THE JOY OF ORIGAMI, ROOM 1360 GENETICS/BIOTECH, 425 HENRY MALL 6:30 - 8:30 PM

Origami is the art of folding paper into various shapes traditionally without cutting or gluing. Attendees will learn to fold several different models including animals and designs that can be used as stationery, gifts and decorations. A variety of papers will be used with an emphasis on reusing everyday materials.

WASHBURN OBSERVATORY OPEN HOUSE | 1401 OBSERVATORY DRIVE | 8:00 - 10:00 PM
UW Space Place

Visit historic Washburn Observatory for public observing, weather permitting. Check Washburn Twitter Feed for updated weather information the evening of the event.
A-MAZE-ING LASING
Graduate Women in Science- Madison Chapter

Use mirrors to direct a laser beam around obstacles in order to hit a target.

BE WISE & SHADE YOUR EYES
McPherson Eye Research Institute

Sunglasses help prevent sun-related eye health problems, including cataracts, glaucoma, and macular degeneration. Sunglasses are especially important for children, who often spend more time outside than adults. This exploration station educates visitors about damaging ultraviolet light, which is beyond the visible light spectrum, and promotes sunglass use to combat ultraviolet light exposure in the eye. Complementary bookmarks display the Ultraviolet Light Index and have the URL of the online Ultraviolet Light Index Forecast. Visitors will receive a few ultraviolet-light-detecting beads, and will see how the beads produce color when lighted by a UV-emitting-flashlight. Guidelines will be offered for children to use the beads to conduct investigations of ultraviolet light in their home environments.

BEES AND POLLINATION
USDA-ARS and Department of Entomology

Learn about pollinators: who they are, what they do, why they are in decline and how you can help preserve them. Can you name some social and some solitary bee species? Which fruit and vegetable crops require insects for pollination and seed production? What makes a bee a bee? Why are bees in decline? What about the neonicotinoids? What is the status of Colony Collapse Disorder (CCD)? How can you help preserve bees? Come visit our booth and we will help you answer these questions and more.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
**BIOMEDICAL ENGINEERING DESIGN STATION!**
Biomedical Engineering Department

Come learn about Biomedical Engineering! There will be four biomedical engineering seniors describing their past experiences throughout their years at UW. They will also present a mock-design situation to introduce students to the design process. Each student will be presented the design requirements and given 10 minutes to design their own solution, which then we will test immediately after!

**BOTANY PLANT GROWTH FACILITIES | BIRGE HALL | 430 LINCOLN DR | 10:00AM-2:00PM**
Botany

Botany Plant Growth Facilities (Greenhouses & Garden) serve both teaching and research as a living reference for plant families, genera and species. In addition to meeting essential teaching and research interests, the greenhouses and garden are an aesthetic resource for students and the community. Botany staff assist visitors seeking advice on plants for their homes and gardens, and touring school children gather the seeds of environmental stewardship.

**BREATHE IN, BREATHE OUT: IRON AND OXYGEN TRANSPORT**
UW-Madison Department of Chemistry

With every breath that we take, we inhale air that contains oxygen. This vital molecule is needed to power the cells in our bodies; however, breathing only takes oxygen as far as our lungs. To carry oxygen from our lungs to all other parts of our body, we use a very important protein called hemoglobin. Hemoglobin, which is the primary component of red blood cells, transports oxygen from the lungs to cells through the blood. Additionally, hemoglobin transports carbon dioxide, a by-product of respiration, from cells to the lungs. Hemoglobin employs the essential mineral iron to transport these gaseous molecules throughout blood. The key role of iron in gas transport drives our need to include this mineral in our diet. Stop by our station to examine iron-rich foods, discover how scientists and doctors measure interactions between oxygen and hemoglobin, and explore how protein shape influences function in gas transport!

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* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm*
CAN YOU BELIEVE YOUR EYES?  
McPherson Eye Research Institute

While the eye is the sensory organ that collects light, the brain is actually responsible for converting, processing and interpreting the data embedded in those collected photons into usable information that we experience as visual perception. The brain relies on neurons to convert and process data and experience, context, inference and bias to make interpretations about sensory data, including light. But the brain can be tricked by data that overstimulates different kinds of processing neurons (physiological) or data that triggers biased inferences during interpretation (cognitive). These tricks result in the experience of visual illusions, where perception differs from reality. This exploration station looks at physiological and cognitive illusions to help visitors learn about visual perception and the brain.

CHASING THE GHOST PARTICLE | STERLING HALL PLANETARIUM, 475 CHARTER ST. | 11:00 AM - 3:00 PM  
Wisconsin IceCube Particle Astrophysics Center, WIPAC

Deep in the ice at the heart of Antarctica, IceCube, the biggest and strangest detector in the world waits for mysterious messengers from the cosmos. Scientists are using tiny and elusive particles called neutrinos to explore the most extreme places in the universe. These ghostly neutrinos give us an exclusive way to study powerful cosmic engines like exploding stars and black holes. In this 30-minute show, stunning simulations of the most energetic places in our universe, and the galaxies around us, are the prelude to a thrilling journey inside IceCube, looking for traces of neutrino collisions in the ice. From one of the most remote locations on Earth to the unexplored regions of the cosmos, Chasing the Ghost Particle: From the South Pole to the Edge of the Universe will take you on a journey you won’t forget. Following the film, your journey continues with an interactive tour of the universe in the planetarium.

