

April 5, 6, 7, 2019



SCIENCE EXPEDITIONS

exhibit guide

FRIDAY, APRIL 5, 2019



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

UW Department of Astronomy

Visit the historic Washburn Observatory telescope. Weather permitting there will be observing with the telescope.



ORIGAMI WITH RUTHANNE BESSMAN | DELUCA FORUM, THE DISCOVERY BUILDING | 5:00 - 5:55 PM, 7:00 - 8:00 PM

Wisconsin Institute of Discovery



LEARN YOUR LAKES: FRESHWATER RESEARCH AT THE CENTER FOR LIMNOLOGY | HASLER LABORATORY FOR LIMNOLOGY, 680 N. PARK ST. | 1:00 - 5:00 PM

Center for Limnology

Take a tour of Hasler Lab and hear the history of limnology (the study of inland waters) in America. Visitors will get hands-on demonstrations of the tools limnologists use to study lakes, meet some of the plants and animals that call Wisconsin waters home and hear the latest science on important topics like alge blooms, invasive species and water quality.



LET'S TALK ABOUT PRECISION MEDICINE | ORCHARD VIEW ROOM | 6:00 - 6:45 PM

All of Us Research Initiative

6:00 - 6:30 pm - Mark Burkard, "Transforming Cancer Treatment with Precision Medicine"

6:30 - 6:45 pm - Marje Murray, "Precision Medicine Begins with All of Us"

UW-Madison is participating in an exciting research program to collect health information from one million people with considerations for lifestyle, environment, and biological makeup. The program, based on precision medicine, aims to help accelerate breakthroughs in the prevention and treatment of diseases such as cancer, Alzheimer's, diabetes, and heart disease. Discover how all of us can play a role in the future of health.



Explorations
Stations



Destinations
for Exploration



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1.



FRIDAY, APRIL 5, 2019



"ALDO LEOPOLD: LIFE, LAND LEGACY" AND "LIBRARY OF STAINS" | MEMORIAL LIBRARY ROOM 976 | 5:00 - 8:00 PM

Department of Special Connections, General Library System

Two exhibits in the Department of Special Collections, 976 Memorial Library: "Aldo Leopold: Life, Land, Legacy" (<https://www.library.wisc.edu/news/2019/01/17/aldo-leopold-life-land-legacy/>) and "The Library of Stains" (<http://researchdata.wisc.edu/news/the-library-of-stains-using-multispectral-imagining-on-medieval-manuscripts/>)



DAYS OF ORE: SOLVING THE MYSTERY OF WISCONSIN'S FORGOTTEN MINING CULTURE | AUDITORIUM, WISCONSIN HISTORICAL SOCIETY LIBRARY | 7:30 PM

Wisconsin Historical Society

For the past 20 years, Wisconsin Historical Society archaeologist Tamara Thomsen has worked with landowners and a group of avid, certified cave divers to explore, survey and catalog inundated lead, zinc and iron mines of Wisconsin. From the submerged passages of the state's mining industries, she will share stories, videos, photogrammetry of artifacts, archaeological surveys, and scientific research of the biofilms that now make these forgotten places their home.



ROBINSON MAP LIBRARY | 310 SCIENCE HALL | 5:00 - 7:30 PM

Department of Geography

In addition to exploring beautiful and historic Science Hall, visitors can interact with a map display in the Robinson Map Library. Staff will be on hand to answer questions and talk about the cartographic research collection - which contains over 500,000 items.



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SATURDAY, APRIL 6, 2019



WHAT SHOULD YOU DO WITH YOUR OLD ELECTRONICS? E-CYCLE THEM!

Wisconsin Department of Natural Resources

E-Cycle Wisconsin is a statewide, manufacturer-funded program that recycles certain electronics used in homes and schools. Come and learn what e-waste is, what you can do with it, and how electronics recycling saves valuable resources!



MARMOSETS IN OUR MIDST | WISCONSIN NATIONAL PRIMATE RESEARCH CENTER | 12:00 - 4:00 PM

Primate Center

Join us at the Wisconsin National Primate Research Center to learn about life-saving research and humane animal care. Our family of common marmosets in the lobby inspires curiosity among all ages. We will also have a variety of hands-on activities for visitors to enjoy as they learn about Primate Center research and animal care.



REPTILES AND AMPHIBIANS!

Wisconsin Area Herpetological Society

Reptile and Amphibian Displays and Educational Handouts



TITANIUM DIOXIDE IN CONSUMER PRODUCTS

Hick's Lab (CEE)

Titanium dioxide is an ingredient found in consumer products. It is also often at the nanoscale. Come learn about the role of titanium dioxide in your life, and about nanotechnology.



THE DYNAMIC SPEECH MACHINE

Department of Communication Sciences & Disorders

Children will be lead through 3 main components of speech: 1) the brain, 2) the respiratory system, 3) and the larynx, commonly known as the "voice box". Participants will leave with fun replications of the speech machine!

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



EXPLORE THE HUMAN BODY
Doctor's Ought to Care (DOC)

This exhibit is lead by the Medical Student Organization known as Doctors Ought to Care (DOC). This is an opportunity to explore the human body through hands-on examination of real human organs. Bring your curiosity and questions!



