





PAGE 6



From the Director



The fall lineup of programming and exhibits is a celebration of the creative spirit and scientific brainteasers.

The exhibit Filling in the Gaps: The Art of Murphy Darden will be open October 12, 2019, through March 29, 2020, and will be the November 1 Art Hop feature. Darden, an artist, historian, and collector of significant African American history, is

Bill McElhone

sharing 48 art pieces that cover four major themes: Black Cowboys, Memories of the Deep South, Kalamazoo Landmarks, and Civil Rights Leaders. This exhibit is part of the Museum's collaboration with the Kalamazoo Institute of Arts' Black Refractions exhibit. For more details, see pages 10 – 11.

In addition, two new special exhibits will be part of the fall lineup: Mindbender Mansion 2 and Willard Wigan Microsculptor.

Mindbender Mansion 2, an eclectic place full of brainteasers, puzzles, and interactive challenges opens on September 21, 2019, through January 5, 2020. Visitors will enjoy trying to master each of the 11 brainteasers and the three group activities in this fun and quirky exhibit. See pages 6 and 7 for related story.

On October 12, 2019, through January 26, 2020, perhaps the "smallest" art exhibit in the world will open, featuring British artist Willard Wigan's micro-sized sculptures. His works will amaze visitors with unbelievably tiny, hand-made sculptures that are small enough to be displayed inside the eye of a needle! See page 3 for more details.

There is still time to check out The Honeybee Scriptures exhibit, featuring the work of artist Ladislav Hanka of Kalamazoo and hardworking bees. See how bees working in a hive added their honeycomb structures and natural engineering over the etchings created by Hanka. The exhibit closes on October 6, 2019.

In addition to these special exhibits, be sure to check out the Museum's permanent interactive exhibits and wide variety of fall programs, including an expanded planetarium show schedule, Sunday Discovery Series, Art Hops, Chemistry Day, Halloweenthemed activity day, Holiday Parade festivities, and winter break family performances. Please visit kalamazoomuseum.org for additional details and volunteer opportunities.

Have a wonderful fall full of fun, creativity, and living well. museON, everyone!

Bill McElhan



From the Director 2 Willard Wigan MICROSCULPTOR 3 The Banana: THE FRUIT WITH THE BUILT-IN ZIPPER 4 MindBender Mansion UNLOCK THE PUZZLE 6 Local Women WERE STEM CAREER FORERUNNERS 8 Filling the Gaps: THE ART OF MURPHY DARDEN 10 150 Years of MINTING 12 The Mystical Arts of Tibet Featuring THE TIBETAN MONKS FROM DREPUNG LOSELING MONASTERY 14

WHAT IS IT? 15

Calendar of Activities 16

New Acquisition: LAUNDRY BOX 18

Special Advertisements 19

Correction: In the Summer 2019 issue of museON, the article on page 10 incorrectly referred to the 27th Governor of Michigan as Charles Osborn, when, in fact, his name was Chase Osborn.

muse<mark>ON</mark>

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WILLARD WIGAN MICROSCULPTOR

Creates the World's Smallest Sculptures

Ripley's Willard Wigan Microsculptor exhibit will amaze Kalamazoo Valley Museum visitors with incredibly tiny, hand-made sculptures that are small enough to be displayed inside the eye of a needle. These detailed creations, on display from October 12, 2019, through January 26, 2020, must be viewed through a microscope.

Wigan did not let his childhood struggle with dyslexia stop him from creating some of the most amazing microscopic sculptures in the world. He even creates his own microscopic tools. Wigan's goal in creating these incredible works of art for more than 40 years is to help inspire others to discover their own hidden talents.

As a child with undiagnosed autism and dyslexia, Wigan says he was ridiculed in class by his teachers and other pupils for not being able to learn to read or write. "I was regularly used as a demonstration of failure to others and was told I would amount to nothing. I desperately wanted to escape the pain of that world, so at the age of five I began sculpting and creating my own unique world," he explains on his website at www.willardwiganmbe.com.

