SESSION 1 (10:15-10:45 a.m.)

**Behind the Scenes at WGAL; My Adventures as a Broadcast Meteorologist**  
Christine Ferreira, Meteorologist, WGAL-TV

Come travel with me as I explain how I learned to forecast the weather in four states. I’ll detail the preparation and planning that go into crafting a forecast for hundreds of thousands of viewers per day.

**Creativity is at the Heart of Discovery: Research on Cardiac Medicines**  
Lara Kallander, Ph.D., Director of Medicinal Chemistry, GlaxoSmithKline

Medicinal chemistry is a field of discovery that requires a creative approach to solving problems as well as collaboration with other scientists to identify medicines that will save lives. I’ve had an interesting journey including education in organic chemistry and employment in medicinal chemistry. I will share my career story and some information about research we are doing at GlaxoSmithKline.

**A Nanosecond’s Worth of Light: My Career in Science**  
Amy Lytle, Ph.D., Professor of Physics, Franklin and Marshall College

In this talk, I’ll discuss my life and path toward my dream career in STEM: being a laser scientist and college professor. The keys to my success have been my passion for science and education, and the mentors, colleagues, friends, and family who have supported me in my work and life.

**A Successful Adulthood Starts with a Healthy Childhood – You Can be a Part of That!**  
Vinitha Moopen, M.D., Pediatrician, WellSpan Rothsville Family & Pediatric Medicine

I would like to give the attendees a look into the world of pediatrics, the best job in the world. We will be talking about the educational process needed to get here and what a typical pediatric practice looks like.

**How Mathematical Models are used in Biology and Ecology**  
Baoling Ma, Ph.D., Assistant Professor of Mathematics, Millersville University

In this talk, I will use several examples to demonstrate how mathematics can be used throughout the biological and ecological sciences. I will also briefly introduce my career path to become an applied mathematician and college educator.
Polymers: From Kevlar to Packing Peanuts to Legos
Kathryn Allen, Ph.D., Assistant Professor of Chemistry, Millersville University

Polymers are present in the world around us in everything – they are naturally found in our bodies, they are artificially produced from the ground, and they are essential to everyday life. This presentation will discuss the importance and the cutting edge research around large molecules (macromolecules) and their pitfalls.

Caterpillars, Kangaroos, Cats, and Cuttlefish: Animal Behavior is Great!
Jean Boal, Ph.D., Professor of Biology, Millersville University

I will trace the circuitous path that led me to my very satisfying career studying animal behavior. I will show that with an open and curious mind, you can stumble into all kinds of wonderful opportunities. I will also discuss how important it is to be prepared with a strong background in math, science, and English.

Crayons and Computers: Awesome Pictures of Mathematics
Annalisa Crannell, Ph.D., Professor of Mathematics, Franklin & Marshall College

It is easy to see, just by looking, that certain kinds of art are beautiful. But how could we see beautiful mathematics just by looking? It would help if we could first understand the mathematics that lies within various kinds of visual art. Dr. Crannell will lead us on an artistic mathematical tour past patterned Spanish walls (symmetry and tessellations), computer generated woodlands (fractal geometry), and Renaissance perspective painting (similar triangles).

“Nuclear” Does Not Have to be a Scary Word
Paula Mancini, Program Chair, Nuclear Medicine Technology, PA College of Health Sciences

My presentation will be an overview of the career of nuclear medicine technology. It will include a general description of the field and the educational requirements (both at a high school and college level) needed to prepare for a job as a nuclear medicine technologist. We will also look at actual case studies to gain a better understanding of the role of a nuclear medicine technologist.

Labs! Demos! The Excitement of Teaching Chemistry
Theresa Holton and Amy Thompson, Chemistry Teachers, Hempfield High School

We will discuss the education requirements of becoming a teacher, the day-to-day routine of a teacher, the perks and pitfalls of teaching, and why we became teachers. We will also show some video clips of demos.
**Hey, This Geophysics Stuff Really Works!**
Felicia Kegel Bechtel, President, Enviroscan, Inc.

