



Women *in* STEM CONFERENCE

Algonquin Regional High School, Northborough, MA
Saturday, March 30th, 2019
8:15 am – 2:00 pm

The Northboro Junior Woman's Club will be holding its twelfth "Women in Science, Technology, Engineering and Math (STEM) Conference" to give middle school girls the opportunity to explore careers in science, technology, engineering and math. After an opening presentation, the girls will be able to attend four, 40 minute interactive hands-on career workshops. Presenters will represent fields such as Forensic Chemistry, Dentistry, Architecture, Nursing, Veterinary Medicine, Teaching, Engineering, Conservation, Exercise Science, Fashion Design and various Medical Professions. The presenters will explain what they do in their occupation and what sparked their interest in the field, share different tips on courses of study needed for their profession, and provide hands-on exploration/activities.

A luncheon will follow the workshops and offer an opportunity for the students and presenters to continue discussions in a more informal setting.

Registration this year is solely on-line. Enrollment is limited to the first 225 girls. Please note that choice of the workshops is based on a first come, first served basis. We will try our best to match you with your top choices. This program has historically been very popular and always fills to capacity.

Please see the description of the workshops on the following page.

Please go to this link to register:

[2019 NJWC Women in STEM Conference Registration](#)

Once registration is completed you will receive a confirmation message stating your registration has been received.

You will receive an email reminder in the week before the conference with details of the day.

If you have any questions please contact us via email at: STEM@northboro juniors.org
or call Mary Ellen at 774-258-1500.

NO information collected via this registration will be shared.

2019 Workshops:

Architect – **Dream It, Design It, Build It** - If you were to explore a day in the life of an architect, it could look radically different from one day to the next. Learn more about the broad array of tasks, projects types, positions, and personalities in this challenging profession. Session will include discussion on technology, education path, salary ranges, and a mock design project.

Chiropractor – **Natural Health and Wellness** - Interested in a career in Natural Medicine? Join us to learn about the exciting progressive ways that Doctors of Chiropractic, Naturopathy, Homeopathy and Functional Medicine work with their patients.

Conservation Agent – **Water Quality and the Environment** - Does healthy and unhealthy water look different? This workshop will explore factors that contribute to the health/detriment of our watershed and the waters within it. What means and methods do professionals and volunteers use to determine the health of the waters around us?

Ophthalmologist – **Do you see what I see?** - How do you become an Ophthalmologist? Look at this medical sub-specialty, find out about the eye and interesting details about a career in ophthalmology.

Forensic Chemistry – **CSI** - Apply science to the law. Assist in a criminal investigation by processing the crime scene and analyzing evidence.

Research Scientist – **Drug Design** - How does medicine work? What do doctors and researchers need to think about when they develop a new drug? Why are some medicines pills and some shots? What happens to a pill when you swallow it?

Nursing – **ABC's of Nursing** - Learn about the vast opportunities in the awesome field of nursing. Learn all about sterile technique, practice assessing a patient, calculating intravenous rates, bandaging and dressing a wound and listening to lung sounds with a nursing instructor and nursing students.

Research Scientist – **Chemistry, Biology and Biotech** - Come and explore the world of drug discovery through the eyes of chemists and biologists. Get hands on experience handling cells, creating chemical reactions and the importance of biology in our everyday lives. If you've ever been curious to know what it's like working in biotech then join us for a lot of fun experiments!

Science Teacher – **Science Escape Room** - What is involved in teaching science? Escape the room using your knowledge of biology, chemistry, physics and earth science. You won't want to miss this workshop!

STEM Educators – **BristleBots** - Explore the engineering design process by building a small robot prototype with a STEM director and Tech Ed Specialist.

Exercise Science – **What's on your FEET?** - The truth about UGGs, Flip Flops and High Heels. We will teach you the GOOD, the BAD, and the **UGGLY!** Let's align your feet, strengthen your hips, and learn how your shoe choice affects your entire body!

Physician – **Outbreak!** - What do Infectious Disease physicians do? Learn how infections spread and how vaccines can protect your community. Then join the Centers for Disease Control to solve the latest outbreak.

Dentist/Orthodontist – **You're Never Fully Dressed without a Smile** - Calling all future dentists and orthodontists. Join us for a hands-on workshop where you will learn how to take and pour impressions and practice your skills at placing orthodontic bands and wires on typodont teeth.

Research Engineer – **Lava Lamp Love** - Learn how to make your own bubbling lava lamp with only three ingredients: oil, water, and a secret bubbling additive! You will learn the differences between words like **immiscible** and **miscible** and perform your own chemical reaction to create the perfect lava lamp.

Nurse Anesthetist – **You Are Getting Sleepy** - What does a nurse anesthetist do? Learn about and practice placing breathing tubes, inserting epidural catheters and explore Poiseuille's Law with intravenous catheters.

Materials Science – **Got Chocolate?** - Come learn about materials science and find out what chocolate bar is the strongest! You will get to test the flexural strength of different chocolate bars and learn how their microstructures (i.e. different candy fillings) affect their strength.

Fashion Design – **Facts of Fashion** - Have you ever wondered what Math and Science have to do with the field of fashion and what on earth is a croqui? This workshop will give you the inside scoop and you will be able to try your hand at a basic fashion illustration.

Engineering and Environmental Science – **Squishy Circuits** - Come have some fun! Build a simple circuit out of conductive clay and talk to some of the young women working to shape a green and sustainable energy future for all of us.

Computer and Electrical Engineer – **Virtual Reality** - Enter the world of virtual reality in programming games.

Veterinarian* – **It's a Dog's Life** - Delve into a day in the life of a veterinarian. (*for those with allergies - animals may be present)

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