VISIT TO LEARN at MSU

MSU Museum

Disciplines:

Arts, Humanities, Social Sciences, STEM

Types of activities:

Virtual tours, On-site tours, Simulations/Labs/Hands-on, Shows, Collections, Borrow materials

Audiences:

PreK,K-5,Middle,High,College,General Public

Venue description:

As the science and culture museum at Michigan State University and Michigan's land-grant university museum, the MSU Museum is committed to understanding, interpreting, and respecting natural and cultural diversity through education, exhibitions, research, and the building and stewardship of collections that focus on Michigan and its relationship to the Great Lakes and the world beyond. The MSU Museum is a public steward for nearly a million objects and specimens in Natural Science, Cultural, and Historical Collections from around the world. The collections provide the foundation for research, education, and outreach both locally and internationally. It is one of the earliest established museums in the nation and has continued to preserve collections and serve learners since its opening on the campus in 1857. It is accredited by the American Alliance of Museums and was the first museum in the state to receive Smithsonian affiliate status.

Venue offerings:

- In-person museum visits (when open): We welcome the MSU community, PreK-12 schools, and the general public to experience three floors of science and culture exhibits and hands-on activities, including the area's only full-sized articulated dinosaur skeleton casts. https://www.museum.msu.edu/field-trips-group-visits/
- Virtual tours and activities: Explore the MSU Museum from home, school, or anywhere
 with virtual museum tours, fun activities, and teaching/learning resources.
 https://www.museum.msu.edu/virtualresources/
- Classroom teaching materials: Make your teaching more engaging with culture- and science-focused teaching resource boxes. Boxes may be borrowed by MSU instructors and K-12 classroom teachers and include lessons plans and other materials. https://www.museum.msu.edu/classroom-kits/

 Science On a Sphere exhibit and shows: Get immersed in spectacular animations of geophysical, environmental, and cultural information with the amazing Science On a Sphere. Free gallery experiences (when open) and online shows (paid and free) available for general and PreK-12 school audiences. https://www.museum.msu.edu/?exhibition=sos

 Collection databases: Explore the richness of the MSU Museum collections through online databases. Find great resources for teaching, student exploration, and individual interests.

https://www.museum.msu.edu/explore-collections/

Teaching consultation: MSU Museum educators are ready to help you integrate
museum experiences and resources into your PreK-12 or university-level teaching.
Contact the Education Team to schedule your consultation.
https://www.museum.msu.edu/contact-education-team/

Contact info:

409 W Circle Dr Michigan State University East Lansing MI48824

Museum Education Team museumed@msu.edu https://www.museum.msu.edu/learning/

Abrams Planetarium

Disciplines:

STEM

Types of activities:

Virtual tours, Shows, Other (Planetarium shows—both live and pre-recorded and fully customizable—Portable Planetarium, Outreach Activities to schools and events

Audiences:

PreK,K-5,Middle,High,College,General Public

Venue description:

Abrams Planetarium is primarily an astronomy education venue. Our building has a lobby with exhibits about astronomy and a 141-seat theater with the Digistar 5 planetarium system. Our space can be used as an immersive theater and can support content in almost any subject. Programs offered include pre-recorded and fully live shows that can be customized for school groups. We also have other events and activities for people of all ages!

Venue offerings:

- Planetarium Shows for the General
 Publichttps://www.abramsplanetarium.org/Programs/Public.html
- Planetarium Shows for Groupshttps://www.abramsplanetarium.org/Programs/School.html
- Sensory Friendly Shows https://www.abramsplanetarium.org/Programs/Sensory.html
- Spartan Young Astronomers Club https://www.abramsplanetarium.org/SYAC/index.html
- Sky Calendar Subscription https://www.abramsplanetarium.org/SkyCalendar/index.html
- Portable Planetarium

Contact info:

755 Science Rd East Lansing MI48864

Shannon Schmoll abrams@msu.eud www.abramsplanetarium.org

MSU Bug House

Disciplines:

STEM

Types of activities:

Virtual tours, On-site tours, Simulations/Labs/Hands-on, Shows, Collections

PreK,K-5,Middle,High,College,General Public

Venue description:

The Bug House consists of two small rooms, one with displays of insects and arthropods from around the world on the walls, as well as space for giving presentations to school classes, and a second room that holds cages of our live insects and arthropods for viewing, touching and handling. We can accommodate school classes and other groups of up to 30 people by appointment. We also offer scheduled open house events for the general public which can accommodate approximately 50 people at a time.