"I wanted to show the world that nothing meant something and that nothing could be something powerful and amazing. I decided that just because you couldn't see something didn't mean that it did not exist or did not matter. I also considered that if I created things that others could not see, then I would not be criticized or ridiculed for my work. When you see my work, you discover that nothing does exist. For all those who said I would become nothing, take another look and behold at the wonders you will see."

Wigan says his mother told him that the smaller he made things, the bigger his name would become. He has since achieved worldwide notoriety. He has a permanent exhibit at the Broadway Museum at Cotswolds, England, a Guinness World Record for the smallest sculpture made by the human hand, and an honorary doctorate degree from the University of Warwick in recognition for his significant contributions to art and sculpture.

His Kalamazoo Valley Museum exhibition will include 10 microscopic sculptures, six interactive stations, and four multimedia presentations about his life story, achievements, childhood, and working process.

The exhibit is a Production of Ripley Entertainment Inc.



The Banana:

The Fruit with the Built-in Zipper

There are delightful moments while researching that occur out of nowhere—looking for something else, you find an interesting distraction from your original quest. The eye catcher was the following line: "Mrs. George Hanselman was bitten by a tarantula..." Intrigued? Of course! The brief article recounts Margaret Hanselman's encounter with a tarantula while buying bananas at the store on the corner of North Burdick Street in the fall of 1898. She took an antidote, and the bite was treated. The spider's fate? It was chloroformed. So how did this non-native spider, and the banana, come to the Midwest?

The importation of bananas to the United States began in earnest after the end of the Civil War, when the blockade of southern ports ended. Early access to bananas came via eastern and southern ports. At the 1876 Centennial Exposition in Philadelphia, a banana plant was on display in the Horticultural Hall, amidst 40 acres of tropical plants. It was so popular, a guard was posted nearby to keep interested visitors from pulling the plant apart for souvenirs. A specialty grocer in Philadelphia sold bananas for 10 cents apiece, wrapped in tinfoil (this wrapping was a common practice of the era). The cost of 10 cents apiece was an hour's wage for many people at the time and would translate to roughly \$2 today.

During the 1870s, only one in every 10,000 Americans had ever seen a banana. It took until the mid-1880s for the banana to become more familiar to Midwesterners, but the fruit remained expensive and was viewed as a luxury item. There were many banana varieties, but importers concentrated on the Gros Michel (Big Mike) variety. Its larger size and thick skin allowed for easier shipping and less bruising. At the end of the 19th century, bananas were familiar to most Americans, but the country was still getting used to the idea of the fruit. Scientific American published an article in 1899 with information on the banana, including the best peeling techniques.

The importation of bananas created a need for improved shipping methods. Bananas needed refrigeration to slow the ripening process. Better ice boxes and refrigerated railroad cars made it possible to ship bananas throughout the United States with fewer product losses. Shipping methods included bananas being shipped still attached to the stem, numbering twelve to eighteen bunches on each stem. This approach, however, left plenty of hiding spaces for spiders, among other pesky travelers (i.e. scorpions and snakes). The stowaways arriving to grocery stores, surviving their long trip, were lulled to sleep in the refrigerated ships and rail cars, only to wake up in the store, scaring shoppers and employees alike.

Margaret Hanselman was not the only one in the area to find a stowaway amongst the bananas. The earliest mention found as of yet comes from South Haven in 1886, and from there the occurrences of tropical spiders amongst the produce continue. Mr. Nicholson, of Randall and Nicholson, captured one in his store at 130 East Main Street in 1892. Julius Hines raced around his North Burdick Street establishment after one in 1897, and as late as 1916, W. L. Taylor acted fast to ensnare and display a spider in his shop on Water Street. Window displays of the spiders were quite common, proudly exhibiting the creatures in jars, sometimes preserved in liquid.

Cookbooks normalized the banana for Americans, giving helpful recipe suggestions, and pamphlets handed out to schoolchildren praised the nutritional value of the banana. Corporations like the United Fruit Company (now Chiquita) cornered the market, owning more than three million acres of land in Central America and the Caribbean in the 1920s and 1930s.