No advanced tickets needed but space is limited to the first 25 people for each show.

COWS TURN GRASS INTO MILK  
Center for Integrated Agricultural Systems

Take a quiz comparing grassfed and conventional cheese and butter (including cheese tasting) and take part in a hands-on activity designing managed grazing systems using miniature electric fence segments, cows, a dairy barn, and a pasture. Young visitors will be encouraged to draw cows, pastures and grazing systems (we’ll encourage more complex drawing projects for older kids), and their artwork will be posted. Students can take a grazing activity sheet and we will have a Fun Grazing Facts Fortune Teller craft to make at the exhibit or take home, as well as take-home information on the properties of grassfed dairy products and recipes for teachers and parents.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
CRANBERRIES: MADE IN WISCONSIN
UW-Madison Department of Horiculture

Did you know that Wisconsin is the largest producer of cranberries in the United States and the world? Stop by our station to learn more interesting facts about the history of the cranberry, its many benefits, and what we are doing to make this amazing fruit even better. Have you ever seen DNA? At our station you can extract the DNA from cranberries and even take it home with you! Also, take our taste test to see if you can pick out the taste of 100% real cranberry juice!

DC SMITH GREENHOUSE | 465 BABCOCK DR. | 10:00AM-2:00PM
College of Agricultural and Life Sciences

Explore the fascinating world of plants and participate in hands-on activities in the DC Smith Greenhouse.

DIFFERNT WAYS OF SEEING
McPherson Eye Research Institute

How might a person with impaired vision see the world? With different abilities and limitations, what things are easy to do and what things are difficult to do? Looking through specially prepared masks (for children) or goggles (for youth and adults), participants can simulate vision impaired by: (1) central blind spots, often caused by age-related macular degeneration (AMD) or Stargardt's disease; (2) tunnel vision, often an early symptom of glaucoma or retinitis pigmentosa; (3) impaired acuity across the whole visual field, occurring with cataracts and with congenital impairments such as albinism and colorblindness. While looking through these mask and goggle simulators, participants will try activities including reading, writing, telling time, and vision testing with a traditional eye chart.

DISCO MICROBES
Biology Outreach Club

In this station, you will use powder to simulate microbes on your hands. You will look at the amount of “germs” under black light before and after hand washing.

DNA BRACELETS
Integrate Program in Biochemistry SFLC

Kids take their names and convert them to DNA sequences, after that they “transcribe” their names by putting corresponding beads onto a pipe cleaner. Then they “translate” their names into pieces of candy.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
SATURDAY, APRIL 1, 2017

**EAT OR BE EATEN: HOW ANIMALS FIND FOOD IN A DANGEROUS WORLD**
Zoology Graduate Student Organization

Come join the Zoology department to discover how animals in your backyard search for food, and avoid being food for someone else! We will have hands-on activities that allow attendees to simulate different foraging strategies and make foraging decisions, such as which animal is poisonous or safe to eat and whether to stop eating when a predator shows up.

**EWB’S WATER FOR THE WORLD**
Engineers Without Borders- UW-Madison Chapter

For the water filter, a 2 liter- soda bottle will be turned upside down with coffee filters covering the opening where the cap would be. Various layers of sand and rock will be added in the bottle to aid in the filtration process. Dirty water will be added to the bottle to filter through the sand, rock and coffee filter. In order to conserve time and simplify the project, participants will be constructing their own filter out of smaller plastic water bottles, while a larger example with the 2-liter bottle will be filtering on display. This experiment shows the five basic steps of water purification: aeration, coagulation, sedimentation, filtration, and disinfection.

**EXPLORING INSECTS WITH INSECT AMBASSADORS**
Entomology

Come learn about the marvels of the insect world from UW entomological experts. Gaze at a myriad of beautiful preserved specimens and conquer your fears by holding live insects!

**EXPLORING KINESIOLOGY | UW NATATORIUM | 2000 OBSERVATORY DR. | 1:30-3:30PM**
Department of Kinesiology

Afternoon labs open for exploration are Physical Activity Epidemiology and Biomechanics.

**EXTREME SOUTH POLE SCIENCE**
Wisconsin IceCube Particle Astrophysics Center, WIPAC

Come experience the world of the neutrino, often called the weirdest particle in nature. Learn about the unique properties of the so called ghost particle that can pass through the Earth undeflected, and exist in three identities at the same time. Learn about how despite being born with a single identity, they can mutate into another neutrino identity when they are detected by experiments such as IceCube, the cubic-kilometer neutrino detector at the South Pole.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm*
GEOSCIENCE HALLIBURTON VISUALIZATION LAB | WEEKS HALL | 1215 W DAYTON | ROOM 212 | 11:00AM-12:00PM
Geoscience Department
Come see how geoscientists view and analyze various types of geophysical data in our visualization lab, complete with a big screen capable of viewing things in 3D!

GROWING FOOD IN SPACE: USING LEDS TO OPTIMIZE PLANT GROWTH AT THE BIOTRON LABORATORY
Biotron Laboratory
Light Emitting Diodes (LEDs) provide a unique opportunity to study the effects of light wavelength (color) and shade on plant growth. The Biotron Laboratory has installed LED lighting for plant growth to encourage testing and development of this innovative technology. Our experiment station displays plants grown under various wavelengths of LEDs, including an LED simulation of forest shade resulting in observable differences in growth. This interactive display challenges students to match the plants with the lighting condition that produced them. Biotron staff will prompt visitors with questions about photosynthesis and growth to encourage appreciation for the complexity of plant responses to light and shade.