Venue offerings:

- Hour-long in person preK-12 class tours/visits to the Bug House, with a 10-20 minute age-appropriate lecture/presentation by our Bug House guides on the biology of insects followed by viewing of our many displays of insects and the opportunity to see, touch and hold some of our live insects and arthropods. By appointment only and a fee is charged.
- Scheduled free open house events for the general public. Visitors can view our many displays of insects as well as see, touch and hold our live insects/arthropods with questions answered by our Bug House guides. For all age groups.
- Online virtual tours of the Bug House, which highlight some of our insect displays and live insects and arthropods. Approximately 7-10 minutes, appropriate for all ages.

Contact info:

288 Farm Lane, R, 147
Natural Science Building
Michigan State University
East Lansing
Michigan48824

Gary Parsons or Amanda Lorenz parsonsg@msu.edu or lorenzam@msu.edu https://www.canr.msu.edu/bughouse/

MSU Tollgate Farm and Education Center

Disciplines:

STEM,Other

Activities offered:

Virtual tours, Professional development

PreK,K-5,Middle,High,General Public

Venue description:

MSU Tollgate provides non-formal learning for children and adults, offering the unique opportunity to explore agriculture, natural resources, gardening, and community food systems in an urban environment. Tollgate utilizes research-based methods and curriculum to connect participants to classroom learning concepts through hands-on experiential place-based learning. Tollgate offers school and community programs as well as professional development for formal and non formal educators. Currently, the farm is closed to the public as we plan virtual remote learning series for school and community for the first half of 2021.

Venue offerings:

- MSU Tollgate Farm Virtual Interactive Vet Science Series: Come explore virtually the
 Tollgate barns and pastures as you investigate veterinary science and animal medicine.
 Get to know an array of animals as you learn about how we care for our animals.
 Explore the five freedoms, engage in daily STEM challenges, and learn about veterinary
 tools & technology. Daily interactive real time sessions with MSU Extension Animal
 Science educators, Tollgate Farm staff, and visiting vets.
 https://events.anr.msu.edu/TollgateGroupVirtualFarmSeries/
- MSU Tollgate Farm Virtual Interactive Plants and Their Partners Series: Pollination and Pollinators: How do plants depend on their parts and on other living things to help them survive? Explore plant structure and function and what plants need to grow. Virtually visit the garden, greenhouse, orchard, as students investigate how plants depend on animals and insects for pollination and seed dispersal as we look at the interdependence of living things on the farm. Students will question, hypothesize, experiment, analyze data, conclude and question again as they experience hands-on lab activities. https://events.anr.msu.edu/TollgateGroupVirtualFarmSeries/
- MSU Tollgate Farm Virtual Interactive The Science and History of Maple Sugaring
 Series: Join us for a maple sugaring adventure today to solve a mystery. Identify and tap
 maple trees in the sugarbush. We'll visit the sugar shack to observe a modern day maple
 sugaring operation and explore the processing of the tasty treat. We'll also take a
 journey through time as we investigate the regional history of making this sweet treat
 through its people and its tools.
 https://events.anr.msu.edu/TollgateGroupVirtualFarmSeries/
- MSU Tollgate Farm Virtual Interactive The Journey of Water Series: What is the water cycle? How can we follow the path of water and better understand the mechanisms for water to travel around the earth? Students will explore the water cycle and discover the

path water takes as it moves through ecosystems. They will apply this knowledge as they investigate with farm staff the journey of water on the farm, and carry out a series of tests on the farm involving soil infiltration and water quality. https://events.anr.msu.edu/TollgateGroupVirtualFarmSeries/

- MSU Tollgate Farm Virtual Interactive Follow the Nutrient Cycle Series: How do plants
 and animals depend on other living things to help them survive? Let's follow the
 nutrient trail of consumers, producers, and decomposers as we meet our plants, goats,
 chickens, and red wiggler friends, the worms! Virtually visithe garden, greenhouse,
 orchard, and animal barn, students will interact with farm staff to complete fun handson investigations about how nutrients travel through the nutrient cycle.
 https://events.anr.msu.edu/TollgateGroupVirtualFarmSeries/
- MSU Tollgate Farm HomeGrown Gardening Series: A series designed for families and individuals to explore the joys of home vegetable gardening. Second Saturdays, 10 11 am. February 13 September 11.