SAY WHAT? TAKE A JOURNEY THROUGH THE HUMAN AUDITORY SYSTEM

Audiology Program/Department of Communication Sciences and Disorders

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



WISCONSIN STATE HERBARIUM | BIRGE HALL 1ST FLOOR | 10:00 AM - 2:00 PM

Department of Botany

The facilities feature more than 1,000 species and aquatic, desert and tropical communities. Botany and other UW departments make extensive use of this working facility, permitting faculty and students to undertake a variety of research projects in plant geography, physiology, anatomy, ecology, taxonomy and other related areas. 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.



THE SCIENCE OF GUMMY BEARS
UW-Madison Food Science Club

We will be microwaving gummy bears, showing the process of how gummy bears are made, and handing out pre-packaged gummy bears.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



EXPLORING OUR BRAIN
Neuroscience Training Program

Hold a human brain! Get hands on and learn about our brain and nervous system from members of the UW-Madison Neuroscience Training Program.



SEEDS FOR POLLINATORS: FROM COLLECTING TO PLANTING
UW Madison Arboretum

At the Arboretum's seed station, participants will learn about the process of collecting, cleaning, and planting seeds. Participants will also look at seeds through a microscope and make seed balls to take home.



FRIENDSHIP, EMOTIONS, AND SOCIAL LEARNING
Department of Psychology

Children will work on making their own books that demonstrate ways to include others they do not already know. Children will also watch videos of people to see how you can learn about groups by watching their behaviors, facial expressions, and listening to them. This station is focused on how children make sense of the social world and different strategies for navigating this world with kindness.



BOTANY GARDENS AND GREENHOUSES | BIRGE HALL | 10:00 AM - 2:00 PM
Department of Botany

This 8,000 square foot growth space and 1.3 acre of land houses the Department of Botany's extensive collection of more than 1,500 unique species of plants and 210 plant families. Come and visit each of the 8 greenhouse rooms that take you through a journey of the tropics, desert, bog, and fern forest. This collection of aquatics, succulents, bryophytes, ferns, orchids, herbs, and woody plants are used for teaching general botany, systematics, taxonomy, plant ecology, and plant anatomy to name a few. These houses also provide a space for the students and faculty of the Department of Botany to carry out research on a diverse array of species with extensive morphological variation. The Botany Greenhouses and Garden become an integral part of the student's experience here on campus, as well as provide public tours throughout the year.

Weather permitting, the Botany Garden is just a small walk down the hill (also reachable by University and Mills) where our collection continues and showcases over 100 different plant families.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



HOW IS GLASSWARE USED FOR CHEMICAL AND SCIENTIFIC RESEARCH?

UW Madison Chemistry Department

Glass instruments are used in all types of scientific research. Many of these glass objects can be purchased from a catalog. If not, it must be made by hand. Scientific glassblowers are the ones who make these customized glass pieces for research. Watch and see how they manipulate the glass tubing and rods in fire to create their work.



BONE DETECTIVES

Biocore Outreach Ambassadors

Our bones are very important structures in our body! This activity allows children to observe different bone structures of animals and talk about functionality and adaptations. The bones vary, but will show analogous structures.



CRANBERRIES: MADE IN WISCONSIN

USDA-Agricultural Research Service

A bog is a foreboding place for many species—cold, acidic, with little oxygen in the soil. However, the cranberry thrives there. How can we preserve and improve this jewel of the bog for future generations? We are using genomic science to answer these questions and more. Have you ever seen DNA? At our station you can extract the DNA from cranberries and even take it home with you! Also, come take our taste test to see if real cranberry juice tastes how you think it does!



WHAT ARE THE INSTRUCTIONS FOR LIFE?

American Society for Biochemistry & Molecular Biology, UW-Madison
Department of Biochemistry

We will be performing a wheat germ DNA extraction. It's a quick, simple, and interactive activity that helps get kids curious about how life works.



SCIENCE ACTIVITIES WITH KSEA-WI

Korean-American Scientists and Engineers Association

KSEA-WI will demonstrate few science activities including ozobots, awareness of sugar, pH measurements, SAFE magnetic rifle, etc. Stop by at our booth and have fun!

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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BOTTLE BIOLOGY: DISCOVERY CUP NECKLACE

TriBeta Biological Honor Society

We will be constructing miniature gardens in Discovery Cup Necklaces using Mother of Thousands (MOTs) plants. Participants will get to take home a small plant to watch grow!



A BEE OR NOT A BEE? POLLINATORS' IMPACT AND CONSERVATION

USDA - ARS (Agricultural Research Society)

You will learn about pollinators and their impact on plant reproduction. Can you tell how to identify a bee and distinguish it from a wasp? Do you know the role of pollinators in agriculture? What food require pollinators and which ones do not? Come and visit our station to learn more about why pollinators are in decline and what you can do to help preserve them.



