MICRON ENGINEERING CENTER (MEC)

First Floor
- Build a Bridge using West Point Bridge Design Software, Boise State Civil Engineering Club – Room 103, Ages 8-Adult, Capacity 25 (D) - Design a bridge utilizing software, and test to see if it would succeed or fail. Participants can review the components of their bridge to make modifications and improvements.
- Tie Dye Chromatography, Micron Foundation – Room 106, Ages 5-14, Capacity 50 (45 minutes: 9:30am, 10:30am, 11:30am, 1pm, 2pm, 3pm) (S) - Use permanent markers to experiment with the concepts related to chromatography and color separation.
- Catapult Launch, Boise State Engineering Residential College and Phi Sigma Rho Sorority – Room 114, Ages 5-14, 30 minutes (D) – Design and build a catapult using spoons, popsicle sticks, and tape. Test your design on a tower of cups!

Second Floor
- Ride a Segway, Boise State College of Engineering – East Hallway, Ages 8-Adult (As space permits, wait in line) (O)
- Ride a Segway, Society of Hispanic Professional Engineers at Boise State – Room 201, Ages 8-Adult (As space permits, wait in line) (O)

Third Floor
- NEW – Build an International Space Station, Allison Bolinger, NASA Johnson Space Center – Room 301, Ages 7-14, 11:30am (first come basis)
- NEW – LED Wearables, IEEE Student Organization – Make an LED wristband, necklace, or badge. Room 309, Ages 5-14, Capacity 30 (D)
- Snap Circuits, Electrical and Computer Engineering Department at Boise State University – Room 307, Ages 10-Adult, Capacity 30 (45 Minutes: 9am, 10am, 11am, 1pm, 2pm, 3pm) (S)

Fourth Floor
- Taming the Dragon: Explore the aerodynamics of a dragon on a wall-sized display using supercomputers. Hands-on! Room 408, All Ages, Capacity 25 (20 minutes: 10am, 1pm) (S)
- 20K Ultra Resolution: Explore famous art and places around the world in incredible detail on a wall sized display. Room 408, All Ages, Capacity 25 (20 minutes: 11am, 2pm) (S)
- Explore a Stream Table, Boise WaterShed Education Center – Room 110, All Ages (O)

CIVIL ENGINEERING BUILDING (CE)
- Fantastic Fire! University of Idaho, College of Natural Resources, McCall Outdoor Science School - Ages 5-15 (D)
- Materials Science, Boise State Materials Science Club - All Ages (O)
- Wind Tunnel, Boise State College of Engineering – All Ages (O) - Experience the breeze of a wind tunnel which tests aerodynamic shapes, lift and drag, how models of buildings behave in wind, and how air flows around scale models.
- NEW – Collegiate Wind Competition Team, CAES Energy Efficiency Research Institute
- NEW – Solar Go-Kart Display, Greenspeed Research, Inc. – All Ages (O)
- NEW – Explore a Stream Table, Boise WaterShed Education Center – Room 110, All Ages (O)

ENVIRONMENTAL RESEARCH BUILDING (ERB) – Open House Research Labs
- Exploring Explosive Eruptions with the Liquid Nitrogen Volcano Experiment, Boise State Geosciences – Outside behind ERB, All Ages (20 minutes: 10am, 11:30am, 1pm, 2:30pm) (S)
- Experiments Explaining Volcanic Processes, Boise State Geosciences, Lobby, All Ages (D)
- 3D Visualizations, Boise State Geosciences, Room 4110, Ages 8-Adult, 9am-11am (D)
- Water Resources Lab, Boise State Civil Engineering, Room 3108, Ages 14-Adult (D)

Thank you to our sponsors:
Outside the SUB (East side)

STEMBusUSA – All Ages (D) – Enjoy a mobile discovery experience ranging from biotech to video game programming to robotic and electronics programming and inquiry. Parking Outside

Boise State Physics and Astronomy Club (O) – Look through a solar telescope! Outside

SUB Rooms – Drop-in or Scheduled


Sessions filled on a first come basis. Four ways to participate: Scheduled Activities (sign up for sessions at the activity location) (S); Drop-in (D); Open Demonstrations (O); Interactive Science Shows (I) Ages listed are suggested, but not required.