February 13: Growing Smart: Planning and Starting a Home Vegetable Garden

March 13: Growing Start: Seed-Starting for Everyone

April 10: Growing Small: Vegetable Gardening in Small Spaces

May 8: Growing Grand: Growing Fun with Kids

June 12: Growing Up: Taking Growing to New Heights

July 10: Growing Long: Season Extension for the Home Garden

August 14: Growing Together: Companion Planting Composting Backyard Gardens

September 11: Growing Safe: Tips and Tricks for Harvest and Storage

Contact info:

28115 Meadowbrook Rd Novi MI48380

Ellen Koehler koehle43@msu.edu

https://www.canr.msu.<u>edu/tollgate/schools/school-field-trips</u>

Facility for Rare Isotope Beams

Disciplines:

STEM

Types of activities:

Virtual tours, On-site tours, Simulations/Labs/Hands-on, Shows

K-5, Middle, High, College, General Public

Venue description:

The Facility for Rare Isotope Beams (FRIB) is a U.S. Department of Energy Office of Science (DOE-SC) user facility. FRIB will enable scientists to make discoveries about the properties of rare isotopes - that is, short-lived nuclei not normally found on Earth. FRIB Outreach lets the public experience how that research is done!

Venue offerings:

- Laboratory Tours: If you are curious about what happens in a rare isotope facility and why, a tour is the best way to discover more. Our laboratory offers tours of the research spaces by appointment for interested groups. Public tours generally include demonstrations, an introduction to the goals and methods of nuclear science, and a walk-through of vaults where nuclei are accelerated, filtered and/or studied. Recommended for ages 10 and up, though younger visitors can learn much!
 - https://nscl.msu.edu/public/tour/index.html
- Virtual tours: For groups that can't visit or are too large for a physical tour, this is the next best
 way to "see" inside the research areas! This trip through the vaults actually includes locations
 that are inaccessible to the public. Recommended for ages 10 and up, though younger
 audiences are welcome.
- Careers in Science: A short presentation on how physicists, chemists, mathematicians, plumbers, welders, machinists, computer scientists, and many more are needed to make cutting-edge science work! Recommended for grades 4-12.
 https://nscl.msu.edu/public/science/speaker.html
- **Introduction to Isotopes**: Virtual or in-person hands-on lesson that has visitors building and naming nuclei with a simple model, then learning to read the chart of nuclides. Recommended for grades 4-12.

https://wikihost.nscl.msu.edu/outreach/lib/exe/fetch.php?media=pennies_are_protons_studen
t worksheet.pdf

Contact info:

640 S. Shaw Lane Michigan State University

East Lansing MI48824

Zachary Constan constan@nscl.msu.edu https://nscl.msu.edu/public/education/index.html

MSU Science Festival

Disciplines:

Arts, Social Sciences, STEM

Types of activities:

Virtual tours, On-site tours, Simulations/Labs/Hands-on, Shows, Collections, Other (Ask a Scientist presentations for K-12, public presentations)

Audiences:

K-5, Middle, High, College, General Public

Venue description:

Every year in April, over the course of multiple days, the MSU Science Festival invites the public to experience more than 250 presentations and hands-on activities on the MSU campus and at venues across the state. There's something for everyone at the Science Festival, with presentations geared for all ages and interests. The mission of the MSU Science Festival is to celebrate the many ways science, technology, engineering, art, and mathematics (the STEAM disciplines) touch our everyday lives and shape our future. The 2020 Festival was virtual and the 2021 Festival will be as well.

Venue offerings:

- Live events for the public: More than 250 presentations and hands-on activities on the MSU campus and at venues across the state.
- Digital presentations and resources: An archive of citizen science projects, videos, virtual tours, STEAM activities to do at home, and podcasts. https://sciencefestival.msu.edu/digital-resources

Contact info:

Roxanne Truhn
MSU Science Festival Coordinator
scifest@msu.edu

https://sciencefestival.msu.edu/

MSU Libraries

Disciplines:

Literacy

Types of activities:

On-site tours, Collections

Middle, High, College, General Public

Venue description:

In today's MSU Libraries, students have access to everything from medieval manuscripts to cutting-edge technology. We have new spaces, new technologies and new services, but our mission to support exploration and learning are the same as when we first welcomed students to MSU.