The banana we know today is not the banana that would have been on the shelves through the 1950s. The Gros Michel was by most accounts more flavorful and delicious than other varieties. Unfortunately, Panama Disease drove it to near extinction. Quickly, the switch was made to the Cavendish, the curvier variety we are used to seeing and eating today. Updating their approach, growers separated bunches from the stem prior to shipment and dipped them in antiseptic solution to kill insects.



Twelve Persons Flee Before Tarantula VENOMOUS SPIDER RAISES HAVOC IN STORE

A dozen people made a precipitous (session of the establishment, it jump-exit from a fruit store at 108 East ed and ranted for some time in an Main street yesterday morning at attempt to get at its tormentors, who about 10 o'clock, chased by a gland, protected by an intervening screen tarantula, which had been dislodged door, stood outside and planned a from a bunch of bunanas by an em-ploye of the store, Peter Magas. Finally the angared tarantula re-

ploye of the store, Peter Magas. Magas had been cutting bananas from several new bunches, preparing for a large day's trade when sudden-ly the venomous spider dropped to the floor and started running after him. The hurred exit of Magas from the store warned others in the place and all made a hasty getaway. Even after the huge and hairy ba-nana bunch dweller had taken pos-

Finally the angored tarantula retreated to a bunch of benands and disappeared. This gave employes of unsuppeared. This gave employes of the store confidence and arming them-selves with brooms and several sacks, the spider was finally captured. The mammoth tarantitia measures five inches in diameter; and is un-doubtedly the largest ever geen in Kalamazoo.

The issues with Panama Disease have not ended, however, and a new race of Panama Disease has recently been affecting the formerly immune Cavendish. The disease is able to ravage the cultivars owing in part to the process of banana production, where each banana is a clone of itself, creating a monoculture process that makes the banana vulnerable to disease.

Spiders can still be found in banana bunches, with stories popping up from the US and other countries. The dangerous ones to look



out for would be a Brazilian wandering spider, large and brown with furry fangs and legs reaching five inches. The "tarantulas" found in bananas by Mrs. Hanselman and local grocers were more likely to be huntsman spiders than tarantulas, which are also called banana spiders.



Visitors of all ages will enjoy exercising their minds as they try to master each of the 11 brainteasers and three group activities in a fun and unconventional new exhibit, Mindbender Mansion 2, on display from September 21, 2019, to January 5, 2020, at the Kalamazoo Valley Museum.

At the entrance, a video introduces the wacky Mr. E., master brainteaser, puzzler extraordinaire, and curator of the Mindbender Society. He explains the mysteries of Mindbender Mansion and how to become a member of the eccentric Mindbender Society by gathering hidden clues and secret passwords. The clues can only be found by solving key puzzles found in select themed areas.

Throughout the exhibit, visitors will find a combination of tabletop brainteasers they can solve on their own and larger group challenges that require assistance from their fellow mansion guests. Grandparents, parents, and children of all ages will learn from each other as they work together to solve the brainteasers and group challenges.

Math, science, and technology educational content are woven into the puzzles, videos, and group activities found in Mindbender Mansion. At the heart of the exhibit is the essential scientific task of problem-solving and critical thinking. The puzzles are an excellent tool for explaining mathematic and physical science concepts. In order to solve the puzzles, visitors must identify patterns, think ahead, use logical reasoning, and look at the problems from different perspectives, setting aside preconceived ideas. The videos explain neuroscience-based principles and tell the story of inventors who used problem-solving skills to come up with new solutions to old problems.

Linda Decker, a retired science and math teacher and Western Michigan University graduate, has challenged herself to complete brainteasers for decades and taught each of her grandchildren to play Sudoku. She looks forward to bringing her 12-year-old grandson to the Mindbender Mansion exhibit. "I'm always looking for opportunities to interact with my grandchildren in ways that are entertaining and mentally stimulating," she said. "I think physical and mental exercise are equally important. And as a teacher, I know that learning is most effective when it is also fun."

The exhibit's group challenges include:

Feeding Frenzy - Kitchen mayhem is guaranteed in a race to beat the clock by filling TV dinner trays with five kinds of food on a fast-moving conveyer belt.