WHERE THE WILD THINGS GROW

USDA - ARS and Department of 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! For centuries people around the world have used genetics to develop crops from wild plants, often making dramatic changes to taste, texture and appearance in the process. Find out where the wild ancestors of our fruits and vegetables are found, and discover how their domesticated descendants traveled throughout the globe to enrich our lives. Explore with us the fascinating origin of the food you eat and how scientific advancements ensure a never-ending supply of healthy fruits and vegetables for your dinner table.



SCIENCE TOURS OF ALUMNI PARK | SCIENCE THEMED TOURS OF ALUMNI PARK

Wisconsin Alumni Association

Join us for science-themed guided tours and a self-guided family-friendly scavenger hunt at Alumni Park. Hear stories of UW-Madison science alumni, discoveries, and innovations featured in the park's exhibits. 30 min tours will start at 1:00 p.m. and 1:30 p.m. in the Alumni Park Welcome Plaza (near the fountain) at 724 Langdon Street.

Stop in at One Alumni Place, the alumni welcome center adjacent to the park, between 11 a.m. – 3:00 p.m. for light refreshments and to pick up science themed self-guided scavenger hunt with a prize for participants.



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SATURDAY, APRIL 6, 2019



UW MADISON GEOLOGY MUSEUM | WEEKS HALL | 9:00 AM - 4:00 PM
UW Geology Museum

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.



EXPLORING RADIOLOGY!
Department of Radiology

Visitors will use ultrasound to identify objects buried beneath the surface and identify common problems that we see at the hospital!



SURFACE CIRCUS
UW-Madison Chemistry

Hands-on demonstrations showcasing the awesome power of surfaces and surfactants and how they affect the environment around us.



D.C. SMITH GREENHOUSE | 10:00 AM - 2:00 PM
College of Agriculture and Life Sciences

Explore the world of plants and the DC Smith Greenhouse and Conservatory. Hands-on activities and demonstrations of plant science.



WHAT CAN WE FIND IN THE SOIL?
Department of Soil Science

Come join us as we dive into the vast and fascinating world of soils! We will have several activities where you can experience the diversity of microfauna and the ways of life in the world beneath our feet. You will have the chance to prepare your own slide to look at bacteria, fungi, and nematodes underneath a microscope, 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.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



YOU BELONG AT UW-MADISON. WE'LL HELP YOU GET THERE
The Office of Student Financial Aid

The Office of Student Financial Aid is excited to share about how our access programs and savings, helped by compound interest, can get you closer to obtaining a college degree! Pro tip: There's a spinning wheel and basketball involved. You won't want to miss it!



MY BRAIN AND ME: MAKING SENSE OF IT ALL
Human Resources Administration - The Ladder Program

The My Brain & Me series was developed by Dr. Geddes as STEM community education workshop that alternates fun hands-on learning activities involving the 5 senses (i.e., prism goggles obstacle course, sight-taste-smell tests, echolocation games, etc.) that highlights the importance of Brain Health (Neuroscience Research) and promotes Traumatic Brain Injury (TBI) awareness in everyday activities for all.



MAKE YOUR OWN LAVA LAMP!
Biology Outreach Club

At our station visitors will be able to make their own lava lamp using common household items such as baking soda, vegetable oil, vinegar, and food coloring. It will be a fun opportunity to learn about liquid properties and chemical reactions.



WISCONSIN ENERGY INSTITUTE OPEN HOUSE AND EXPLORATION STATIONS | 1552 UNIVERSITY AVENUE | 12:00 - 3:00 PM
Wisconsin Energy Institute, Great Lakes Bioenergy Research Center

Explore the Wisconsin Energy Institute and learn about ground breaking renewable energy research taking place at UW-Madison. Visitors will meet researchers, design a wind turbine, conduct a fermentation experiment, and tour this state-of-the-art research facility.



WALK THIS WAY: PRIMATE LOCOMOTION
Department of Anthrology - Bioanthrology Graduate Students

Explore the different ways that primates get around their environments and compare it to what humans do.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



EXPLORE INSECTS

UW Entomology

Explore the diversity and beauty of the insect world with UW Entomology graduate students.



DIFFERENT WAYS OF SEEING

McPherson Eye Research Institute

Using goggles and masks that simulate visual impairment, work with children and adults to try tasks like writing and reading, noting the challenges that visually impaired individuals face. Find out how easy—or how hard—it is to do things when your vision is impaired.



BE WISE, SHADE YOUR EYES

McPherson Eye Research Institute

This exploration station educates visitors about damaging ultraviolet light, which is beyond the visible light spectrum, and promotes use of sunglasses 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.



HOW DO WE PERCIEVE COLOR?

McPherson Eye Research Institute

Color vision depends on both our eyes and our brain. Our eyes detect colors and our brain interprets them. Learn about the different kinds of color blindness and experience color illusions.



WHAT'S IN YOUR WATER? FIND OUT

Wisconsin Geological Society

Find out about drinking water quality in your county or city. We will guide you in online access to water quality data for the City of Madison and for rural Wisconsin counties. Experiment with how your well taps groundwater using the shoe box model.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



THE WONDERS OF STEM CELLS

Student Society for Stem Cell Research and Wisconsin Stem Cell Roundtable

At this station visitors will learn what stem cells are, what they can be used for, and how they are grown in labs. There will be a mock cell passaging activity for visitors to get a better idea of what working with stem cells is really like!