STUDENT UNION BUILDING (SUB) – Food Vendors Open on First Floor

Simplot Ballroom

NEW – NASA Astronaut, Steve Swanson – All Ages, 10:00am (60 minutes) (I) – NASA’s retired astronaut has flown 2 shuttle flights, STS-117 in 2007 and STS-119 in 2009, and launched to the International Space Station as a member of Expedition in 2014. Learn more about his experiences at NASA and in space.

NEW – World’s Fastest 5 Ball Juggler, David Rush – All Ages, 1:00pm (45 minutes) (I) – Local technology professional, and juggler on the side, will share his STEM story told through juggling, culminating with an attempt to break the Guinness World Record for “most juggling catches in one minute (five balls)”. The current record is 330 catches in 1 minute (5.5 catches per second).

Jordan Ballroom – Open Demonstrations for All AGES

• Treasure Valley Photo Booth – Get your photo taken with fun science and engineering props!

• Physics and Astronomy Demonstrations, Boise State Physics Club

• NEW – Test Verizon Wireless High Tech Products, Verizon Wireless

• Radio Demonstration, HP Amateur Radio Club - It’s not your father’s Amateur Radio! We cover the world and even space with voice, data and images.... Learn how much you depend on radio and may not even know it. At the top of each hour participate in hands on experiments that illustrate the magic of how radio works.

• Robots and Land Rovers, The Boise Robotics Group (BoRG) - Learn how the BoRG makes and programs their robots and how you can do the same.

• High Altitude Balloons, NearSys - What can you do with $150 worth of balloon and helium? You can send experiments into near space! While conducting experiments in atmospheric and cosmic ray studies, remote sensing of the Earth’s surface, radio wave propagation, and astronomical and technological evaluations, we discover more about the world around us. Near space is the poorman’s space program. See how missions are performed and how students can do experiments in this close analog to outer space.

• Seabelt Demonstration, Federal Highway Administration – Live demonstration will that help Idahos make better Snap Decisions about whether to wear or not wear a seabelt.

• Your Brain on Language, Linguistics Lab at Boise State University

• 15,000 Volt Demonstration, Idaho Power - Designed to illustrate the properties of electricity. The demonstration will prove the theory that electricity always seeks the quickest path to earth.

• What’s a Watt? Idaho Power - Ride a bicycle that generates power. Feel the energy that powers a light bulb, a computer, and a television.

• Future City and MATHCOUNTS, Idaho Society of Professional Engineers – Learn about competitions for 6th-8th graders

• Making Waves with LIGO, LIGO Hanford Observatory – Exploring gravitational waves and more with LIGO.

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• Code the Ocean, Boise City Public Works - Ages 8-Adult – Check out this hands-on oceanthology exhibit.

• Robots, Structures & Other Things! PCs ActivitesLab - Where your talent and passions intersect

• Science is Fun! Idaho National Laboratory

• PRINTING Up Close and Personal, Hewlett Packard

• NEW – Virtual Reality with the Space Broncos, Boise State Space Broncos - Experience a virtual reality environment using a gaming engine called Unreal Engine.

• NEW – Build a Bubble Powered Rocket, Boise State Microgravity Undergraduate Research Team

• Adaptation Exploration, Intermountain Bird Observatory

• NEW – Explore Algal Biofuels, Boise State Biology Department

• Chemistry is Cool, Boise State Chemistry

• Amazing Math, Boise State Mathematics

• NEW – Science Trek, Idaho Public Television – Do you have questions about the ocean, forces and motion or other science topics? Science Trek let's you ask scientists about what you want to know. You might even be on television!

• NEW – Idaho Air Guard Display

• NEW – Cyberspace Display and Equipment, Mountain Home AFB

ENGINEERING BUILDING (ENGR)

First Floor

• NEW – Mallory Yates, NASA Johnson Space Center – Room 110, All Ages, 9am (I) – Learn about a mechanical engineer’s path from Idaho to NASA.