Venue offerings:

• **Field trip tour**: This tour is ideal for middle school students. We will divide your students into small groups for an immersive experience in our 360 degree visualization room, our makerspace with 3D printers, Special Collections (home to the world's largest comics collection), and our Map collection, including 3D maps and other treasures.

Contact info:

366 W. Circle Dr. East Lansing MI48824

Holly Flynn flynnhol@msu.edu lib.msu.edu

W.J. Beal Botanical Garden and Campus Arboretum

Disciplines:

STEM

Types of activities:

Virtual tours,On-site tours,Professional development,Collections,Other (Music performances in conjunction with College of Music, Music in the Garden summer concerts)

Audiences:

PreK,K-5,Middle,High,College,General Public

Venue description:

The W.J. Beal Botanical Garden is an outdoor garden located in the heart of the MSU campus off of West Circle Drive and next to the MSU Library. Founded in 1873 by Professor Beal, the garden contains collections of plants representing plant diversity and plants important to people, used in our daily lives. We also feature rare and endangered plants of the Great Lakes Region. The Campus Arboretum contains a large collection of trees hardy to our climate, both native and non-native species. Some of the oldest trees can be dated back to the mid 16th century.

Venue offerings:

- Virtual Talk: General Public: "Plants Important in Human History"
 Plants that figured in endeavors of nations and economies since the start of civilization.
- In Garden Tour: General Public: "Edible Wild Plants of Spring"

 Join Beal Botanical Garden curator Peter Carrington for a tour of the Beal Botanical Garden to showcase the edible plants that tempt us into the fresh menu spring wild vegetables. How to gather them safely and keep everyone asking for more.
- In Garden Tour: General Public: "The Food Plants of Our Indigenous Predecessors"

 The Indigenous Americans, on whose ancestral lands the Beal Garden and Michigan State

 University now stand, have a deep understanding of the food uses of all potential plants that

 could contribute to their support. Join the Beal Garden curator Peter Carrington on a walk

 through the "pantry" that helped keep the First Nations alive for countless millennia.
- In Garden Tour: General Public: "The War of the Weeds—The Silent Battle for Unpaved Ground"

The plants we lump into the category called weeds, have an ongoing fight for unmaintained ground that started in the distant past. Join Beal Garden curator Peter Carrington as we find out who the troops are, where the newest armies are from, and why this matters to civilization.

- In Garden Tour: General Public: "Our Botanical Medicinal Heritage"
 One hundred fifty years ago, almost all our medicines came from plants. Today, the percentage is somewhat less, but still hugely significant. Join Beal Garden curator Peter Carrington as we remember where some of our species' most important medical developments came from, and where some of the newest discoveries of promise are now being found in plants today.
- In Garden Tour: General Public: "The Tomato Family: Friend and Foe"

 The tomato family is enormous and has both our favorite vegetables and subtlest poisons. Join Beal Botanical garden curator Peter Carrington as we explore who our allies are and who poses the persistent challenges; and how nicotine shows up in the strangest places.

Contact info:

W.J. Beal Botanical Garden 330 W CIRCLE DR Michigan State University East Lansing MI48824

Dr. Peter H. Carrington carring3@msu.edu http://cpa.msu.edu/beal

W.K. Kellogg Biological Station

Disciplines:

STEM

Types of activities:

On-site tours, Professional development

Audiences:

College, General Public

Venue description:

The W.K. Kellogg Biological Station (KBS) is Michigan State University's largest off-campus education complex and one of North America's premier inland field stations. Located between Kalamazoo and Battle Creek, Michigan (about 65 miles from MSU's main campus in East Lansing), the 3,873 acres/1,566 ha station includes W.K. Kellogg Bird Sanctuary, W.K. Kellogg Farm, KBS Academic and Research Facilities, W.K. Kellogg Conference Center and Manor House, and Lux Arbor Reserve. KBS is a premier site for field experimental research in aquatic and terrestrial ecology that takes advantage of the diverse managed and unmanaged ecosystems. The varied habitats of KBS includes forests, old fields, streams, wetlands, lakes, and agricultural lands. The general public is welcome to engage with KBS through site visits, program participation and volunteer opportunities.