LEAFCUTTER ANT DISPLAY COLONY | MICROBIAL SCIENCES, 1550 LINDEN DRIVE | 10:00 AM - 3:00 PM

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.



EXPLORING YOUR BRAIN AND EMOTIONS

UW Child Emotion Lab at the Waisman Center

The Child Emotion Lab's primary goal is to unite cutting edge science with research aimed at improving children's wellbeing. Our research focuses on the influences of social risk factors on children's brain and behavioral development, with particular focus on emotions, learning, and children's health. Join our station to learn more about your brain! Learn about the different parts of the brain and create your own 3D brain model.



TMI: THINK, MAKE, INVESTIGATE WITH UW-MADISON CAMPUS LIBRARIES

Steenbock/SEL UW-Madison Libraries

As partners in discovery, research and innovation, librarians connect their library users with necessary resources. Our station presents an opportunity to speak with expedition attendees about how they can use our campus libraries--including those with STEM collections--to advance their knowledge and work.

In addition to distributing information, posters, bookmarks and reading lists, the activity at our station will include an interactive, hands-on display of equipment and kits used by active and aspiring educators for sparking creative-thinking, prototyping, and skill-building.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



TAKE THE HYPOTHERMIA CHALLENGE!

UW Sea Grant Institute

Come and take the hypothermia challenge! Test your ability to withstand bone chilling temperatures and learn about how the body reacts.



WISCONSIN INSECT RESEARCH COLLECTION OPEN HOUSE | 147 RUSSELL LABORATORIES | 10:00 AM - 2:00 PM

Wisconsin Insect Research Collection, Department of Entomology

Join WIRC staff and the Entomology Department's Insect Diagnostician in exploring some of the incredible diversity of the world's largest group of animals—the insects! A large variety of curated specimens from the Wisconsin Insect Research Collection will be displayed in a family-friendly, casual setting. We will be on hand to answer all of your insect-related questions.



LIGHTS, CAMERA, BACTERIA!

Medical Microbiology and Immunology

Did you know that bacteria can act as flashlights? Come learn about the beneficial interaction between the Hawaiian bobtail squid and the luminescent bacteria *Vibrio fischeri*. We will have a viewing station with juvenile squid and an example of agar art using luminescent bacteria. Like what you see? Make some agar art of your own and see it glow!



EXTREME SOUTH POLE SCIENCE

Wisconsin IceCube Particle Astrophysics Center (WIPAC)

Come experience the world of the neutrino! Learn about IceCube, the biggest and strangest neutrino detector in the world. It's located at the South Pole and is searching for these ghost particles. We will have many hands-on activities as well as an LED model of IceCube.



LET'S LEARN FROM ZEBRAFISH

Informal Science Education Course

This exhibit will draw from the idea of using model organisms to understand human development. We will have zebra fish specimens to observe, case studies of zebrafish research, and coloring and flip-book activities.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



THE HELMET SMASHER
Informal Science Education Course

Come learn about your brain, concussions, and how to protect the most fragile organ in your body! Can you design the best helmet to protect your thinker from the Helmet Smasher?



BADGER INVITATIONAL DAIRY CATTLE SALE | 1815 LINDEN DRIVE | 11:00 AM - 2:00 PM; TOURS AT 10:00 AM, 11:00 AM, 12:00 PM, 1:00 PM
Dairy Cattle Center

Tour the Dairy Cattle Center and explore the key roles our 80 cows on campus continue to play in research on nutrition, physiology and reproduction.



L. R. INGERSOLL PHYSICS MUSEUM | 1150 UNIVERSITY AVE., CHAMBERLIN HALL, ROOM 2130 | 9:00 AM - 4:00 PM
Physics Department

The Ingersoll Physics Museum is free to public and runs on donations. 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 1500sf museum consists of over 65 exhibits with some rotating in and out each year. In conjunction to our museum, you can find photos of the Nobel Prize Winners in Physics from 1901-1993, as well as many historical instruments on display along the corridors of Chamberlin Hall.



CHASING THE GHOST PARTICLE AND PLANETARIUM SHOW | STERLING HALL PLANETARIUM, 475 CHARTER ST. | 11:00 AM - 3:00 PM (ONE SHOW EVERY HOUR)
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.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



HOW DO WE SEE GENES?

Department of Genetics

We will have an activity that shows how genes interact with life all around us.



SCIENCE IS FUN

Wisconsin Initiative for Science Literacy

Join the Science is Fun group in a series of experiments and conversation that highlight the wonders of science in the Lab of Shakhshiri!



"ALDO LEOPOLD: LIFE, LAND LEGACY" AND "LIBRARY OF STAINS" | MEMORIAL LIBRARY ROOM 976 | 10:00 AM - 2:00 PM

Department of Special Connections, General Library System

Two exhibits in the Department of Special Collections, 976 Memorial Library:

"Aldo Leopold: Life, Land, Legacy"

(<https://www.library.wisc.edu/news/2019/01/17/aldo-leopold-life-land-legacy/>)

"The Library of Stains"

(<http://researchdata.wisc.edu/news/the-library-of-stains-using-multispectral-imaging-on-medieval-manuscripts/>)



WHAT DO ANIMALS THINK?

