

# Summary Report of the 2012 STEM Seminar

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## Introduction

The 2012 STEM day-long seminar for high school girls was held on Saturday, March 3 from 8:30 AM until 3:00 PM. There were twenty-two of the twenty-five registered participants in attendance, representing the school districts of Roanoke City, Roanoke County, Craig County, Botetourt County, and Salem City. The event was held at Roanoke City's William Fleming High School and in collaboration with the Office of Teaching and Learning with the Roanoke City Public Schools.

## Program

After a light breakfast snack, distribution of STEM T-shirts, and ice-breaker activities following registration, the events of the day included an opening session via interactive SKYPE with Katherine Grichnik, M.D., of the Duke University Medical Center ("Girl Power: Life, Liberty, and the Joy of Research"); hands-on problem-solving with Stephanie Salisbury, MS of the Virginia Institute of Marine Science ("Boom or Bust? Cleaning Up Environmental Oil Spills and a Look into Careers in Marine Science"); hands-on learning with Diana Willeman-Buckelew, MS, MSPH of the Jefferson College of Health Sciences ("Forensic Science: Solving Crimes with Science"); a conversation with Kathy Cox of Roanoke City Office of Technology ("Technology as a STEM Career Choice"); Sarah Baumgartner, BS, of the Western Virginia Water Authority ("Putting Science and Technology Together to Work to Treat Drinking Water"); and, Susheela Shanta, B.E., M.U.P. – Director/Faculty Center of Engineering – BCAT/RCPS ("Engineering Mechanics – Statics in Everyday Use: How Spindly Tower Cranes Handle Large Loads"). Lunch was served on site.

The day closed with the presentation of certificates of attendance, at which several parents had gathered to witness. Participants generally expressed appreciation and enthusiasm for the day as they departed, and parents were very supportive and complimentary.

## Acknowledgements

The STEM Committee is extremely grateful to the AAUW members who assisted in making the day, by all accounts, a success. They are: Claire Newman, Katherine Hoffman, Betty Black, Nora Smith, Lotty Hebblethwaite, Jennie Sue Murdock, Sally Sizer, Pam Jones, Pam Kessler, Viola Turner, Kay Koehler and Peggy Shifflett. (Erroneous omissions are not intentional.)

The work of the Committee was further enhanced by the behind-the-scenes commitment of Peggy Shifflett (assembly of conference materials and

supplies/acquisition of STEM Leader Gifts and participant door prizes) and Helen Ruth Burch (registration acknowledgements and documents for participant/parent emergency contact information). The Committee's appreciation for you runs deep.

The STEM Committee is composed of Melody Blankenship (Meals Procurement, Volunteer Recruitment and Coordination, Distribution of Registration Brochures); Paula Prince (Certificates, Registration Brochure, Program Guide); and Susheela Shanta (Brochure/Correspondence Printing and Distribution, and STEM Topic Leader).

### Survey Results

The participant survey ratings are best shown graphically in the pages that follow. Ratings are OK, Big Hit, and Awesome. The N=22 is three fewer than the number registered, though 100% of the girls in attendance. Once again, the girls demonstrated high regard for interactive, hands-on, and problem-solving kinds of experiences. This is in fact, extremely encouraging in light of some of the existing traditional research literature that suggests that girls learn differently from boys and in fact are less likely to pursue hands-on learning experiences. It is an indication that the gender gap on that point is perhaps in retreat. Our STEM girls indicate strongly that they do not wish to be passive or on the side-lines, but rather, they want to be engaged in the processes of STEM learning. They indicate in the open-ended comments part of the survey that they want more information about a broad array of STEM fields, or fields that require STEM skills and learning. They also generally wish to continue in the tradition of girls to want more interaction with one another (Carol Gilligan would like this).

It is important to note, as well, that even the topics presented without hands-on opportunities still engaged the girls, were rated well, and continue to have a strong place in the program. The comments part of the survey concludes with suggestions of interest for future STEM program topics. All of the open-ended responses are recorded, without consideration of any repeated items, in the attached page titled 2012 STEM Participant Survey Open Comments. A copy of the survey instrument is also attached.