Spelling Fever - Hopscotch meets Scrabble in this race to spell correct words within a limited amount of time by hopping on letter squares that light up.

Amazing Maze - In this version of the classic steel ball labyrinth game, visitors must work together to tilt a table in different directions, guiding a ball into six holes as quickly as possible.

Upon completing each of the brainteasers and group challenges, visitors will have gathered the necessary clues and secret passwords to become members of the Mindbender Society and add their portraits to the "Wall of Fame."

Mindbender Mansion was produced and is toured by the Oregon Museum of Science and Industry, Portland, Oregon.





Hopscotch meets trivia as visitors hop on letters to answer questions in Spelling Fever.

Local Women WERE STEM CAREER FORERUNNERS

Do you know a woman in STEM? Jobs in STEM (Science, Technology, Engineering, and Math) are increasing in the State of Michigan, with job opportunities projected to grow by 11.8% through 2020, compared to 8.5% job growth for other occupations. Still, women hold less than 25% of STEM jobs, despite holding 48% of all jobs nationally.

Here we will highlight the stories of a few women who have worked locally in a STEM profession.

Anna Mae Searcy Miller began her chemistry studies in Missouri, attending William Jewell College starting in 1943. She was a student assistant for the chemistry department and graduated in 1946. The Upjohn Company recruited her, and by 1948, she was living and working in Kalamazoo.

The Upjohn Company recruited her for her work with progesterone, a hormone connected to menstruation and pregnancy, among other bodily functions. She worked for Upjohn for about 6 years on a variety of projects on steroid chemical development. In 1954, she co-authored a published paper entitled "Chemical Studies with 11-Oxygenated Steroids. V. A One-Step Oxidation – Halogenation of 3-Hydroxysteroids." She married Ronald F. Miller in 1954 and left the company to start a family. She still lives in Kalamazoo and is an avid quilter.

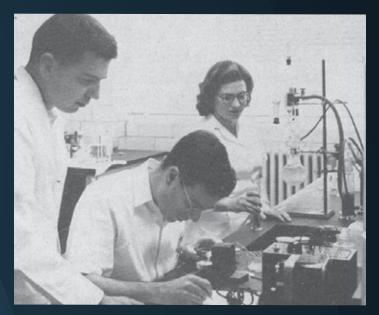
Dr. Lillian Hoagland Meyer (1910-1986) came to Kalamazoo for a faculty position in the chemistry department at Western Michigan College (now University). Dr. Meyer earned her bachelor's degree at Washington University, St. Louis, and her doctorate from the University of Illinois. Prior to arriving at WMU, she taught at Vassar College, Oregon State University, and Wayne State University. During her time at Western, Dr. Meyer published multiple books, including a chemistry textbook, and was an active member of the Michigan Dietetic Association. Starting in 1956, Dr. Meyer was acting head of the chemistry department, assisting Dean Gerald Osborn, and she took over all duties as head of the department in 1958. The next year, Dr. Meyer was a part of the graduate faculty for the newly created Master of Arts in Chemistry degree. Dr. Meyer retired in 1968 and passed away in 1986.

Dr. Ausma Skerbele Weisend (1929-2014) arrived in the United States in 1950 with her family, parents Janis and Marta and sister Dzintra, from Latvia as part of the wave of displaced persons in the wake of World War II. She enrolled at Western Michigan University, studying chemistry, and was involved in science and mathematics-based clubs and organizations on campus like the Science Club and Kappa Rho Sigma. In the summer of 1951, she worked in fluids packaging at the Upjohn Company. She graduated with her BS in 1954 and went on to obtain a Ph.D. in physical chemistry at The Ohio State University in 1960. She worked at GE Flight Propulsion as a chemist following graduation and later was a Fellow in Physical Chemistry at the Mellon Institute. Later, she returned to her studies at Ohio State, receiving an MA in 1985 and a second Ph.D. in 1994, this time studying German language and literature. Her dissertation was entitled "Poetry, Nature and Science: Romantic Nature Philosophy in the Works of Novalis and E.T.A. Hoffman." Dr. Weisend passed away in 2014 in Columbus, Ohio.