Developmental Psychobiology Lab

How do other animals solve problems, learn and remember new things, navigate in their worlds, and communicate? Explore how comparative psychologists learn about behavior, cognition, and brain development in humans and other animals with hands-on games, videos, and puzzles.



WISCONSIN PRE-MEDICAL SOCIETY

Wisconsin Pre-Medical Society

We will be teaching kids about medicine or the human body utilizing interactive crafts or activities!

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SATURDAY, APRIL 6, 2019



HOW DOES EXERCISE AFFECT THE HUMAN BODY?

Informal Science Education Course

With spring around the corner, many of us will be running around and playing outside. What do you think happens to your brain and body when you exercise? Come to our exhibit to run around, test your memory, and see how exercise impacts the human body!



RUTH DAVIS DESIGN GALLERY | NANCY NICHOLAS HALL, 1300 LINDEN DRIVE | 12:00 - 4:00 PM

Center for Design and Material Culture

This exhibition is one of two celebrating the golden anniversary of the Helen Louise Allen Textile Collection. "Applique to Zardozi", in conjunction with "One of a Kind Ahead of Her Time" in the new Mecklenburg Textile Gallery, showcases the breadth and depth textile-making techniques found in our nationally-renown collection.



MECKLENBURG TEXTILE GALLERY | NANCY NICHOLAS HALL, 1300 LINDEN DRIVE | 12:00 - 4:00 PM

Center for Design and Material Culture

Guest curated by Lynn K. Mecklenburg, the inaugural exhibition of the textile gallery showcases collection pieces representing the travels of Professor Helen Louise Allen (1902 - 1968).



THE WONDERS OF PLASMA | CHAMBERLIN HALL LOBBY | 9:00 AM - 4:00 PM

UW Physics Department

A series of interactive plasma-related demonstrations, emphasizing the ability of plasma to emit fascinating and beautiful colored light.



EXPLORE THE HUMAN BODY

Doctors Ought to Care (DOC)

Hands-on experiments and demonstrations to see the surprising ways we use light in our lives. Also learn how engineers and scientists are exploring new ways in which the colorful world of light can impact our health, happiness and safety while saving energy and protecting the environment.

Saturday Exploration Stations are at The Discovery Building 10:00 AM - 2:00 PM



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SUNDAY, APRIL 7, 2019



HOW CAN PRECISION MEDICINE IMPROVE CANCER TREATMENTS? | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

UW Carbone Cancer Center

Play doctor for a day and help treat our “patients” in an interactive game that explores what precision medicine is and how doctors use it to beat cancer.



WHY STUDY FRUIT FLIES? | RENNEBOHM HALL | 12:00 - 3:00 PM

Pharmaceutical Sciences Division, School of Pharmacy

Our exploration station introduces the public to the principles of genetic model organism research and basic genetics using hands-on activities with the fruit fly, *Drosophila melanogaster*. Students are introduced to the many genetic tools in the fruit fly as they build their own paper fly that they can take home with them. The students customize their fly by choosing specific traits that can be modified in a real organism, such as eye color, wing shape, and bristle type. Students also learn about the difference between genotype, or the genetic sequence, and phenotype, or the externally visible trait. They can then observe real, living fruit flies under a microscope, allowing them to see what their paper fly would look like as an actual organism. Altogether, this exploration station introduces both students and adults to the power and importance of genetic model organism research.



CLINICAL SIMULATION PROGRAM TOUR | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

UW Health Clinical Simulation Program

Hands-on tour of our center, including laparoscopic surgery trainers, the operating room and more! Tours are from 12:00-12:40, 12:40-1:20, 1:20-2:00.



EXPLORE THE HUMAN BODY | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

Doctors Ought to Care (DOC)

Hands-on experiments and demonstrations to see the surprising ways we use light in our lives. Also learn how engineers and scientists are exploring new ways in which the colorful world of light can impact our health, happiness and safety while saving energy and protecting the environment.



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SUNDAY, APRIL 7, 2019



**MEDICAL PHYSICS | HEALTH SCIENCES LEARNING CENTER |
12:00 - 4:00 PM**

Department of Medical Physics

What is Medical Physics? Medical Physicists work to improve medical imaging, invent therapy devices, and ensure radiation is used safely! We have a Geiger-Muller counter to help us detect radiation and a portable ultrasound machine for an imaging scavenger hunt!



**ARBORETUM OUTDOOR WALKS | UW MADISON ARBORETUM |
12:30 - 4:00 PM**

UW Madison Arboretum

The Arboretum Visitors Center is open from 12:30-4:00 pm. Enjoy the exhibits and art Gallery and participate in the Family Scavenger Hunt. Join us for one of two walks:

1- 2:30 p.m. Transitions. Early spring can have variable weather, influencing plant awakenings and animal behavior. Walk with the naturalist to areas where changes are most evident.

1:30-2:30 p.m. Garden Stroll. Our naturalist will share Arboretum stories and science on this slower-paced, shorter distance walk in our gardens. This stroll is perfect as a multi-generational learning adventure.