Venue offerings:

 The KBS K-12 Partnership provides teachers in-depth exposure to research topics in environmental science and training to teach inquiry-based science at the elementary and secondary levels. The Partnership is a joint effort among KBS scientists, MSU College of Education faculty, science teachers and administrators in southwest Michigan school districts. Since 1999 the Partnership has been supported by multiple grants and is sustained by the KBS Long-term Ecological Research Program (the National Science Foundation's Long-term Ecological Research Program).

https://www.kbs.msu.edu/education/k-12/pd/

 Group tours: As part of Michigan State University, the Kellogg Biological Station welcomes your group to visit!

Tour options:

- Group tours of KBS research areas, please complete the KBS Group Tour Contact Form.
 Plan a minimum of 4 hours for a multi-site tour.
- For K-12 student groups, please visit the Kellogg Bird Sanctuary for field trip and tour options.
- Groups interested in visiting the historic W.K. Kellogg Manor House will find more details here.

Certain areas of KBS have limited tour offerings to protect ongoing research projects. Groups wishing to visit multiple locations may require a coordination fee(+). Please note that no reservations are considered final until you receive confirmation from the KBS Location(s) you wish to visit. Tour requests should be made at least 1 month before

preferred date of visit.

https://www.kbs.msu.edu/visit/tours/

• **KBS Volunteer program**: Make a difference in the lives of students and community by volunteering. Whether it's pulling invasive species, teaching youth about the wonders of nature or sharing a piece of Michigan's history. We need your help in connecting people to science, agriculture and history.

https://www.kbs.msu.edu/support/volunteer/

Contact info:

Kellogg Biological Station 3700 East Gull Lake Dr.

Hickory Corners MI49060

Kara Haas karahaas@msu.edu https://www.kbs.msu.edu/education/

W.K. Kellogg Bird Sanctuary

Disciplines:

STEM

Types of activities:

Virtual tours, On-site tours, Simulations/Labs/Hands-on, Shows

Audiences:

PreK,K-5,Middle,High,College,General Public

Venue description:

The W.K. Kellogg Bird Sanctuary is a unique wildlife center located in Southwest Michigan offering conservation-focused public programs, interpretive tours, and accessible trails that allow close views of captive and wild birds. Today, the Sanctuary serves an important role as a primary outreach arm of Michigan State University's W.K. Kellogg Biological Station. Highlights of the Sanctuary include 1. a paved, ¾ mile accessible trail to Wintergreen Lake to see hundreds of waterfowl in their natural habitat, including Trumpeter Swans, Canada Geese and a variety of duck species; 2. Birds of Prey enclosures feature both raptors, including Bald Eagles, Red-tailed Hawks, Eastern Screech and Great Horned Owls; 3. Native plantings in restored prairies and gardens; 4. Large picnic area; 5. nature- and bird-related gifts, toys and other locally made and fair trade items at the Sanctuary's Resource Center; 6. Many miles of trails through varied habitats.

Venue offerings:

• **Community programs** for adults focused on bird identification, natural history knowledge and skill building and nature appreciation.

https://birdsanctuary.kbs.msu.edu/events-programs/adults/

• Community programs for families.

https://birdsanctuary.kbs.msu.edu/families/

• **Group Tours**: volunteer guided programs focused on the Sanctuary's history and the adaptations of the wild and captive birds (waterfowl, upland gamebirds and birds of prey) that call the Sanctuary home.

https://birdsanctuary.kbs.msu.edu/visit/group-visit/

Online/virtual programs for K-12 students. Free asynchronous content. Live programs
featuring Interviews with birds of prey or scientists! Programs require a program fee and
scholarships are available.

https://sites.google.com/view/k12partnership/home?authuser=0

Virtual Tours of the W.K. Kellogg Bird Sanctuary. These StoryMaps allow you to visit the
Gardens, Prairie Restoration project and Bluebird Trail without leaving your computer. Photos,
maps and descriptions help you learn about native plants, habitat restoration and cavity-nesting
birds.

https://arcg.is/bjeyK

Contact info:

