Workshop Choices

First Name_____
Last Name_____
E-mail _____

Workshops are based on availability. We will try to assign you to two of your top four choices, but we reserve the right to assign workshops due to scheduling and time constraints.

Please choose 4 workshops you are interested in:
#1 _____

#2_____

#3_____

#4 _____

Email or mail your choices to:

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expanding your horizons

Conference for young women interested in Science, Technology, Engineering & Mathematics (STEM) Careers

Saturday October 18, 2008

ROBERT MORRIS UNIVERSITY 1921

Special thanks to the Claude Worthington Benedum Foundation for providing funding to support this event.

Workshops

1. ***A Starfish Can Grow a New Arm, Why Can't I? (Joan Schanck) -*** *Our challenge is to help humans tap their innate ability to regenerate damaged, diseased or compromised body parts—much like a Starfish! What technologies might you use? What experimental strategies can you imagine?*
2. ***Be the PC! (Cynthia Leonard & Gina McGrath)-*** *Ever wonder what's going on inside your computer? Find out by playing "Be the PC" - A fun interactive game that simulates the inner working of the part of the computer.*
3. ***Call my Random Number (Dr. Monica VanDieren)*** *- See how beautiful patterns (fractals) can appear out of randomness and learn about how all of this makes cell phone communication possible.*
4. ***Carnegie Science Center's SuperFun ScienceFest (Jessica Lausch)*** *Watch, participate and enjoy demos and activities done in their signature style.*
5. ***Disc Driving the Electronic Mall (Sonali Mukherjee & Alma Riska)*** - Use a board game to simulate maneuvering through a shopping mall to understand how data is read through a hard drive.
6. ***Electronic Matching Game (Elena Petrak) -*** *Building this electronic game enhances the student's knowledge of circuits and electrical flows. Each has the opportunity to construct their own game.*
7. ***Gaming (Carrie Calloway)*** *- This workshop will introduce students to gaming and the STEM applications involved in the development of games. Students will also learn how gaming can develop essential skills for success.*
8. ***Keeping Secrets (Dr. Monica VanDieren)*** *- Learn about the cryptography (the science of coding secret messages) and steganogrpahy (the science of hiding information). Explore public key cryptography, which is the encryption method used in internet communication.*

Workshops

9. ***Legos NXT (Ashley Laughlin)-*** *Learn how to build and program a robot to do specific functions using Lego NXT kits and software.*
10. ***Material Testing Mania (Rochelle & Robert Stachel, David Wright)*** *- General demonstration and introduction to Inspection & Testing, followed by several stations where students can complete materials testing and use measuring instruments to measure thickness of coatings, etc. like an actual inspector would do.*
11. ***Perfume Science (Cheryl Maurer)****- Introduction to the biology, chemistry and techniques behind fragrance design.*
12. ***Planning an Accessible World (Carol Cocuzzi)*** - Are you interested in the engineering field and want to find out how to make the environment more accessible? This session will provide an overview ensuring compliance with Americans with Disabilities Act.
13. ***Robotic Arms (Kayla Miller)*** *- Learn how to program industrial robots for simple tasks and build your own prototype of robot grippers.*
14. ***Steady Hand Game (Elena Petrak)-*** *Students explore the fundamentals of electricity. They build an electrical circuit that includes an energy source, resistance, a light and a switch.*
15. ***Women in Nuclear (Jennifer Powell-Campbell)*** *- Nuclear power plants provide about 20% of the Nation's electricity. Learn about how a nuclear power plant works, how safe nuclear power is and the environmental benefits of nuclear power.*