

2018 Career Workshop Sessions

Students: Please indicate your top five choices on your registration form.

| # | Workshop Title | Career | Description |
|-------|---|--------------------------------------|--|
| OD117 | Arborists: Tree Trunk Injection = Tree Protection | Environment/Arborist | The Lorax speaks for the trees. But an arborist is a surgeon for trees. Come and learn about this exciting career and try your hand a tree trunk injection. |
| OD71 | Atmospheric Chemistry & Space Science | Science/Chemistry | Chemistry impacts many areas of our lives, including the atmosphere and space. Students in this workshop will participate in hands-on activities to learn how scientists make measurements of Earth's atmosphere and outer space. |
| OD5 | Bones, Bugs & Splints - Oh My! | Nurse/Medical | Take a look into a day in the operating room! From casts, to intubation, to gowns and gloves! |
| OD94 | Check the Instructions | Technical Writer/Engineer | In a complex world, precise written and illustrated instructions save time and make products easier to use at home and in the workplace. Creating instructions takes collaboration from the entire development team. Learn how it's done! |
| OD60 | Coding: Makey Makey Magic! | Technology/Engineer/Digital Learning | In this interactive workshop participants will use coding to watch their inventions come to life! Let's Makey Makey some Magic! |
| OD74 | Crime Scene Investigation | Public Safety/Investigation | Why there aren't more women in law enforcement and how you can better prepare yourself to compete in this field? Could science and technology hold the key? |
| OD10 | Cryptography – Toy Ciphers, Secret Codes & More! | Computer Science/Math | What is Cryptography? And how do we use it every day? Using skills in math and computer science, we will try to understand a secret message! |
| OD110 | Diabetes: Type 1 versus Type 2... What's the Difference? | Health Care | Have you ever considered working with a specific medical population? This workshop will feature technology available for Diabetic care to maintain a healthy and active lifestyle. |
| OD114 | Discover Agriculture Careers | Agriculture (all STEM areas) | Jobs in agriculture go beyond farming. There is a huge need for agronomists, agriculture journalists, agriculture teachers, aquaculture specialists, agriculture engineers and environmental managers. We have a vast challenge of feeding 9 billion people by the year 2050! You can be a part of that! |

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| OD106 | Disease Trackers: Public Health & Epidemiology | Science/Immunology & Epidemiology | Why do people get sick and how do we study diseases in populations? Immunology is the study of the body's immune system and how it responds to pathogens. In this workshop, we'll talk about the various roles of antibodies, a protective protein produced by specific cells of the immune system, and how they can be used to track diseases in populations as well as diagnose infectious diseases during an epidemic. |
| OD11 | DNA – The Genetic Information of Life | Scientist/Researcher | All living organisms have DNA, which is a blueprint for all cellular processes. Learn about the many fascinating things you can extract DNA from, and what scientists have learned from this information. Learn about the different careers that require an understanding of DNA, and extract DNA from fruit! |
| OD12 | Doctor for a Day | Doctor/Medical | Experience what it is like to be a doctor for a day! Learn about human anatomy by viewing and touching real human specimens. Learn and practice basic physical exam procedures and what it takes to be a doctor! |
| OD107 | Engineer Your World: The Civil Way! | Engineer | Do you know what a Civil Engineer does? Do you want to get your hands dirty and find out? This workshop will introduce you to the career of a civil engineer and the path of education and training you will need to take to become one! |
| OD118 | Engineering in the Utility Industry | Engineer | Knowledge is power --- and so is the utility industry! Learn how high voltage power lines are constructed and how electricity works with circuits |
| OD108 | Explore Your World with Data Visualization | Information Technology | Explore how to better understand real world information using data visualization. Join us for a fun session! |
| OD72 | Firefighting as a Career | Firefighter | What are the challenges of firefighting and how can my school classes help me within this career? We will take a look at the physical laws of science and how it applies to everyday operations within the fire service. Learn how math, science and more can save lives and their important role in dealing with a burning building. |