HOMO NALEDI MEET & GREET: GET TO KNOW THE NEWEST MEMBER OF THE GENUS HOMO
Department of Anthropology
Homo naledi is the newest member of the genus Homo, which researchers, including UW-Madison’s own Dr. John Hawks, first described in 2015. The Rising Star Cave system, part of the Cradle of Humankind World Heritage Site in South Africa, has continued to reveal extraordinary data on H. naledi. In a recent publication in the open access journal eLife, Professor Hawks and colleagues reveal new information on H. naledi skeletal morphology as well as context for this intriguing site. Our exploration station will provide a hands-on experience with H. naledi remains using 3D prints, as well as key information from the new finds. Please join us in getting to know the newest member of our genus.

HOW DOES THE HEART WORK? WHY IS IT IMPORTANT TO GIVE BLOOD?
UW-Madison American Red Cross Club
For our exploration station, we will provide opportunities to learn about the functions of the human heart--how blood pumps through the system, different blood types, differences between arteries and veins, etc. We will have dry-erase mazes with pictures of the human heart and trivia questions about blood. We will emphasize the importance of donating blood.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
HUMAN- HUMAN INTERFACE
Department of Biomedical Engineering

This interactive station uses an electrophysiology setup to innervate one individual’s hand based on movement of another individual. A TENS simulation device and Arduino will be used to take over control of each other’s wrist and hand movement. A second setup allows for one individual to control the movement of a mechanical claw.

IEEE- FUN WITH ELECTRONICS
IEEE- UW-Madison Student Chapter

Hands-on activities such as Morse Code Transceivers, infinity mirror, and more for kids to learn about electronics.

L.R. INGERSOLL PHYSICS MUSEUM
Department of Physics

The Ingersoll Physics Museum is free to public and consists of over 65 exhibits with some rotating in and out each year. Our exhibits give our guests a hands-on experience of physical concepts ranging from mechanics to modern physics in a demonstrational kid-friendly environment. Our museum runs on donations.

LEAFCUTTER ANT DISPLAY COLONY | MICROBIAL SCIENCES BUILDING | 1550 LINDEN DR. | GROUND FLOOR/ATRIUM | 11:30AM-2:30 PM
Currie Lab, Department of Bacteriology

Visit the Currie-lab’s large leaf-cutter ant colony and learn about these amazing organisms! Observe the ants cutting and carrying leaves to feed the symbiotic fungus they farm in underground chambers. Watch the ants raise their young and weed their fungus. Plus, learn how we can improve our understanding of basic biology, discover new antibiotics, and contribute to biofuel research by studying these insects. Visitors can observe our display colony, play a game to experience the challenges of forming a successful leaf-cutter ant colony, and learn how to collect ants in their own backyards.

LEARN ABOUT THE BRAIN WITH NEUROSCIENCE TRAINING PROGRAM OUTREACH!
Neuroscience Training Program Outreach

Hands on activities to help you learn about the brain and neuroscience including a chance to hold a real human brain!

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
LEARNING FROM EXAMPLES  
The Study of Children's Thinking

How do children use what they've seen in the past to make predictions about the future? Visit our exploration station to play some games and make predictions about what will happen next.

MAKE YOUR OWN LUNGS!  
Department of Biomedical Engineering

Have you ever wondered how your lungs worked? It's easy! When you breathe in and out, you have muscles that push your lungs which then pushes air into and out of your body. This process is called ventilation. Today, we will be making your own lungs so you can see how it works inside your body!

MARMOSETS IN OUR MIDST LEARNING LOBBY | PRIMATE CENTER, 1220 CAPITOL CT. | 12:00 - 4:00 PM  
Primate Center

Visit the Wisconsin National Primate Research Center’s learning lobby just three blocks south of the Wisconsin Institutes for Discovery on Capitol Court off Orchard Street. Meet a family of marmosets, try hands-on activities to learn how monkeys learn, and discover how Primate Center researchers and animal care technicians have advanced science, medicine and humane lab animal care.

MICROBE DETECTIVES  
Department of Bacteriology

Microbes come in all different colors, sizes and smells! And we as humans interact with and use them in our everyday lives. At our booth, you will act as a detective and explore the different traits of common unknown microbes to solve the mystery of which bacteria we use for everyday purposes!

MILK FIREFWORKS & THE BABCOCK MILKFAT TEST  
Wisconsin Science Museum

Experiment with ways to test how fat affects how milk looks and behaves, and explore how the Babcock milk fat test transformed the dairy industry in Wisconsin.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
Members of the UW-Madison Pre-Dental Society will be presenting tips and tricks on how to practice great oral hygiene for kids. Topics covered will include; teeth trivia, brushing/flossing, recommended foods, and the growing technology used at the dentist office.

Our exhibit will feature a peak at nitrogen-fixing rhizobia (bacteria) and the structures they help form on the roots of legumes, like soybean. We also will show microscopic fungi that associate with roots and provide many nutritional benefits to plants. These microbes are vital to soil health and contribute to the success of plants.

This station will feature several tabletop interactive plasma physics demos which will include plasma ball displays.