**COLOR ME CARNATION | HEALTH SCIENCES LEARNING CENTER |
12:00 - 4:00 PM**

Molecular and Environmental Toxicology

Color me Carnation is a hands on activity to learn about dose response. We are from the Toxicology program and our exhibit will involve each participant getting a carnation and adding their desired amount of food dye ("poison") to water. As the time goes on, the flower will absorb the color based on the amount (dose) of food dye will make the carnation light or dark color.



**STICKY BLOOD VESSELS | HEALTH SCIENCES LEARNING CENTER
| 12:00 - 4:00 PM**

UW SMPH HR Equity and Inclusion

Create your own blood vessel and learn how sticky cholesterol can alter blood flow.



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SUNDAY, APRIL 7, 2019



GAME-BASED LEARNING AND MEDICATION SAFETY | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

School of Pharmacy

Our exhibition focuses on helping people learn about safe and appropriate management of medication using game-based learning techniques.



EXPLORATION STATIONS AT PICNIC POINT | PICNIC POINT | 2:00 - 3:30 PM

Friends of the Lakeshore Nature Preserve

At the entrance to Picnic Point, near the stone wall, friendly guides will give each person a booklet that contains a map of Picnic Point, with our five exploration stations indicated on it. The guides will direct visitors to the exploration stations sited along the path to the tip of Picnic Point. The booklet also contains activities and challenges related to those four stations.

At the Rock Wall, Emeritus Geology Professor Dave Mickelson and Science Olympiad coach Scot Moss will introduce visitors to the origins and kinds of rocks in the stone wall. On the hillside inside the stone wall, a Birding Station will be hosted by gifted naturalists Galen Hasler and Paul Noeldner. They will provide strategies for identifying birds, and binoculars and a spotting scope for guests to look into the spring sky and across the lake. At the Tree Station, forester Nate Chotlos and his brother, UW student Matt Chotlos, will help visitors identify leafless trees and calculate tree age. Along the path to Fire Circle #1, Preserve Volunteer Coordinator Bryn Sriver will show visitors different kinds of seeds and how to make seed balls. At Fire Circle #1, archeologist Amy Rosebrough will talk about the effigy mounds and the native people who created the earthen mounds on Picnic Point and nearby areas. At each station, children can engage in related activities.



MY COMMUNITY, MY HEALTH | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

School of Pharmacy

An interactive station about social science research focused on minority population, diabetes, health literacy and health equity.



IMMUNOTHERAPY OF CHILDHOOD CANCER | 4118 WISCONSIN INSTITUTE FOR MEDICAL RESEARCH | 1:00 - 4:00 PM

Pediatrics

See how we isolate immune cells from blood and engineer them to fight childhood cancer.



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SUNDAY, APRIL 7, 2019



**MAPPING ANTIBIOTIC RESISTANCE IN WISCONSIN |
RENNEBOHM HALL | 12:00 - 3:00 PM**
School of Pharmacy

Explore an interactive map of antibiotic resistance in Wisconsin. Create friendly microbes. Learn about antibiotics and what drives antibiotic resistance.



COMPOUNDING MEDICATIONS | RENNEBOHM HALL | 12:00 - 3:00 PM
School of Pharmacy

Learn how to make capsules and gummie medications. Observe Sterile Product Preparation.



WSPS HEALTH STATION | RENNEBOHM HALL | 12:00 - 3:00 PM
School of Pharmacy

WSPS has multiple care projects (Heart, Diabetes, Immunizations, Self-Care, Airways, MedDrop, and GenRx) that focus on educating children about their health through the use of hands on interactive games.



SUGAR CUBES | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM
PALMA

An activity with sugar cubes, in which students and families will be able to guess how many sugar cubes there are in a common drink, fruit, or vegetable. There will be printed pictures revealing the correct answer, and last year we had toothbrushes, floss, and toothpaste as give aways.



INFECTION PREVENTION | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM
UW-Madison Department of Medicine/Infectious Disease and The Association for Professionals in Infection Control

Learn about hand hygiene and environmental contamination.



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SUNDAY, APRIL 7, 2019



EXERCISE AND THE BRAIN | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

Wisconsin Alzheimer's Disease Research Center

Come get moving and learn why exercise is one of the brain's best friends! Have fun showing off your memory and thinking skills while you blast through activities that'll get your heart pumping. Then, find out what scientists at UW-Madison are doing to discover how the brain changes as people grow up.



THE HEALING SCIENCE OF ORIGAMI | SIGNE SKOTT COOPER HALL | 12:00 - 3:00 PM

School of Nursing

Origami is an ancient Japanese art form that can also have therapeutic applications. For example, it can be used to help patients regain range of motion in fingers and wrists after injury or surgery. Origami has also been used to promote mindfulness and reduce stress. Visitors will learn origami basics and can take home a small project.



YOUR BODY INSIDE AND OUT | SIGNE SKOTT COOPER HALL | 12:00 - 3:00 PM

School of Nursing Faculty

Physical assessment is a cornerstone of nursing practice. Nurses know how things should look and sound when you're healthy and when you're not. Have you ever wondered what they are listening to and looking for? Get a look inside your abdomen to see which organs are where and why they might not sound like they should.