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| OD119 | Gaming IS for Girls! | Analytics (Tech, Math &, Engineering) | Do you happen like gaming AND keeping things organized in your life? Well you might just be someone who would enjoy normalizing data! Check out this hands-on workshop focused on a normalizing data activity (and possibly snacks)! Math CAN be yummy! |
| OD112 | Geology, Mining & Sustaining Our Planet | Geologist | Geology is the study of the earth's physical structure, such as rocks and minerals, and how they change over time. Mining is the <i>removal</i> of those rocks and minerals from the earth, generally from private industry, to make the products we use in our everyday lives. Unfortunately, the result of extracting mineral resources can be hard on our planet. In this workshop we will do a little mining of our own to learn about the mining process, mining waste, environmental clean-up, and the important role geologists play in every aspect of mining. |
| OD47 | Holding it All Together | Mechanical Engineer | From hand-held GPS to communicating with the Mars Rover, learn how mechanical engineers at Rockwell Collins put all the pieces together. Test your mechanical skills with a hands-on building competition. |
| OD93 | I Like Math & Science But I Am Not an Engineer | Supply, Logistics, Costing & Finance | You might be thinking that science, technology, engineering, and math (STEM) skills aren't important because you're not interested in becoming an engineer. But almost <i>all</i> jobs require some STEM-related skills. This workshop will explore opportunities in the fields of supply chain, cost and logistics. Experience each of these fields through the creation, assembly and testing of a product. In addition, you will learn about "green products" and the impact of "tariffs" on goods manufactured outside of the United States. |
| OD115 | "Investing" In Your Future | Finance | Are you interested in the stock market and investing? Learn about the variety of exciting careers associated with the industry. |
| OD48 | It's a Material World | Materials Engineer | Learn how materials make or break the world around us from a Rockwell Collins materials engineer. Test your material knowledge with a fun hands-on challenge. |
| OD21 | It's Not a Stretch – You Can Be An Engineer, Too! | Engineer | Learn how engineers design and make plastics that you encounter every day. Create your own stretchy putty to take home with you. |

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| OD56 | Leadership Starts Here | Management/Consultant | STEM is not just about science, technology, engineering and math. It all starts with leadership. Begin identifying and developing leadership skills that will benefit you for the rest of your life. |
| OD26 | Physical Therapy | Physical Therapist | Discover how physical therapists use technology and exercise to improve the lives of their patients, whether as result of sports injuries, accidents or medical condition. |
| OD36 | Programming from Scratch | Computer Programmer | Learn about problem solving with programming through an introduction to the MIT Scratch programming software! Students will be able to create their own programming projects and take them home on a flash drive that will also include other resources to expand their computer and programming experience. |
| OD49 | Putting the Power into Electronics | Electrical Engineer | Rockwell Collins produces hand held GPS and radios that communicate with the Mars Rover; learn how electrical and systems engineers power the world and beyond! Test your electrical skills with a hands-on experiment. |
| OD121 | Solving Mysteries with Math | Data Analysis | To some, math is nothing but a mystery. To a data analyst, math is a mystery with a solution! Join this interactive workshop as we solve a murder mystery showing how math can be fun and applied to our lives. |
| OD97 | Technology in Wildlife Research | Naturalist | Learn about the various technologies used in wildlife research, such as radio telemetry and mapping. Have the opportunity to handle live animals, such as turtles! |
| OD98 | The Chemistry & Biology of Streams | Naturalist | Learn how to detect the health of a stream near you! After making mini watershed models, students will conduct chemical tests on stream water and hunt for little creatures that live in our creeks and ponds. |
| OD55 | The CSI of the Hospital | Lab Researcher | What happens to your blood after it is collected? Why are different colored tubes used? Why does your doctor order laboratory testing? Meet the people behind the scenes and find out what really happens to your blood and body fluids! Help diagnose patients and aid the doctor in treatment. After all, 70-80% of any diagnosis starts in the laboratory. It's time to discover the mysteries the body holds. |

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| OD17 | The Fruit Shapes Adventure | Food Engineer | Participate in the fun processing steps to make fruit shapes. Learn about equipment needed, ingredients used, and how the product looks at various stages—including sensory taste testing of the final product! |
| OD35 | There Is Science In My Make-up | Chemist/Engineer | Learn the chemistry behind what makes cosmetics look, smell, and feel good. Then make your own lip gloss, bath salts and shower gel to take home with you! |
| OD82 | Vision Therapy – Improving Vision with Exercises | Optometry | Nearly all humans are born with the potential for good eyesight, but vision – the ability to identify, interpret and understand what is seen – is learned and developed, starting at birth. Learn about optometry and how vision therapy trains the entire visual system which includes eyes, brain and body. |
| OD57 | We Build This City: Design Like an Architect | Architect | Working in a team and using various design tools, such as sketching, model making and writing, you will design a city community center. The site, size and building needs will be established by your “client”. It will be up to your team to respond to these needs in a creative and inspiring way! Let’s build! |
| OD39 | Weather Wise | Meteorology | Cold fronts, warm fronts, hurricanes, tornados, blizzards...weather is constantly impacting our lives. Learn how to forecast and present the weather! |
| OD113 | What Is Artificial Intelligence? | Technology/ Data Science | Did the movie industry get it right? Are we using Jarvis, BB-8 and WALL-E at work yet? With this activity, learn how businesses use machine learning algorithms for prediction, clustering and optimization. Learn about the emerging field of Data Science where computers learn without being programmed with code. |
| OD100 | Wild Card | | Workshop sessions are sometimes added to the conference after registration materials are posted. Possibilities include dietician, archaeologist, obstetrician, geneticist, or researcher. If you like surprises, request this session number on your registration form! |