



2017 Teen STEM Conference Registration Form

6th to 11th Grades

November 9, 2017 | 9:00 AM – 3:00 PM

Spruce Street Community Center, 1040 Spruce Street, Lawrenceville

\$35.00 if registered before 10/31/2017; \$40 after 11/1/2017

On-line registration at www.bgcmercer.org/events-page/tweenteen-stem-conference

Name _____ School _____ Grade _____

Email _____ Phone _____

Address _____

Credit Card # _____ Exp. Date _____

Name on Card _____ 3-digit Code _____

Or check, payable to: Boys & Girls Clubs of Mercer County

Choose your top 4 workshops you'd like to participate in (you will be registered for 2 of your top 4 choices)

1st: _____ 2nd: _____ 3rd: _____ 4th: _____

Workshop Descriptions

1. **Alternative Energy Cars** – Learn about alternative energy and electric vehicles including the Tesla Model S. See a Tesla up close in person and learn about how they work and what the future holds for the cars we drive. Learn about jobs relating to this industry. Presenter: Domain Computer Services
2. **IT Essentials** – Learn what it takes to become IT essential trained to work on computers, what jobs/careers this translates into, as well as opportunities to gain internship experiences while still in high school. Student will learn various PC component parts and in teams and re-assemble a PC. Presenter: Computer Exchange
3. **Basic Coding** – Learn the basics of coding in a hands-on session of various applications. Learn what careers and opportunities coding skills lead towards. Presenter, Mercer County Community College
4. **Engineering in the Plastics Manufacturing Industry** – This seminar will focus on multiple aspects of the plastic injection molding industry. Starts with a presentation on “what is engineering” we will walk you through the engineering, design and manufacturing processes associated with the industry to present an understanding on how that plastic part you see as a common everyday item has been created. Presenters: Nordson Corporation.
5. **Microbes? Small but Powerful** – You will work with petri dishes that have nutrients for bacterial growth and learn basic microbiology techniques (media, swabs, sterility). You will press items and body parts into petri dishes and view plates that contain bacteria and fungi. Microscopes are used to view microbes found in a drop of pond water and in yogurt. Short discussion of careers in microbiology. Presenter Mercer County Community College
6. **How the Internet works** – If you've ever used the Internet, it's a good bet that you've used the Domain Name System, or DNS, even without realizing it. DNS is how you send email, search for a website and so much more. This workshop will



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have hands-on DNS searches and how they relate to how to send/receive email, looking for websites and you can find out what county and or city those servers are located. Presenter AugusteTech

7. **Scribble Bots (Engineering Design)** – Students will use simple materials to create a robot that can draw. They will combine their understanding of electricity and their engineering talents to create and test several designs while working in a small team. Presenter: Rutgers 4H Youth Development.
8. **Cooking Up Science (Food Science)** – Learn how simple food products are used to make some of the materials we use in our daily lives. Hands-on activities will explore chemical reactions, physics, and other science principles. We will then cook up something tasty using some of these same ingredients. Presenter: Rutgers 4H Youth Development.
9. **Make Your Own Lotion** – In this activity students will have the opportunity to understand the role of a R&D Scientist/Product Developer. They will learn how to develop a lotion formula, understand functionality of ingredients through the application of basic chemistry principles and mathematics concepts, and gain insight to the lifecycle of a product once developed. Presenter: Johnson & Johnson
10. **Careers In Healthcare** – Through a hands-on activity and power point presentation this workshop will provide information on the various careers in healthcare along with the types of career pathways need to attain them. Presenter: Capital Health Systems.
11. **Oceans, Weather and Climate** – What is happening in the ocean and why do we care? What are storm surge, sea-level rise and ocean acidification? Explore the links between oceans and our lives by carrying out experiments with an "ocean in a tank". We will also watch scientists as they explore the ocean around the world and see how computers can be used to tell us about the future of the ocean. Presenter: Cooperative Institute for Climate Science at Princeton University
12. **Mad Machines** – This workshop explores engineering through working with levers and pulleys. Students will design and problem solve in making a machine. (6th & 7th graders only) Presenter: Mad Science

Afternoon Career Panels - List your top two choices for which career panel you would like to attend

1st: _____ 2nd: _____ (you will be registered for 1 of your 2 choices)

Panelists will discuss their company, personal career pathway and career opportunities within their specific STEM industry. There will be an opportunity to ask questions of the panelists.

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| <ol style="list-style-type: none"> 1. STEM Career – Panelists Include <ol style="list-style-type: none"> a. Nordson b. Capital Health c. CA Technologies d. BMS 2. Women In STEM – Panelists Include <ol style="list-style-type: none"> a. CA Technologies b. BMS c. Novo Nordisk d. Comcast | <ol style="list-style-type: none"> 3. Tech Careers – Panelists Include <ol style="list-style-type: none"> a. AugusteTech b. Domain Computer Services c. CA Technologies d. Comcast 4. STEM Career Pathways – Panelists Include <ol style="list-style-type: none"> a. Mercer County Community College b. Domain Computer Services c. Comcast d. Princeton University |
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Mail with check to: Boys & Girls Clubs of Mercer County, 1040 Spruce Street, Lawrenceville, NJ 08648

Or email with credit card info to: mgonzalez@bgcmercer.org

Scholarships are available. Visit our website for forms and instructions

www.bgcmercer.org/events-page/tweenteen-stem-conference



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