 80 Girl Scouts to campus on Saturday, February 20th to learn more about opportunities in STEM careers and engage in hands-on activities led by Clemson faculty and students.

Introduce a Girl to Engineering at Clemson University

Since, 1999, Women in Science and Engineering has collaborated with Lockheed Martin, a global security and aerospace company, and Girl Scouts from Mountains to Midlands to present its annual "Introduce a Girl to Engineering and Science Day". The national theme for this year's celebration was "Engineering New Horizons." Girl Scouts from South Carolina were invited to Clemson University to learn about careers in science and engineering through interactive activities with industry professionals and Clemson faculty and students.

In 2013, Women in Engineering ProActive Network (WEPAN) presented Women in Science and Engineering at Clemson University the annual National Engineers Week Award, *Introduce a Girl to Engineering Day*. This award honors organizations for outstanding outreach efforts as a part of National Engineers Week and the Introduce a Girl to Engineering Day Initiative.

In addition, throughout the last 103 years, Girl Scouts has helped millions of girls grow into inspiring leaders. Juliette "Daisy" Gordon Low assembled 18 girls from Savannah, Georgia, on March 12, 1912, for a local Girl Scout meeting. She believed that all girls should be given the opportunity to develop physically, mentally, and spiritually. They are continuing Juliette's legacy of breaking new ground and developing innovative new programs that are contributing to the skills girls need to become stimulating and influential leaders in this fast-paced, universal world.

Today, Girl Scouts of the USA has membership of over 3.2 million girls and adults, a significant growth from its modest beginnings nearly a century ago. In fact, more than 59 million women in the U.S. today are Girl Scout alumnae.

In the following pages you will find more information on this year's event.

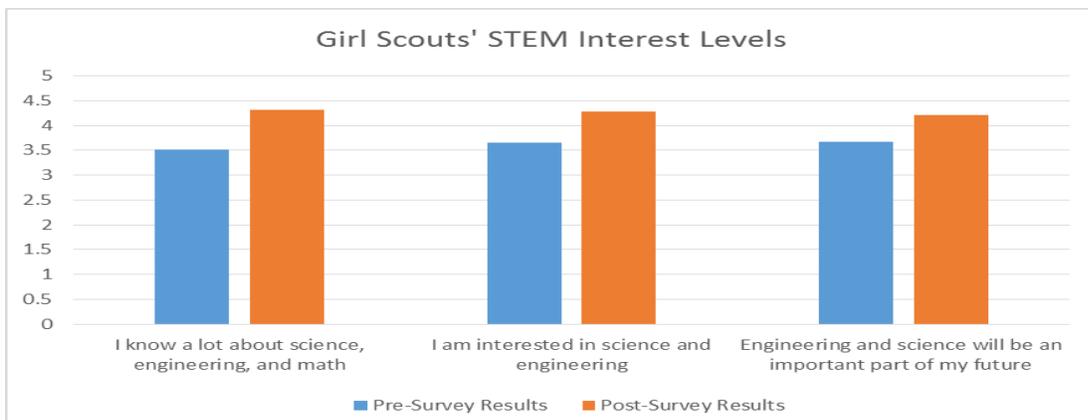
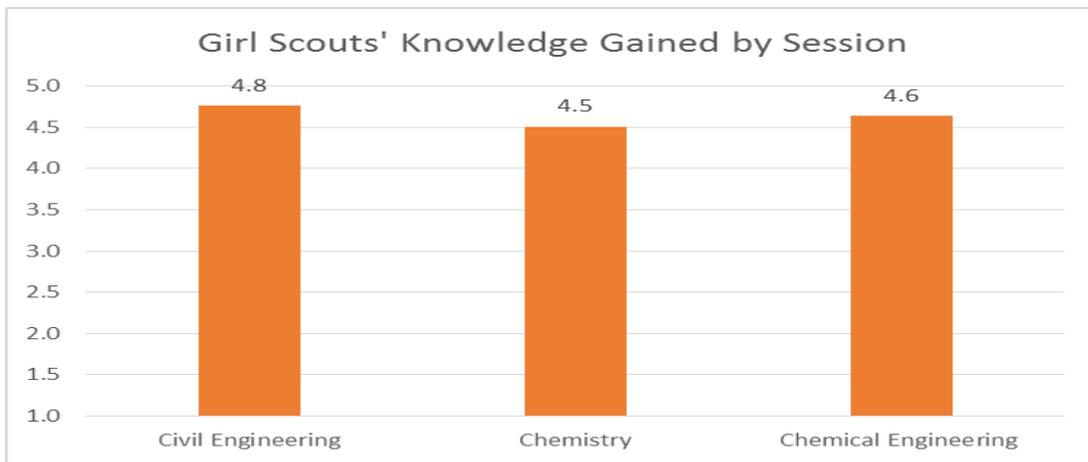
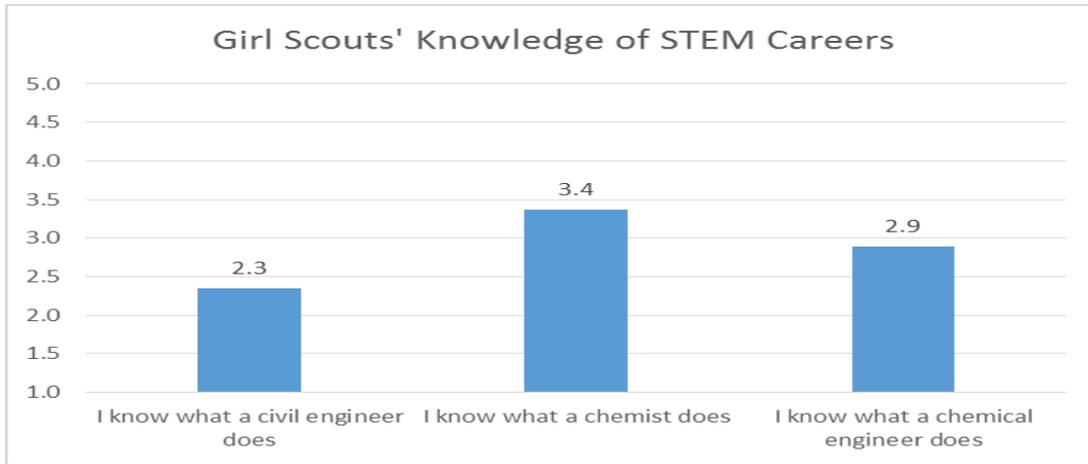