Kellogg Bird Sanctuary 12685 East C. Ave. Augusta MI49012

Lisa Duke birdsanctuary@kbs.msu.edu https://birdsanctuary.kbs.msu.edu/

W.K. Kellogg Manor House

Disciplines:

Arts, Humanities

Types of activities:

On-site tours

Audiences:

General Public

Venue description:

W.K. Kellogg Manor House is the former estate of cereal magnate W.K. Kellogg and his wife, Dr. Carrie Staines Kellogg. Built on the highest point overlooking Gull Lake in 1925-1926 the Manor, surrounding grounds and building offer awe-inspiring views and historic grandeur. In 1952 the home and surrounding property were donated to Michigan State University and became the home-base for the W.K. Kellogg Biological Station. The Manor House was restored to its original grandeur in 2000. The home is rich in history and can be visited for tours, programs or private event rentals.

Venue offerings:

- Tour the Manor House: Whether it's lush garden views and the sound of Gull Lake waves hitting the shore or the snow-swept hills, twinkling lights, and lavish holiday decorations adorning each room, Kellogg Manor is truly a visitor's destination any time of the year. We welcome visitors for tours all year-round, and no matter what the season, our visitors are truly in for a treat. https://conference.kbs.msu.edu/manor-house/visit/
- Take a walk on the Estate Grounds: The estate grounds remain open for self-guided walking tours from dawn to dusk. You are welcome to pick up a historical walking tour guide from our brochure rack on the office doors at the Manor House or download a PDF version of our Historical Walking Tour. When enjoying the estate, please wear a mask, remain 6 feet away from other visitors, bring your own water, pack out any garbage, and note that there are no open public restrooms available at this time.

 https://conference.kbs.msu.edu/manor-house/visit/
- Host an event at the Manor House or Conference Center https://conference.kbs.msu.edu/

Contact info:

Kellogg Biological Station 3700 East Gull Lake Dr. Hickory Corners MI 49060

Nicole Kokx Manorhouse@kbs.msu.edu https://conference.kbs.msu.edu/

MSU Broad Art Museum

Disciplines:

Arts,Other

Types of activities:

Virtual tours, On-site tours, Simulations/Labs/Hands-on, Professional development, Collections

PreK,K-5,Middle,High,College,General Public

Venue description:

The MSU Broad Art Museum connects people with art through experiences that inspire curiosity and inquiry. With a focus on the art of our time—in dialogue with the historical—the museum encourages engagement with timely issues of local relevance and global significance. We are committed to amplifying perspectives and stories by underrepresented and oppressed communities through the arts and creating an inclusive environment for meaningful dialogue about equity and social justice.

Venue offerings:

- Families at the Broad: With the health and safety of your family in mind, we've moved our
 monthly in-person Family Day digital! Each month, FAB Club at Home offers monthly creative
 activities that invite you to make and explore art with your family
 https://broadmuseum.msu.edu/index.php/learn/families
- School Field Trips: Observing, discussing, and making artwork is a way to learn about yourself
 and others. Our virtual field trips provide up-close art encounters that build skills for
 conversation and creative expression. Presently offered via Zoom and Google Classroom. Prerecorded content also available.
 https://broadmuseum.msu.edu/index.php/learn/schools
- **Studio Squad**: FREE after school program for youth ages 9-12. Structured around weekly virtual meet-ups that build a community of friendship through art. Participants create art individually and together while learning about artists around the world. https://broadmuseum.msu.edu/index.php/studio-squad
- Looking to Act: Images, Observers, and Activism Today: A D2L self-guided program designed for
 university courses and individual learners alike. The program provides participants with the
 visual literacy and critical thinking skills required to critique and create images in the service of
 social justice.
 - https://broadmuseum.msu.edu/learn/university
- University Tours and Class Visits: We welcome all courses regardless of the enrollment size or
 discipline. Tours are designed to promote co-teaching, co-learning, and co-discovery as students
 practice creativity, close-looking, and perspective-taking. Experiences can be customized to
 course learning goals and include various instruction methods, including discussions, individual
 reflections, collaborative activities, writing exercises, or art-making experiences. Currently
 offered via Zoom. Pre-recorded tours available.

https://broadmuseum.msu.edu/learn/university

Contact info:

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Michelle Word

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