Geophysics is the science of detecting and mapping underground, underwater, or otherwise hidden objects without digging or drilling. Just as medical radiology is used to non-intrusively diagnose medical problems and make invasive surgery safer, geophysics is used to detect targets like utilities, sinkholes, rock depths, contaminant plumes, graves, drums prior to digging (which can often make future drilling or digging safer, and minimize or eliminate costly mid-project surprises).

**The Right Stuff: Do You Have What it Takes to be a Scientist?**
Dominique Didier, Ph.D., Professor of Biology, Millersville University

Being a scientist takes more than brains, it takes guts. In this presentation attendees will get an overview of the type of preparation needed for a career in science and some of the possible educational and career paths available to them. I certainly never predicted that I’d end up as a marine biologist, and in my presentation I’ll use anecdotes from my career as an example of how you get from high school to a profession in science. I hope that attendees will gain insight and appreciation of what it takes for a career in science.

**A Day in the Life of a Dietitian: Nutrition Nazi or Model of Moderation?**
Janelle Glick, Wellness Dietitian, Lancaster General Health

Attendees will have a basic understanding of a dietitian’s career options, what colleges offer dietetics degrees, what my typical work includes, the differences between nutritionists and dietitians, and why nutrition is important for everyone’s health.

**Engineers Are Women, Too!**
Joan Greenslade, Manager: Testing & Analysis Laboratory, Armstrong World Industries

Why engineering? Perception vs. reality. How did I get here? My journey through the professional world and how I find balance to enjoy all my interests.

**Scientists Explain the Nature of the World**
Sophia Yuan, Ph.D., Research Mechanical Engineer, Armstrong Flooring, Inc.

My job as a research mechanical engineer in Armstrong includes new product innovation, development and manufacturing. This job requires a PhD in mechanical engineering, research experience in academia, and statistical analysis skills. Conference attendees will learn how women can be successful in the engineering world.
**Breathing Matters**
Cheryl Garner - Pulmonary Rehabilitation Coordinator, UPMC Pinnacle

*Presentation on the role and duties of a respiratory therapist in a world with increasing respiratory disease.*

**You’re a Genetic What?...Genetic Counselor**
Rachelle Gehr – Licensed and Certified Genetic Counselor, Lancaster General Health Penn Medicine

*Never heard of genetic counseling? Do you like to work with people, enjoy math and science, and are you looking for a career to combine all of these? Come to this presentation to learn what we do as genetic counselors and what is required to become a genetic counselor. Hear some sample cases and learn why we love our jobs.*

**How to Market Yourself**
Ting He, Associate Professor, School of Electrical Engineering & Computer Science, Penn State

*In this talk, I will share personal opinions about the tips in “marketing yourself”, using my own experience as a concrete example. Whether it is an elevator talk with your supervisor’s supervisor, or it is a CV you send for your dream school/job, we constantly face the challenge of having to condense all our capabilities, passions, and experiences into a brief form that can be evaluated by someone far away. I hope through this interactive session to inspire my audience about how they might showcase the best version of themselves when opportunities come.*

**Making Your Impact through Community Conservation**
Lydia Martin, Director of Education, Lancaster County Conservancy

*Environmental education combines sharing a passion for nature and everything we learn in the natural sciences to motivate all ages to be inquisitive and inspired to make change happen. This ability to engage a diverse audience prompts active stewardship in support of sustainable communities and long term natural resource protection.*

**Girl Power…Is Energy Engineering Right for You?**
Jeannie Sikora - Energy Engineer, CLEAResult

*This presentation will give an overview of the energy engineering profession, including career preparation and typical roles and responsibilities of an energy engineer. The program will introduce what energy engineers do, and why energy engineering is an interesting, challenging, and rewarding career choice.*