• NEW – Greg Whitney, Flight Director at NASA Johnson Space Center – Room 110, All Ages, 10am (I)

• NEW – Jake Fongberg, Planet Labs – CubeSat – Room 103, All Ages, 2pm (I) – Learn about a computer program’s path from Idaho to Aerospace!

• NEW – Jessica Kochne, NASA Ames Research Center – Room 103, Ages 14-Adult, 110am (I) – Meet a Physical Scientist for the Center for Nanotechnology at NASA!

• Molecular Madness with Dr. Pirklestein, Boise State Chemistry - Room 110, All Ages, 45 minutes: 11am, 1pm, 3pm (I) – Learn about the energy housed in the chemicals that make up our food, AKA: explosions, fire, ignition, combustion, and a few other demos involving liquid nitrogen, cloud in a bottle and silver plating a bottle.

• NEW – Snow Simulation, Idaho Transportation Department – Outside in the parking lot (weather permitting) – Experience a super-charged video arcade game! 

• NEW – An Introduction to Computer Science Using Scratch, Idaho Technology Council - Room 111, Ages 8 and up, younger (6+) with Adult assistance, Capacity 25 (D)

• Beyond the Looking Glass: Seeing at the Nanoscale, Boise State Materials Science & Engineering - Room 104, Ages 5-Adult (D)

• NEW – See a 3D Printer in Action, Boise State College of Engineering – Room 106, All Ages, (D)

• Bugs Under a Microscope! Boise State Materials Science & Engineering - Room 108, Ages 8-Adult (D)

Second Floor

• NEW – Explore Infrared (IR) using IR cameras, and email yourself an IR image, Energy for Society at Boise State – Room 225, All Ages (D)

• NEW – Build and Eat an Edible Aquifer, SUEZ and Department of Environmental Quality – Room 215, Ages 5-14, Capacity 30 (45 minutes: 9am, 9:30am, 10am, 11am, 1pm, 2pm, 3pm) (S) – Learn how ground water is stored in aquifers, how we do what can affect our groundwater like leaky underground tanks, and how good engineering can help us keep our water clear.

• NEW – Programming with Star Wars and Frozen” ACM-W and Computer Science Club – Room 238, Ages 8-Adult (D)

• Play with Keva Blocks and Ubistrix, Discovery Center of Idaho – 2nd Floor Attrium, All Ages (O)

Third Floor

• NEW – Extreme Weather Science, National Weather Service – Room 313, Ages 8-Adult, Capacity 30, (45 minutes: 9:30, 10:30, 11:30, 1:00, 2:00, 3:00) (S) – Meteorologists will discuss the science of extreme weather in the context of a “Weather Jeopardy” game. New teams will compete to be the Weather Jeopardy Champions and various scientific weather demonstrations will be conducted during the course of the game. In addition, weather safety information will be provided in a fun and interactive way.

• NEW – Sustainable Energy and Materials, Boise State Materials Science & Eng – Room 314, All Ages, (30 minutes: 9am, 9:45am, even 10:45am: 1pm, 1:45pm, 2:30pm, 3:15pm) (S)

• NEW – Jelly Bean Binary, Micron Foundation – Room 335, Ages 5-10, Capacity 25, (30 minutes: 9:00am, 9:45am, 10:30am, 11:15am, 12noon, 1pm, 1:45 pm, 2:30pm, 3:15pm) (S) – Learn the language of computers. Learn how the computer uses binary code and how to encode and decode with it. Then, using “1’s” and “0’s”, and jelly beans you will be able to write your name in binary code.

• NEW – How to Use Your PC / Laptop to Learn about Materials, Boise State Materials Science and Engineering – Room 336, Ages 10-Adult (45 minutes: 9am, 10am, 11am, 1pm, 2pm) (S)

• NEW – Explore Engineering by building your own Hovercraft! Boise State Society of Women Engineers – 3rd Floor Attrium, All Ages (O)