All in a Day's Worm
Sue Fox & Renée Brielmann
**Hands-on learning about what scientists do all day.** Students will get a chance to use real scientific equipment and to see worms that glow under the microscope! Students will also get a tour of a laboratory and see how scientists do experiments.

Be A Good Digital Citizen
Kelly Stack & Amy Burkhardt
**How can we all be better digital citizens on social media?** Dive deep into the history of Facebook and Instagram, learn best practices for safety and putting your best digital foot forward.

Because Racecar
Kerui Tan & Fellipe Sebastiam
**Northwestern has three vehicle teams, all with very specific, unique design goals.** You’ll be able to walk through the Ford Autobay and look closely at these vehicles, learning how the different cars and the aspects of the designs make each specialized for the design challenge they work toward. Get an up close look at the real mechanical engineering happening on this campus!

Be Prepared for the Unexpected: Safety Behind Science
Brett Berg & Mark Bachrack
**The Office for Research Safety assists labs and during emergencies.** Try on lab personal protective equipment and learn how to remove it safely. Glow in the dark powder will represent “hazardous material” as we learn how to successfully remove gloves. Explore the equipment used to detect hazardous fumes in labs, and see how respirators are used. At the end, the students will receive goodie bags with safety glasses, lanyards, and chocolate.

Bonjour, Hola, Jambo
Sara McGuinn
**Visit Asia, Europe, or Africa...all from Undergraduate Learning Abroad!** Explore the languages and cultures of different countries, hear stories from Northwestern students who have studied abroad, and get an idea of what it’s like to receive an international education.

Dueling Soundscapes
Deborah A. Burkhart
**Learn about acoustic and architectural design** by touring two spaces within the Ryan Center for the Musical Arts: The Opera Theater and a Classroom.
Take Our Children to Work Day 2018  
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Electrocute a Pickle: Visualizing Molecules!  
Andrew Ott  
Watch light diffracting off of slides, an example of trace metals analysis, and a mass spectrometer identifying an unknown compound. Manipulate molecules on a computer. Electrocute a pickle and have a little fun with liquid nitrogen!

Enlightening Science With Color  
Mara Dobrov & Rhoda Rosen  
A spectroscopic view of everything from sound, distance, movement, to projecting beyond our sensory knowledge, depends on color. Watch colors mix, blend, explode, bubble, illuminate and reflect through a kaleidoscope of hands-on science experiments. Color extends our sensory view of the world and universe.

Explore Alice Millar Chapel  
Timothy Stevens & Jenae M Gurley  
Tour the beautiful, historical Alice Millar Chapel. Visit the immense pipe organ and see how it is played, and more.

Fight Back: Physical Self-Defense and Empowerment  
Cmdr. Ken Jones  
Start with a rousing discussion of how "you can be crime-prevention savvy," as well as rape prevention and awareness. Watch Lt. Jones demonstrate self-defense moves before he brings out the pads and gives you the opportunity to practice those moves on him!

Flubber: Fun with Slimy Polymers  
Shelby Hatch & Stephanie Knezz  
Tour a real laboratory and examine the fascinating role chemical polymers play in your daily life. You’ll begin by making a sample of polymer and comparing the physical properties of yours with the polymers made by your classmates. Take home your very own sample of "slime" polymer!

Forces, Forces Everywhere  
Mark Seniw  
Explore the forces that affect all of us, through the lens of Materials Science.

Get Creative in 2D & 3D  
Danielle Cotrone & Chris Davidson  
University libraries aren’t only about books! Visit Mudd Library to make buttons, record a short video and to watch 3D printing in action.
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If You Build It… They Will Come
Bob Buckman & Pat Malone
Tour the Facilities Management headquarters. Visit paint, lock, and carpentry shops and learn about careers in the skilled trades. Participants will also get to assemble and paint a woodcraft to take home!

Lights! Camera! Action! Creating Instructional Videos
Cecile Sison & Kelly Roark
Choosing from provided props and working in groups, students will create a 30 second instructional video using an iPad. Students will either be directors, camera persons or actors; all will have an opportunity to edit.

Make Your Own Solar Cells and Batteries
Dick T. Co
Create solar cells using household materials and blackberries, assemble cells into solar panels, and make electricity under sunlight or a lamp. Assemble common household materials into a battery pack and make electricity using foods!

(Nano) Gold Rush!
Tanushri Sengupta
Spend time with the International Institute for Nanotechnology, where atoms and molecules do some heavy lifting. Learn about nanotechnology in healthcare, and experience the power of the gold nanoparticle.

NUANCE Center | Exploring Inner Space!
Chad Goeser
Experience three different hands-on demonstrations at the Northwestern University Atomic and Nanoscale Characterization Experimental (NUANCE) Center. This is an amazing opportunity to see many of the different microscopes that are used to analyze materials and meet the scientists who use them every day. These microscopes aid in many areas of study, including research into curing illnesses (such as cancer and Alzheimer’s), advancing technology (new computer chips and batteries), discovering how the great Artists (Picasso, Rembrandt, etc.) created their Masterworks and even helping NASA look for signs of life in Martian soils and ice from comets.

NUPD: Protect & Serve
Sgt. Latori Bartelle & Sharon Mielke
Learn about the Northwestern University Police Department and what they do to ensure safety on our campus! Tour the Police Communication Center, and check out the squad car, police bicycles and other equipment. “Be a Hero” and learn what you can do before, during, and after an emergency so that your family is prepared. See NU’s Emergency Operations Center and learn how we monitor events and respond to a crisis on campus.
NU Power: The Central Utility Plant
James McKinney & Jessica Abrams
Too hot? Too cold? Come see the facility that keeps the University running! Get a guided tour through the plant that makes steam and central a/c for the entire Evanston Campus. Look at a functioning boiler. Learn how to read the gauges and test water for ph level. Find out how temperatures are calculated.
*Participants in this track must be able to walk across a metal catwalk, then down 40’ stairs into the plant. For safety reasons, crutches and wheel chairs cannot be accommodated.