Agenda

- 9:00 - 9:25** **Check In and Meet and Greet**
You will check yourself in while meeting peers from other troops. Enjoy our complimentary refreshments.
- 9:30 - 9:45** **Welcome**
Serita Acker, Program Director
You will receive a brief overview of your day,

And speak with a few Clemson students about their experience at Clemson.
- 9:45 –10:00** **Pre-Survey Explanation & Instructions**
- 10:15 -11:15** **Session 1**
- 11:30 -12:30** **Session 2**
- 12:40-12:50** **Picture Time!**
- 1:00-2:00** **Lunch with WISE Big Sisters
& Lockheed Martin Staff Presentation**
- 2:15 –3:15** **Session 3**
- 3:30–3:40** **Break**
- 3:45– 4:00** **Wrap Up & Post-Survey**

Pre/Post Survey Results



1st Workshop Chemical Engineering with Dr. Davis

Dr. Eric M. Davis joined Clemson University in 2015 as an Assistant Professor in the Department of Chemical and Biomolecular Engineering. His current research focuses on the development of structure-processing-property relationships of polymer membranes for energy storage and delivery. He earned his B.S. in Chemical Engineering from Clemson University and his PhD in Chemical Engineering from Drexel University.

Workshop Description -

The workshop on chemical engineering provided lively, interactive efforts explaining the science behind polymers. The Girl Scouts participated in modeling polymers using construction paper to demonstrate how polymers come in many different shapes and sizes. Students also produced instant snow using tiny absorbent polymers. In addition, putty-like material called a polymer was also created mixing Elmer's Glue with Borax and water.

2nd Workshop Civil Engineering with Dr. Chen

Dr. Qiushi Chen is an Assistant Professor in Civil Engineering. He received his PhD degree from Northwestern University, after obtaining his B.S. from Shanghai Jiaotong University. His research expertise is studying the mechanism relating to Geotechnical Engineering and Computational Geomechanics.

Workshop Description -

The Girl Scouts students learned various ways that a civil engineer can help community infrastructure, including producing clean water and designing economic and safe structures. For instance, students learned the basic knowledge of structures and bridges using computer programs as well as constructing their own hand-made structures and competing with their respective classmates in generating the sturdiest foundation. Through this process, students could understand how civil engineers design infrastructures while personally experiencing effective collaboration.

3rd Workshop Chemistry Dr. Casabianca

Dr. Leah Casabianca is an assistant professor in the chemistry department at Clemson University. Her research involves using Nuclear Magnetic Resonance (NMR), which is the same technology used in Magnetic Resonance Imaging (MRI), to study the interactions between biologically relevant molecules and nanomaterials. Dr. Casabianca received her Ph. D. from Georgetown University and then did post-doctoral research at the University of Illinois at Chicago and the Weizmann Institute of Science in Israel before joining the faculty at Clemson in 2014.

Workshop Description -

Dynamically, Girl Scouts dived into the ocean-filled chemistry of cooking. Students waded and soaked in the differences regarding solutions, suspensions, and colloids as well as investigating and sailing through different examples of mixtures that are found in the foods we eat. The Girl Scouts were able to grasp the composition of milk and why drink mixes are sold as powders. Students were also able to make their own cheese. Tasting the results of these experiments was encouraged!

Special Thanks

Clemson University and the College of Engineering and Science would like to personally honor you for granting girls the opportunity to be exposed to STEM related fields, thus, paving the way to a multifaceted generation of women and professionals. We would like to expand a special recognition of appreciation to our partners - the Girl Scouts from Mountains to Midlands and Lockheed Martin. We would also like to thank our Clemson professors and assistants for facilitating the animated and hands-on STEM workshops. In addition, we would also like to spread our gratitude to our very own PEER, WISE, and College staff for the willingness to make Girl Scouts Day a success.

Once again, we cannot thank you enough!
Sincerely,

WISE Department,
Clemson University

Fox News – *Clemson hosts Girl Scouts event aimed at showing possible career paths*
<http://www.foxcarolina.com/story/31271674/clemson-hosts-girl-scouts-event-aimed-at-showing-possible-career-paths>

Independent Mail – *Clemson program shows place for girls in STEM careers*
<http://www.independentmail.com/news/clemson-program-shows-places-for-girls-in-stem-careers-2c390c84-4c88-3709-e053-0100007fe0dc-369535161.html>

Clemson University - *Clemson aims to shatter glass ceiling for women in engineering and science*
<http://newsstand.clemson.edu/mediarelations/clemson-aims-to-shatter-glass-ceiling-for-women-in-engineering-and-science/>

Girl Scouts - *Girl Scouts Day at Clemson University Introduces Girls to STEM Careers*
http://www.gssc-mm.org/en/our-council/news/2016/girl_scout_day_at_cl.html