Museum Partners with Girl Scouts to Offer New Science Badges

Recognizing the importance of STEM education, Girl Scouts of the USA (GSUSA) recently released several new badges for girls ages 5 to 18 focused on STEM subjects. Among the new badges are Space Science badges for Girl Scout Daisies, Brownies, and Juniors (grades K – 5). Space Science badges for Cadettes, Seniors, and Ambassadors (grades 6 – 12) will be implemented soon.

Exposing girls to STEM at a young age is vital to developing their interest in STEM careers. Supporting this philosophy, the Kalamazoo Valley Museum is collaborating with the Girl Scouts Heart of Michigan (GSHOM) Kalamazoo Regional Center to offer a Space Science Badge Extravaganza on Saturday, September 21. Daisies, Brownies, and Juniors will have the opportunity to investigate and learn about the Sun, Moon, planets, and stars through fun hands-on activities and programs in the Museum's state-of-the-art planetarium. Register through the Girl Scouts Heart of Michigan at gshom.org.



Anna Mae Searcy Miller (in background) working at the Upjohn Company in 1954



Dr. Ausma Skerbele Weisend, c.1965



Dr. Lillian Hoagland Meyer, c.1958

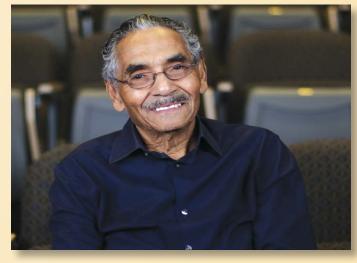
Meyer Announces Second Text Run

"Introductory Chemistry," a textbook by Dr. Lillian H. Myer, head of the WMU chemistry department, has just made its appearance in a second edition.

Designed primarily for home economics students and others interested in areas related to biochemistry, the first edition enjoyed a wide acceptance, reports Dr. Meyer. It is used at the freshman level in college chemistry and is published by the Macmillan Company.

Filling in the Gaps: **THE ART OF MURPHY DARDEN**

For the past several decades, Kalamazoo resident Murphy Darden, now in his nineties, has indulged his passion for the parts of history that have long been ignored in classrooms and in public discourse. In his pursuit of preserving this history for future generations, he has collected artifacts, images, and historic documents chronicling the achievements of African Americans.



viewers further insight into personal experiences that have shaped his life views. Portrayals of family members, his all-black high school, and river baptisms recount joyous memories and are in stark contrast with depictions of racist hate crimes that were also a part of daily life.

The latter make Darden's celebrations of civil rights leaders all the more inspiring. It is evident

Not all of history can be represented through material objects. Sometimes,

the richest and most complicated stories are better interpreted through artistic expression. It was in these situations, when Darden felt pieces of the story were missing, that he created artworks to fill in the gaps.

Some of his works will be featured in the exhibit "Filling in the Gaps: The Art of Murphy Darden," which runs October 12, 2019, through March 29, 2020, at the Kalamazoo Valley Museum. Selections of his art will be assembled into four distinct themes: black cowboys, Darden's personal experiences in Mississippi, civil rights heroes, and the African American community in Kalamazoo.

The display runs in conjunction with the Kalamazoo Institute of Arts' hosting of "Black Refractions: Highlights from The Studio Museum in Harlem," September 14 – December 8, 2019, www.kiarts.org.

Darden's renderings of Western cowboys give viewers a glimpse into his childhood. Like many boys in the 1930s, Murphy and his twin brother, Irvin, spent many hours pretending to be cowboys and watching cowboy movies. His fascination with the American West followed him into adulthood, when he discovered the wonderful reality that African Americans also roamed the range. Legendary Wild West performer Bill Pickett remains one of Darden's favorite subjects to portray.