Physics of Magic and the Magic of Physics
Arthur Schmidt
Take part in numerous activities to tease and fool your senses of sight and sound. Magic is often described as tricks done with smoke and mirrors. We will use smoke and mirrors as well as other materials in our tricks. We will float objects and defy gravity using the laws of physics.

Power of Advertising
Candy Lee
Why do companies advertise? Why do you buy certain products? Think about the last item you purchased. Why did you decide to buy that product? Did you influence someone else to buy a product for you? Get a hands-on learning experience about marketing and advertising and create an advertisement.

Ready, Aim, Hired!
Saher Qadri, Gemma Lopez, Michael McGandy
Thinking about joining the work force? Come meet NU's Talent Acquisition Team to learn the basics of exploring the job market. Find out how to research prospective companies, dress the part for your interview, and practice cultural sensitivity in all parts of life. You can really hone your skills with an interactive mock interview with NU's finest. Before you know it, you'll be landing that first job!

Robots At Work: From Robots to Lasers
Nicolas Martinez Prieto, Sarah Wolff & Newell Moser
See robots at work with an exciting tour of the Mechanical Engineering & Manufacturing Lab. Meet the robots that manufacture sheet metal parts, laser machined surfaces, and more!

Rocking the Rosetta Stone
Tasha Seago-Ramaly & Rifka Cook
Rock out as you find out how much Spanish and Portuguese you already know...and how much more you can learn in just an hour! Sing along with a top hit in Spanish and Portuguese. Crafts, cultural information, souvenirs, and plenty of hilarity will ensue! Join us! Bienvenidos!
Rocket Science Isn't Rocket Science
Matthew Peters

Ever wonder how we landed a man on the moon or how SpaceX is able to land a first-stage rocket? The secret to these engineering feats lies in mathematical equations that describe the movement of flying objects. During this session, you will learn how to use this math to launch and calculate the velocity, range, and height of your own paper rockets. You will then use this knowledge to design a launch setup to reliably hit a target, just like real aerospace engineers. Come and learn that rocket science isn’t rocket science!

Scrapbooks: Turning the Pages of History
Brittan Nannenga

Long before glitter and puffy hearts were invented, Northwestern students in the early 1900s were collecting the memories of their college days in scrapbooks. Both girls and boys pasted photos, invitations, concert and sports programs, ticket stubs, and other mementos into their scrapbooks. These scrapbooks tell stories about life over 100 years ago in a much different way from history books. Session attendees will examine some of the colorful scrapbooks in the University Archives’ collection and will report on what they learn about the long-ago students who so carefully put them together.

Seismic Signals
Mitchell Barklage & Suzan van der Lee

Earthquake! View live seismic signals. Jump up and down near the seismometer to create seismic signals and discuss the STEM related to obtaining the signals. Seismic sleuthing: match graphs of seismic signals (seismograms) to events that caused them. Use slinkies to demonstrate how seismic waves propagate within the Earth. Pasta Quake: Use spaghetti noodles to explain the earthquake magnitude (Richter) scale and demonstrate how one earthquake can trigger another earthquake.

Sustainability: Keeping It Green
Stephanie Folk & Audrey Steinbach

Learn all about the Office of Sustainability at Northwestern. Explore how you can make a difference and take steps toward a greener future.

Take a Walk in My Shoes
Jim Stachowiak

Learn about technologies created to assist students with disabilities. Observe demonstrations of several pieces of technology including speech recognition software, big key keyboards, a head controlled mouse, and other tools. Participants will have a chance to try the technologies too!

The Incredible Purple & White
Kevin Leonard & Brittan Nannenga

Take a tour of Northwestern’s Evanston Campus and visit buildings and landmarks where new meets old, land meets lake, and purple meets white.
The Invisible Universe & Sounds of Spacetime
Michael Zevin
**See how much can be learned about our universe using light, even light invisible to humans!** We will first take a tour of the historic Dearborn telescope, and weather permitting use it to help us see the Sun in a way our eyes never could. We’ll then bring space into the classroom by experimenting with a vacuum chamber, using these experiments to understand how light differs from other waves such as sound waves. We will explore how light can tell us what galaxies billions of lightyears away are made out of and delve into ripples in the fabric of spacetime known as “gravitational waves.”

There's No Business Like (The Waa-Mu) Show Business!
Gabriella Green & Diane Claussen
**Do you love musical theatre?** Curious about songwriting? Learn how a song is written for The Waa-Mu Show. Write music, lyrics, and scenes of your own and perform them!

Touch and Movement: How do you feel?
Hannah Emnett & Nick Bush
**What do rat whiskers have to do with neuroscience and robotics?** Our lab studies the sense of touch and specifically focuses on the rat whisker system. View rats in an enrichment chamber, check out current behavioral experiments and videos of rats, and witness demonstrations that show the connection between touch, movement, and biomedical engineering.

Water On Land, Water Below Our Feet
Angang Li & Tierney Acott
**Can rivers move?** How does water interact with land? What are the human impacts on rivers and groundwater? These are key questions that can help you understand the role of environmental scientists and engineers in society. In this lab, you will work together to create a simple experimental river network and compare what you observe to what you see in nature.

We Can Do It! Women in Skilled Trades
Hannah Nemec & Trina S. Whittaker
**Get involved in some hands-on learning from women guiding the way in skilled trades at Northwestern.** Discuss career opportunities and work on a take-home project!