The Madison Area Herpetological Society educates enthusiasts and the general public about frequently misunderstood reptiles and amphibians. It is a great source for people to exchange knowledge, from amateur hobbyist to experts. It also gives a community a basis for expertise on issues dealing with local laws, ordinances, and conservation.

What do we see around us? Is there something we want to measure? Can we see it clearly? This exhibit revolves around imaging and how scientists use light microscopy to quantify biological phenomena. Just using our own eyes and a smartphone, we will cover some basic topics including resolution and magnification, being sure we can resolve some basic shapes and examples. Then we'll use a mini-microscope and some real biological samples to find objects we are interested in measuring and applying what we learned to properly resolve them. These concepts all lay a foundation for how to best acquire images that help scientists answer their biological questions.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
SATURDAY, APRIL 1, 2017

**ROOFTOP GREENHOUSE | LEOPOLD RESIDENCE HALL | 1645 KRONSHAGE DR. | 10:00AM-1:00PM**
UW GreenHouse Residential Learning Community

Join undergraduate residents and UW Housing Staff in a rare open-house of the rooftop greenhouse at Leopold Residence Hall. Open to the public only for Science Expeditions, Leopold Hall is the newest residence hall on the UW-Madison campus. The hall is home to GreenHouse Learning Community and features green building techniques. Most prominent is the greenhouse on the roof. Come visit us and our plants in the Lakeshore Neighborhood!

**SAY WHAT? TAKE A JOURNEY THROUGH THE HUMAN AUDITORY SYSTEM**
Communication Science and Disorders- Audiology

At this station, you will discover how sound travels from the outside world through the amazing human ear to the brain. You will also learn how loud sounds can damage your hearing and how to protect your ears for a lifetime of healthy listening. Bring your phone or other portable electronic device and learn whether your listening setting are safe. Also, bring your appetite and make a cochlear inner hair cell out of candy.

**SCIENCE IS FUN**
Chemistry Department

Join Professor Bassam Shakhashiri’s SCIENCE IS FUN student presentation group for hands-on activities that showcase fascinating scientific phenomena. Explore items that sink, float, shrink, expand, whistle, change color, and more!

**SCIENCE IS FUN SCIENCE SPECTACULAR | CHEMISTRY BUILDING | 1101 UNIVERSITY AVE | ROOM 1351 3:00PM**
Chemistry Department

The Science is Fun Spectacular fosters public awareness and appreciation of science. Join Professor Bassam Shakhashiri and friends as they showcase scientific phenomena that charm and fascinate.

**SCIENCE OF ART | THE CHAZEN MUSEUM | 750 UNIVERSITY AVE | LOBBY | 12:00-4:00PM**
Chazen Student Ambassadors

You won’t want to miss this one of a kind experience, centered around the temporary exhibition of Martha Glowacki’s Natural History! The Chazen Ambassadors, a group of undergraduate students who love the museum, will be running tours themed around the intersection of science and art. They have a diverse range of expertise, from biology to computer science to visual culture. Tours of the museum will run every half hour, starting at noon. The last tour will leave the lobby at 4:00. Tours will last approximately 30-40 minutes. We hope to see you there!

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
**SCIENCE POLICY: LEARN, LISTEN, ACT!**
Catalysts for Science Policy

Have you ever wondered what role science plays in public policy? Come learn about how science and policy interact in issues ranging from public health to energy policy. Play a game where you are the in charge of making the choices!

**SCIENCE SCINEMA: FILMS FROM HOWARD HUGHES MEDICAL INSTITUTE | GENETICS BIOTECHNOLOGY CENTER | 425 HENRY MALL| ROOM 1111 | 9:30AM-4:30PM**
UW Housing - Residence Life

Check out our stream of science cinema from Tangled Bank Studios of the Howard Hughes Medical Institute. Some films are short (8 min) while others run 30 minutes to an hour.

**SCIENCE SCINEMA: MAKING MOVIES OF RESEARCHERS IN THE FIELD | GENETICS BIOTECHNOLOGY CENTER | 425 HENRY MALL| ROOM 1111 | 7:00PM-9:00PM**
UW Housing - Residence Life

Check out our stream of science cinema from Tangled Bank Studios of the Howard Hughes Medical Institute. Some films are short (8 min) while others run 30 minutes to an hour.

**SCIENTIFIC GLASSBLOWING TOUR | ROOM B-201 CHEMISTRY BLDG., 1101 UNIVERSITY AVE. | ROOM B-201 | 10:00 AM - 2:00 PM**
Department of Chemistry

The chemistry department has the only scientific glassblowing laboratory on the UW-Madison campus. Many of the glass instruments are custom built by hand to aid scientists in their research. Come learn about glass and watch as fire is used to create these practical and beautiful glass tools.

**SIMULATION-BASED ENGINEERING LAB (DRIVING SIMULATOR)**
Mechanical Engineering

Computer simulated driving of a vehicle, with video of other simulations.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
SOIL SAFARI AND CRITTER QUEST
Social Science

Come join us as we dive into the vast and fascinating world of soils! We will have several stations set up, where you can experience the diversity of microfauna and the ways of life in the world beneath our feet. Here, you will have the chance to prepare your own slide to look at bacteria, fungi, and nematodes underneath a microscope, do your own colourimetric assay to compare soils with varying levels of carbon, see how to extract small organisms from soil using a Berlese-Tullgren funnel, and more! There is much to learn at this hands-on soil safari and critter quest.