PROTECT YOUR BRAIN - IT'S THE ONLY ONE YOU'LL EVER HAVE | SIGNE SKOTT COOPER HALL | 12:00 - 3:00 PM

School of Nursing faculty - collaboration with AFCH onsite sale of bicycle helmets

Our station will focus on concussion education and encouraging kids of all ages to wear helmets. Dr. Snedden's research focuses on concussion in athletes and non-athletes and the many different mechanisms that can lead to concussion, as well as the effects associated with recovery from concussion.



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SUNDAY, APRIL 7, 2019



MINDFUL MOVEMENT | SIGNE SKOTT COOPER HALL | 12:00 - 3:00 PM

School of Nursing DNP Program

Using light physical activity in the form of yoga and deep breathing to promote regulating emotions and coping with big feelings.



YOU GOTTA MOVE TO GROOVE | SIGNE SKOTT COOPER HALL | 12:00 - 3:00 PM

School of Nursing Faculty

Sedentary behavior or limited physical activity causes loss of muscle mass and strength. This station simulates how much additional effort is needed to do basic activities such as walking, when muscle strength is lost. This simulation aligns with my program of research that targets increasing patient ambulation during a hospital stay to maintain or improve physical performance and muscle strength.



OOPS! DID I DO THAT? UNDERSTANDING HUMAN FACTORS TO DESIGN SAFE HEALTH CARE | SIGNE SKOTT COOPER HALL | 12:00 - 3:00 PM

School of Nursing Faculty

This station relates to Dr. Steege's research program aimed at improving using human factors engineering theories, methods, and tools to improve healthcare quality.



CRYSTALS GROWING LIKE FLOWERS BLOOMING | RENNEBOHM HALL | 12:00 - 3:00 PM

School of Pharmacy

Do you notice how pretty flowers bloom in the summer? Crystals do the same but even in the cold winter at Wisconsin! Come check us out! You will see how crystals grow from a clear solution.



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SUNDAY, APRIL 7, 2019



**PLANTS ARE AMAZING! | ROOM 1306 HEALTH SCIENCES
LEARNING CENTER | 12:00 - 4:00 PM**

UW Department of Horticulture

Never take plants for granted again! In this demonstration we'll explore how our planet is populated by fascinating biological machines that we constantly underestimate.



**USING HEALTH TOOLS: ALL OF US RESEARCH PROGRAM |
HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM**

All of Us Research Program, ICTR

We will show children how to use a stadiometer, blood pressure cuff and scale. Kids will get to measure themselves and family members - just like a medical professional!



**PREVENTION! EXPLORING PUBLIC HEALTH | HEALTH SCIENCES
LEARNING CENTER | 12:00 - 4:00 PM**

UWSMPH Preventive Medicine Residency

We will explore different aspects of public health and prevention, including infection prevention, nutrition and injury prevention.



**MOVE LIKE BUCKY WITH BADGER ATHLETIC PERFORMANCE |
HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM**

Badger Athletic Performance, Department of Orthopaedics and Rehabilitation

Can you jump higher than Bucky Badger? Come find out with Badger Athletic Performance! Hands on opportunities will be provided for interested participants to trial different equipment commonly used in biomechanics, such as force plates. Using this equipment we will analyze common movements such as jumping, squatting, and balance.



**ELECTRIC EARS & HOW WE HEAR | HEALTH SCIENCES LEARNING
CENTER | 12:00 - 4:00 PM**

Binaural Hearing & Speech Lab

Learn how science and hearing go together, then listen to demos of hearing loss and electric hearing. This hands-on exhibit will demonstrate how the sense of hearing works; from the development of cells that form the inner ear to the electrical impulses that the brain "hears."



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SUNDAY, APRIL 7, 2019



UW HEALTH ULTRASOUND | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

UW Health School of Diagnostic Medical Sonography

A demonstration of diagnostic medical ultrasound of a “phantom baby” will be available. We will reveal how sound waves are transmitted and reflected in the body to create an image which aids healthcare providers in treatment of the patient.



DIGITAL DNA | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

Biostatistics and Medical Informatics

We explore the amount of data stored in DNA and compare it to our current digital method of using hard disk drives and computers. We will discuss data storage and analysis while trying to understand DNA’s resulting phenotypes or why we have different eye colors and other features. Lastly, we will make a take away network cable and test during live demonstrations of data transportation, over a network, between systems transporting actual DNA sequence data. The network cables will be used as example of the complexities of how computers interact and work for large scale problems.



CAN YOU BELIEVE YOUR EYES? | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

McPherson Eye Research Institute

The experience of visual illusions may occur when perception differs from reality, when the brain may be “tricked” into interpreting the data provided by the eye in ways that are not “true.” This exploration station examines physiological illusions and cognitive illusions to help visitors learn about visual perception and the brain.



EXPLORING OUR BRAIN | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

Neuroscience Training Program

Hold a human brain! Get hands on and learn about our brain and nervous system from members of the UW-Madison Neuroscience Training Program.