As a part of the great northern migration that occurred in the first half of the twentieth century, Darden has strong ties to his native Mississippi. His childhood memories inform his artworks and give

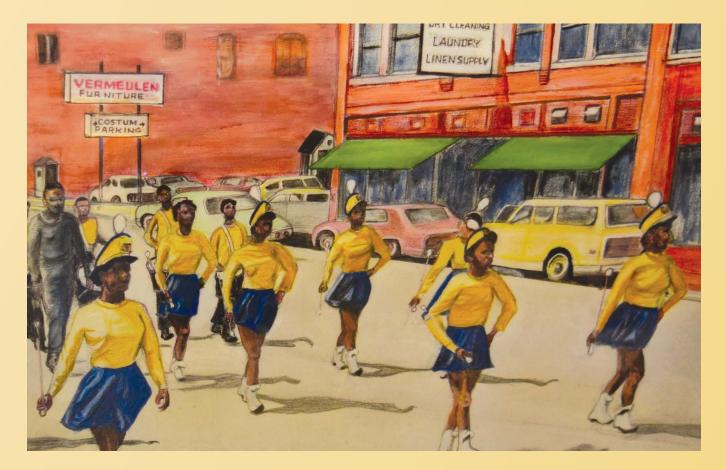
Photo by Joshua Gipson, Precision Productions.

that he has his favorites—Dr. Martin Luther King and Rosa Parks are portrayed in several works. Darden presents them as shadow box creations and in three-dimensional models. He says that this allows people a new perspective apart from the well-known photgraphs which have dominated our understanding of these events.

Perhaps Darden's most important contributions to the Kalamazoo community are his works related to local people, places, and events most of which are undocumented elsewhere. Paintings of the Van Avery Drugstore boycott and the local neighborhood band, the Bombardiers, were based on small newspaper clippings with poor-quality photographs. He brings both subjects back to life with his colorful renditions. His scale models of several African American landmarks are the only thing that remain of these historic buildings. The artist has created them in perfect proportion without the use of physical measurements.

Darden's artistic pursuits started as a young boy, although he says his access to proper supplies was always very limited because of his family's limited means. It was not until he left Mississippi and took up residence in Kalamazoo in the 1940s that he was able to better explore his talents.

As a young man, Darden participated in home study art instructional courses. (Correspondence art schools were immensely popular during the 1930s-60s, promising students they could become proficient in any

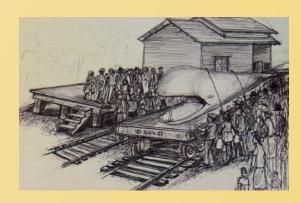




Above: Portrayal of Kalamazoo Bombadiers.

Left: Civil rights icon Rosa Parks.

Right: Drawn from a memory of his childhood when a whale came to town on a railroad car.



number of artistic pursuits by taking a 12-step lesson via the mail.) The exercises were engaging but lacked any useful critiquing methods.

Thus, he and his brother Irvin became the first African American students to enroll in art classes at the Kalamazoo Institute of Art back when it still shared a space with the Library and Museum in the Peck Mansion. Darden recalls it being noteworthy that he, as a black man, sketched nude models who were white as part of the curriculum at the school. The scenario would have been unthinkable back in Mississippi. The reason he stopped attending was not because he did not believe the lessons valuable, but because he did not want his children to stumble across the sketches. Despite his aptitude for drawing, Darden did not have opportunities to work as an artist even though he spent much of his adult life working at the Kalamazoo Parchment and Paper Company, where countless illustrators were employed. The company was highly segregated, with black staff members working strictly in custodial positions without the chance of promotion.

Thankfully, retirement has given Darden a chance to fulfill his life passions of history, education, and, of course, art. His commitment to all three endeavors provides an invaluable resource to the Kalamazoo Valley Museum, local students, and the entire community.



MINTING



Visitors who wander deep into the heart of the Museum's second floor gallery, Kalamazoo Direct to You, may be surprised to smell a hint of mint. This olfactory experience indicates that they have found the "Making a Mint" exhibit, featuring a few highlights regarding the life, career, and philanthropy of Albert May Todd.

The exhibit's title, a play on words, explores how the genius of a 19-yearold farmer, chemist, and entrepreneur's endeavors would eventually lead Kalamazoo and southwest Michigan to emerge as one of the worldwide centers for the mint industry with the establishment of the A. M. Todd Company in 1869.