SQUISHY CIRCUITS
Adult Role Models in Science

Have you ever wondered how light bulbs, computers, or your refrigerator are powered? Learn how to make your own electrical circuit using just a battery and play dough! Create your own electrical circuit design that lights up, rotates a motor, or makes noise.

STUCK
Institute for Chemical Education

You will explore viscosity and determine what makes molecules stick to each other. You will explore different liquids and determine which is the most viscous.

STUDENTS PARTICIPATING IN CHEMICAL EDUCATION
SPICE

We are UW-Madison students who love exploring the world of chemistry! We will be investigating a few chemicals with properties that also make them fun to play with!

STUDENTS PARTICIPATING IN CHEMICAL EDUCATION - DEMO SHOW
CHEMISTRY BUILDING | 1101 UNIVERSITY AVE | ROOM 1351
1:00PM-2:00PM
SPICE

We are UW-Madison students that love exploring the world of chemistry! Join us as we perform different experiments to learn more about chemistry and have fun doing it!

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
**TERRIFIC TINY TERRARIUMS**
Tribeta

Build your own personal terrarium and learn how terrariums can survive.

**THE INCREDIBLE SURFACE OF WATER**
Department of Chemistry

The high surface tension of water makes its surface unusually strong. Come explore its unique properties by participating in hands-on demonstrations. Make a soap-propelled boat, create your own lava lamp, learn about the shapes of soap bubbles and films, or step inside a human-sized bubble.

**THE PHYSICS OF PLASMA | CHAMBERLIN HALL | 1150 UNIVERSITY AVE | ROOM 2103 | 10:30AM-11:00AM AND 12:00-12:30PM**
The Wonder of Physics

The Physics of Plasma is a presentation that discusses the fourth state of matter, plasma. It will feature a discussion about what plasma is and where it can be found. The presentation will also feature various plasma-related demonstrations.

**THE SCIENCE OF COLA AND MENTOS**
Food Science Club

We are planning to have a small experiment with Mentos and Coca Cola. We will demonstrate adding Mentos to Coca Cola, then we will explain why the Mentos is shot up when dropped into a carbonated drink.

**TOUR THE WISCONSIN STATE HERBARIUM | BIRGE HALL | 430 LINCOLN DR | LOBBY | 10:00AM-2:00PM**
WI State Herbarium, Department of Botany

The State Herbarium is a scientific research collection of >1.3 million pressed and dried plant specimens from all corners of the world. Museum curators will lead behind-the-scenes tours and hands-on activities that showcase this world-class collection to visitors of all ages.

**USING COMPUTATION TO IMPROVE HUMAN HEALTH**
Center for Predictive Computational Phenotyping

Explore the complexity of DNA sequence and learn how computational methods help us to understand relationships between DNA sequence and human health.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm*
**UW GEOLOGICAL ENGINEERING STUDENT CHAPTER**

UW Geological Engineering Student Chapter

Hands on demonstration of Geological Engineering and Geology applications.

**UW GEOLOGY MUSEUM OPEN HOUSE | WEEKS HALL | 1215 W DAYTON | UW GEOLOGY MUSEUM 9:00AM-4:00PM**

UW Space Place

Explore the Geology Museum and take a peek into Wisconsin’s deep history! On your visit you can touch rocks from a time when there were volcanoes in Wisconsin; see corals, jellyfish and other sea creatures that used to live and swim where we now walk; and stand under the tusks of a mastodon while imagining yourself in the Ice Age. Also on display at the Geology Museum are rocks and minerals that glow, a model of a Wisconsin cave, dinosaurs and meteorites. Our mineral, rock and fossil collections have the power to educate and inspire visitors of all ages. Come see for yourself!

**WASHBURN OBSERVATORY OPEN HOUSE | 1401 OBSERVATORY DRIVE | 8:00 - 10:00 PM**

UW Space Place

Visit historic Washburn Observatory for public observing, weather permitting. Check Washburn Twitter Feed for updated weather information the evening of the event.

**WHAT IS COMPARATIVE PSYCHOLOGY?**

Psychology

Learn about animal research along with human and animal minds through hands-on interactions with enrichment and video games used to learn more about monkeys. Discuss psychology, evolution, conservation, animal welfare, or ecology with students who research animals.

**WHAT’S BUZZING AT THE ARBORETUM?**

UW-Madison Arboretum

At our exhibit you will learn how to identify our native bumble bees, the research being done at the Arboretum, and the importance of providing spring to fall food sources for these small but mighty pollinators.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm*
WHAT’S IN YOUR WATER? WHERE DOES IT COME FROM?
Wisconsin Geological Survey

Dangerous levels of lead have been identified in drinking water in Milwaukee. Should you be worried? We can help you decide. Learn where your water comes from. Find out how to get water quality reports from your utility. What do they mean? Then, experiment with our shoe box groundwater model so you understand how water goes from raindrops to water glass.

WHEAT GERM DNA EXTRACTION
American Society of Biochemistry and Molecular Biology

Come have your own sample of DNA! A simple extraction involving soap and some alcohol, you can take home your own tube of DNA with the assistance and supervision of undergraduate students.

WHERE THE WILD THINGS GROW
USDA/ARS; UW-Madison Horticulture

Can you imagine a time when an ear of corn could only feed a field mouse, or when Italians had never heard of tomato sauce? Can you picture Szechwan without hot peppers, Belgium without chocolate, Germany without beer, or Georgia without peaches? It wasn’t long ago that the culinary world was very different from what it is today. Most of the fruits and vegetables that we enjoy were unknown or didn’t exist!