BOUNCY BALL EXPERIMENT | RENNEBOHM HALL | 12:00 - 3:00 PM

Pharmaceutical Sciences Division

From making plastic bottles to DVDs, polymers are part of our daily lives. Polymers are a chain of chemical subunits linked together. In this activity, you will explore the properties of polymers by playing with bouncy balls and even making your own! Join us as we dive into the world of chemistry and learn more about polymers.



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SUNDAY, APRIL 7, 2019



HOW IS GLASSWARE USED FOR CHEMICAL AND SCIENTIFIC RESEARCH? | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

UW-Madison Chemistry Department

Glass instruments are used in all types of scientific research. Many of these glass objects can be purchased from a catalog. If not, it must be made by hand. Scientific glassblowers are the ones who make these customized glass pieces for research. Watch and see how they manipulate the glass tubing and rods in fire to create their work.



MY BRAIN AND ME: MAKING SENSE OF IT ALL! | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

Human Resources Administration - The Ladder Program

The My Brain & Me series was developed by Dr. Geddes as STEM community education workshop that alternates fun hands-on learning activities involving the 5 senses (i.e., prism goggles obstacle course, sight-taste-smell tests, echolocation games, etc.) that highlights the importance of Brain Health (Neuroscience Research) and promotes Traumatic Brain Injury (TBI) awareness in everyday activities for all.



DIFFERENT WAYS OF SEEING | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

McPherson Eye Research Institute

Using goggles and masks that simulate visual impairment, work with children and adults to try tasks like writing and reading, noting the challenges that visually impaired individuals face. Find out how easy—or how hard—it is to do things when your vision is impaired.



EXPLORING YOUR BRAIN AND EMOTIONS | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

UW Child Emotion Lab at the Waisman Center

The Child Emotion Lab's primary goal is to unite cutting edge science with research aimed at improving children's wellbeing. Our research focuses on the influences of social risk factors on children's brain and behavioral development, with particular focus on emotions, learning, and children's health. Join our station to learn more about your brain! Learn about the different parts of the brain and create your own 3D brain model.



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SUNDAY, APRIL 7, 2019



MODEL ORGANISMS AND DNA | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM
SACNAS

We will host a booth where we have hands-on interaction with model organisms and then make DNA bracelets to teach kids about this important molecule that links us to other organisms and allows us to use them to study human disease.



EBLING LIBRARY-TOURS OF STAGGERING LOSSES: EXHIBIT ABOUT WW1 ON THE 3RD FLOOR | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

Ebling Library for the Health Sciences (within HSLC)

Micaela Sullivan-Fowler, the curator of Staggering Losses: WW1 & the Influenza Pandemic of 1918 will be at the Ebling Library table (which will have information about the exhibit), and periodically take people upstairs to show them the exhibit. There could be a clip board to "sign-up" for a "tour," in case she is not there to tell people about the tours. This is a health sciences centric exhibit, suitable for older (teen age) students and their parents.



DAIRY CATTLE CENTER TOURS | 1815 LINDEN DRIVE | TOURS AT 10:00 AM, 11:00 AM, 12:00 PM, 1:00 PM

Dairy Cattle Center

Tour the Dairy Cattle Center and explore the key roles our 80 cows on campus continue to play in research on nutrition, physiology and reproduction.



OREGON CHILD ABSENTEEISM DUE TO RESPIRATORY DISEASE STUDY (ORCHARDS) | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

School of Medicine and Public Health - Department of Family Medicine and Community Health

Onsite Influenza testing, virus puzzles, information about study.



A POWERFUL FORCE: COMPOUND INTEREST | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

Office of Student Financial Aid

The Office of Student Financial Aid is excited to share the powerful force of compound interest, how it differs from simple interest, and why you should care. Pro tip: there's candy and a spinning wheel involved, you won't want to miss it!



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SUNDAY, APRIL 7, 2019



MODELING WITH GOOGLE EARTH | HEALTH SCIENCES LEARNING CENTER | 12:00 - 4:00 PM

UW Madison STEM and 4W Programs

Internet-based mapping programs are used by scientists and researchers for more than driving directions. These programs can be used to examine trends, identify geological and biological resources, and to better human interaction with the physical world.

This interactive station will showcase a few of these commonly available (and often free,) applications. Visitors can explore them on computers at the station. Volunteers will be available to assist visitors in using these applications to explore your world.



RUTH DAVIS DESIGN GALLERY | NANCY NICHOLAS HALL, 1300 LINDEN DRIVE | 12:00 - 4:00 PM

Center for Design and Material Culture

This exhibition is one of two celebrating the golden anniversary of the Helen Louise Allen Textile Collection. "Applique to Zardozi", in conjunction with "One of a Kind Ahead of Her Time" in the new Mecklenburg Textile Gallery, showcases the breadth and depth textile-making techniques found in our nationally-renown collection.



MECKLENBURG TEXTILE GALLERY | NANCY NICHOLAS HALL, 1300 LINDEN DRIVE | 12:00 - 4:00 PM

Center for Design and Material Culture

Guest curated by Lynn K. Mecklenburg, the inaugural exhibition of the textile gallery showcases collection pieces representing the travels of Professor Helen Louise Allen (1902 - 1968).



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