WISCONSIN INSECT RESEARCH COLLECTION OPEN HOUSE | RUSSELL LABS | 1630 LINDEN DR | ROOM 147 | 12:00-4:00PM
UW Madison Entomology

Come explore the holdings of the Wisconsin Insect Research Collection. This exploration destination will feature insect specimens from around the world, microscope activities, live insects, invasive species education, interactive 3D insects, stickers, and more!

WISCWIND
WiscWind- Wisconsin Energy Institute

WiscWind is a Student Org participating in the Collegiate Wind Competition to design, build, and present innovative wind turbine designs. Our exhibit will provide fun and educational hands-on activities that show how wind energy works as well as the general significance of renewable energy.

* Saturday Exploration Stations are at the Discovery Building 10 am - 2 pm
**BREATHE!**  
School of Nursing

Do you know how breathing sounds and feels like for someone with asthma? Use real stethoscopes on life-like manikins and listen for yourself!

**CAN YOU BELIEVE YOUR EYES?**  
HSLC | McPherson Eye Research Institute

While the eye is the sensory organ that collects light, the brain is actually responsible for converting, processing and interpreting the data embedded in those collected photons into usable information that we experience as visual perception. The brain relies on neurons to convert and process data and experience, context, inference and bias to make interpretations about sensory data, including light. But the brain can be tricked by data that overstimulates different kinds of processing neurons (physiological) or data that triggers biased inferences during interpretation (cognitive). These tricks result in the experience of visual illusions, where perception differs from reality. This exploration station looks at physiological and cognitive illusions to help visitors learn about visual perception and the brain.

**CAN YOU SEE ME?**  
School of Nursing

Did you know that your vision, touch, and hearing change as you grow older? Visit our booth for hands-on learning about these sensory changes and associated problems that people might experience.

**DESTINATION STATIONS AT PICNIC POINT | LOT 129 | 2004 UNIVERSITY BAY DR | 2:00-3:30PM**  
Friends of the Lakeshore Nature Preserve

Learn the natural and cultural history of Picnic Point with the Friends of the Lakeshore Nature Preserve. Gather at the entrance to Picnic Point, near the stone wall. Friendly guides will direct visitors to four different stations in the Preserve, where guests can learn from experts in geology, native American mounds, and trees, and use binoculars at a viewing station. Children can engage in related activities at each station.

* Sunday Exploration Stations are at the Health Sciences Learning Center, School of Pharmacy-Rennebohm Hall and School of Nursing’s Signe Skott Cooper Hall 10 am - 2 pm*
DIFFERNT WAYS OF SEEING
HSLC | McPherson Eye Research Institute

How might a person with impaired vision see the world? With different abilities and limitations, what things are easy to do and what things are difficult to do? Looking through specially prepared masks (for children) or goggles (for youth and adults), participants can simulate vision impaired by: (1) central blind spots, often caused by age-related macular degeneration (AMD) or Stargardt’s disease; (2) tunnel vision, often an early symptom of glaucoma or retinitis pigmentosa; (3) impaired acuity across the whole visual field, occurring with cataracts and with congenital impairments such as albinism and colorblindness. While looking through these mask and goggle simulators, participants will try activities including reading, writing, telling time, and vision testing with a traditional eye chart.

DISCO MICROBES
HSLC | Biology Outreach Club

In this station, you will use powder to simulate microbes on your hands. You will look at the amount of “germs” under black light before and after hand washing.

ELECTRIC EARS AND HOW WE HEAR
HSLC | Litovsky Lab Waisman Center

Learn how science and hearing go together. Listen to demonstrations of hearing loss and electric hearing. This hands-on exhibit will display how the sense of hearing works from the cells that form the inner ear to the electrical impulses that the brain “hears.”

ELECTRO- WISE
HSLC | Women in Science and Engineering (WISE) Residential Learning Community

Explore the concept of circuits and conductivity with the WISE Learning Community! Using MaKey MaKey kits and ElectronInks, we’ll make a banana piano, play video games, and use liquid silver to create circuits!

EXPLORING KINESIOLOGY | UW NATATORIUM | 2000 OBSERVATORY DR | 1:30 -3:30 PM
Department of Kinesiology
Physical Activity Epidemiology.

* Sunday Exploration Stations are at the Health Sciences Learning Center, School of Pharmacy-Rennebohm Hall and School of Nursing’s Signe Skott Cooper Hall 10 am - 2 pm
EXPLORING THE BRAIN!
School of Pharmacy

Learn about how the brain works! See real brains and try out fun activities that trick your brain and show you how this complex organ functions.

FIND WHAT YOU NEED AT EBLING LIBRARY
HSLC | Ebling Library for the Health Sciences, part of School of Medicine and Public Health

2 graduate library students showing people how to find authoritative health/ pharmacy, etc. related information on the web. Also, cut out skeleton that kids can build and medically related word games.

GLASSBLOWING FOR SCIENTIFIC RESEARCH WITH THE WISCONSIN FIREWAGON
HSLC | Department of Chemistry

Scientific glassblowers provide the glass tools and instruments for today’s cutting edge research. Learn about glass, glass science, and watch as a torch and fire is used to manipulate glass into a variety of shapes and forms.

GROWING FOOD IN SPACE: USING LEDS TO OPTIMIZE PLANT GROWTH AT THE BIOTRON LABORATORY
HSLC | Biotron Laboratory

Light Emitting Diodes (LEDs) provide a unique opportunity to study the effects of light wavelength (color) and shade on plant growth. The Biotron Laboratory has installed LED lighting for plant growth to encourage testing and development of this innovative technology. Our experiment station displays plants grown under various wavelengths of LEDs, including an LED simulation of forest shade resulting in observable differences in growth. This interactive display challenges students to match the plants with the lighting condition that produced them. Biotron staff will prompt visitors with questions about photosynthesis and growth to encourage appreciation for the complexity of plant responses to light and shade.

HEART, LIVERS AND BRAINS, OH MY!
School of Nursing

Do you know that there are 5 vital organs in each human body that are essential to our survival? Stop by our station to see what these organs look like, feel like, and what jobs they do.

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HYPOTHERMIA CHALLENGE
HSLC | Wisconsin Sea Grant

Hypothermia is a physical condition that occurs when the body’s core temperature falls below a normal 98.6° F (37° C) to 95° F (35° C) or cooler. Severe hypothermia may result in unconsciousness and possibly death. The Hypothermia Challenge invites participants to hold their hand in a cooler of 38-degree Fahrenheit water for 35 seconds; the participant is then given 10 seconds to try to pick up as many dimes at the bottom of the cooler as possible. The challenge is designed to highlight how quickly an individual’s motor skills can deteriorate when they fall into icy water in a body of water like Lake Superior, which seldom warms to more than 38 degrees at any time of the year, even during the summer.

IT DOESN’T HAVE TO HURT
HSLC | American Family Children’s Hospital Child Life Specialists and Pediatric Pain Team

Activities for kids to learn about and try to control pain during immunizations, blood draws and other pokes.

KATY’S KIDS
School of Pharmacy

Come play with Katy the kangaroo and see if you can tell what is candy and what is medicine!

LEARN ABOUT THE BRAIN WITH NEUROSCIENCE TRAINING PROGRAM OUTREACH!
HSLC | Neuroscience Training Program Outreach

Hands on activities to help you learn about the brain and neuroscience including a chance to hold a real human brain!

MEET YOUR PATIENT, MR. SIM-MAN
School of Nursing

Visit the simulated hospital environment that nursing students use to learn how to care for real patients. Gather information about your patient that is important for their care.

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SUNDAY, APRIL 2, 2017

**MY BRAIN & ME: UNDERSTANDING TRAUMATIC BRAIN INJURY (FOR KIDS)**
HSLC | UW-Madison/VA Hospital GRECC

My Brain & Me is an interactive series of events (i.e., playing games wearing glasses which compromise your vision, mimicking a moderate Traumatic Brain Injury (TBI) experience for all aged ) that attendees in participate as I display my professional efforts in the laboratory to study and treat TBI using a rodent model (scientific poster) and my educational/community S.T.E.M. course (educational poster) about the Human Brain and the 5 senses, culminating in a Brain Injury Awareness & Protection Take-home message. Sparking the interest to fuel future Madisonian Doctors and Scientists today!

**OOPS! DID I DO THAT? UNDERSTANDING HUMAN FACTORS TO DESIGN SAFE HEALTH TECHNOLOGY**
School of Nursing

Learn about the field of human factors engineering--how understanding things like human memory and multi-tasking help us to design better health technologies.

**ORCHARDS- FINDING WHAT MAKES KIDS SICK**
HSLC | Family Medicine and Community Health

ORCHARDS - the Oregon Child Absenteeism due to Respiratory Disease Study - is designed to keep track of absences from school to help identify when influenza is affecting the community. As part of this, we visit sick kids at their homes and take samples from their noses and throats. These samples are then analyzed to identify viruses that cause respiratory infections, like colds and the flu. Learn about the common viruses that affect you and your family and see some of the laboratory equipment in action.

**TOUR THE NEW STATE OF THE ART CLINICAL SIMULATION PROGRAM | UW HEALTH CLINICAL SIMULATION PROGRAM | 750 HIGHLAND DR | 10:00 - 2:00PM**

UW Health Clinical Simulation Program

During the tour, participants will have the opportunity for some hands-on experiences in simulated healthcare rooms as well as interacting with high-fidelity human patient simulators.

**PHARMACY COMPOUNDING LAB ACTIVITIES**
School of Pharmacy

In our Pharmacy Compounding Laboratory we will be demonstrating the preparation of a capsule that is not commercially available. Students will have the opportunity to mix powders using a mortar and pestle and to "punch capsules". We will also have our Sterile Products Lab open for you to view and ask questions.

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**SUNDAY, APRIL 2, 2017**

**PLANT CELL MICROSCOPY: EXTRAORDINARY VIEWS OF ORDINARY PLANTS**
HSLC | Gilroy Lab and Newcomb Imaging Center
Using a microscope, observe familiar edible plants (potatoes, onions, leaves, celery, and fruit) purchased from the farmer's market, grocery store, or home-grown. Two digital microscopes, a classic compound microscope, and a stereo microscope will be available for folks of all ages to try. Come and learn how to use a microscope, prepare samples for microscopy, and discover the stunning beauty of plants at a cellular level.

**PLAQUE ATTACK!**
School of Nursing
Learn about ways to combat plaque and take care of your teeth. Interactive activities for children of all ages.

**PROTECT YOU BRAIN...IT'S THE ONLY ONE YOU'LL EVER HAVE!**
School of Nursing
These aren’t head games! Explore how properly fitted helmets protect your brain.

**SCHOOL OF PHARMACY TOURS | SCHOOL OF PHARMACY | RENNEBOHM HALL | 777 HIGHLAND AVE | 10:00 - 2:00 PM**
School of Pharmacy Student Ambassadors
Participants will have the opportunity to tour the School of Pharmacy facilities with a current student ambassador. Tours will leave from the atrium every 30 minutes.

**SCIENCE SCINEMA FROM HHMI: MAKING MOVIES OF RESEARCHERS IN THE FIELD | HEALTH SCIENCES LEARNING CENTER | 750 HIGHLAND AVE. | 10:00 - 2:00 PM**
Biotechnology Center
Enjoy a continuous cycle of screenings of videos & movies from Tangled Bank Studios, part of the Howard Hughes Medical Institute, that delve into the explorations of researchers in the field.

**SLY SALT AND HEALTHY HEARTS**
HSLC | Physiology Club
Learning exhibit exposing public to cardiac physiology relating to heart health and how salt intake affects blood pressure and cardiac structure. Teaches public how where to look for excess sodium in their diet through interactive meal building exercise.

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SUNDAY, APRIL 2, 2017

**SPEEDING UP DISSOLUTION BY AMORPHIZATION**
School of Pharmacy | Pharmaceutical Sciences Department

Wonder why your coffee must be hot for sugar to dissolve? Well, that is not necessary anymore if you add “amorphous” sugar instead of commercial “crystalline” sugar. Participants will learn what amorphous sugars are and see how they can instantaneously disappear into water even at room temperature! The importance of this magic trick on drugs will be discussed.

**STAYIN’ ALIVE!**
HSLC | Anesthesiology

Come take a look at the world of Anesthesiology! We will get you ready for the operating room and see how a patient goes to sleep for surgery, learn cool anatomy, and take a hands-on turn trying out some of the neat devices and equipment!!

**STEM CELLS!**
HSLC | SCRMC

Learn how scientists from UW-Madison work with stem cells in the laboratory and hear about how stem cells can revolution medicine and science.

**STUDENTS PARTICIPATING IN CHEMICAL EDUCATION**
HSLC | SPICE

We are UW-Madison students who love exploring the world of chemistry! We will be investigating a few chemicals with properties that also make them fun to play with!

**TRIP-IT- ARE YOU SAFER IN VIRTUAL REALITY THAN IN YOUR HOUSE?**
School of Nursing

Surprising safety hazards lurk all over your house! Come tour the School of Nursing’s apartment to get familiar with the space, then walk through it virtually using the Oculus Rift. How many hazards can you find?

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**UW ORGAN AND TISSUE DONATION**
HSLC | University of Wisconsin Organ and Tissue Donation

Learn how you can be an everyday hero with UW Organ and Tissue Donation! In providing education about the importance of organ, tissue and eye donation as well as the medical advancements that have been made possible through organ donation and transplantation, we hope to encourage attendees of our Exploration Station to make an educated decision about becoming a registered organ donor. This exhibit will serve to teach attendees about which organs and tissues can be donated as well as answer frequently asked questions about organ, tissue and eye donation.

**VOICE LABORATORY**
HSLC | Surgery

An interactive exhibit with video, audio, games and activities teaching about the larynx. Participants will partake in hands-on activities to learn about the structure and function of the larynx during voicing.

**WALK WITH A NATURALIST: TRANSITIONS | UW-MADISON ARBORETUM | 1207 SEMINOLE HIGHWAY | 1:00-2:30PM**

 UW- Madison Arboretum

Early spring can have variable weather, influencing plant awakenings and animal behavior. Walk with a naturalist to areas of the Arboretum exhibiting where these transitional changes are most evident.

**WHAT CAN YOUR PHARMACIST DO FOR YOU?**
School of Pharmacy

This station will show the wide variety of roles that pharmacists can play within the community. There will be games and other activities including vaccine awareness, medication safety, evaluating how much sugar is in your diet, organ donation awareness, asthma awareness, and more!

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WHAT’S IN YOUR WATER? WHERE DOES IT COME FROM? DISCOVER THE ANSWERS YOU NEED TO KNOW
HSLC | Wisconsin Geological Survey

Dangerous levels of lead have been identified in drinking water in Milwaukee. Should you be worried? We can help you decide. Learn where your water comes from. Find out how to get water quality reports from your utility. What do they mean? Then, experiment with our shoe box groundwater model so you understand how water goes from raindrops to water glass.

WIRING OF THE BRAIN: USING FROGS TO STUDY DEVELOPMENT
HSLC | Gomez Laboratory (Department of Neuroscience)

We will have developing frog embryos at different stages for people to look at under a dissecting microscope, and a poster explaining how we use frog embryos to research how neurons develop, and how this relates to human development. We’ll also have two adult frogs (one male and one female) to show kids as we explain how we collect embryos, and laptops set up showing timelapse videos of frog development and neuron growth.

YOU GOTTA MOVE TO GROOVE
School of Nursing

Lying around makes your muscles weak! At this station you will learn how hard your legs have to work if you don’t exercise. Do you know how many steps it takes to go around the atrium of Cooper Hall? Find out!