His life's journey started out rather modestly, as Todd was the tenth and last child of Alfred and Mary Ann Hovey Todd, born on June 3, 1850, near Nottawa, Michigan, in St. Joseph County. The Todds operated a relatively small 45-acre family farm.

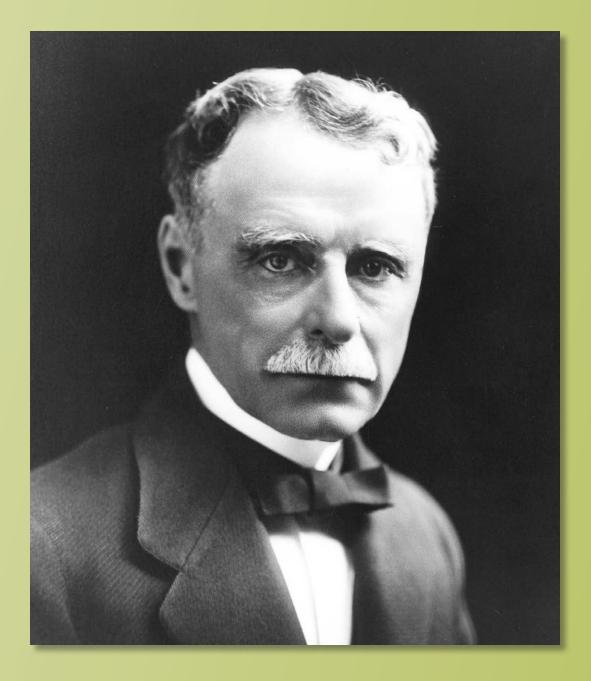
Todd's early education was in one-room schoolhouses before graduating from Sturgis High School in the neighboring town. He also spent a year at Northwestern University.

Todd's agricultural roots and exposure to peppermint plants grown in southwest Michigan, along with an interest in chemistry, led him to attempt to cultivate and to distill the plant. In 1869, he established the A. M. Todd Company, with a view to commercially extracting flavorings and essential oils from mint. Together with his brother Oliver, Todd began growing mint on a small scale and working to improve methods for its distillation into peppermint oil. These earlier experiments were still crude. After leaving Northwestern due to poor health, he traveled to Europe and made a study of mint cultivation there, bringing home varieties of the plant.

Todd returned to southwestern Michigan, where, shortly after, he developed the "Crystal White" brand of peppermint oil, which would go on to win a gold medal at the Philadelphia Centennial Exposition in 1876. In 1891, the A. M. Todd Company moved to Kalamazoo. It is estimated that by the early 20th century, 90 percent of the world's supply of peppermint was grown within 100 miles of Kalamazoo, most of which was refined by Todd. His predominance in this field earned him the popular moniker, "The Peppermint King."

Todd established two gigantic plantations, "Mentha" in Pine Grove Township and "Campaignia" near Fennville, for the purpose of growing a ready supply of raw mint for extraction. The company grew and harvested approximately 10,000 acres of peppermint, spearmint, and other aromatic herbs.

Todd's success in the field was supported by ongoing experimentation in developing plants that were resistant to disease and made use of his agricultural background and academic understanding of chemistry. In 1922, at the age of 72, he was awarded an honorary degree from the University of Michigan for this work.



Todd's curiosity about the world around him and interest in art after traveling abroad earlier in his life spurred a lifelong interest in collecting rare books and artwork. At the time of his death, he owned over 11,000 volumes, including illuminated manuscripts and clay tablets dating to the 23rd century BCE. His art collection included 228 paintings, sculptures, pottery, and porcelain works from all over the world. His donations helped to establish the Kalamazoo Public Museum (now the Kalamazoo Valley Museum) in 1927.

He also established the A. M. Todd Rare Book Room at the Upjohn Library of Kalamazoo College. Later bequests to the library by Todd's surviving family members restored a significant part of Todd's original collection. Other artwork and manuscripts were placed in collections at Western Michigan University and the University of Michigan.

Albert Todd died October 6, 1931, at his home in Kalamazoo. He was 81 years old at the time of his death. Todd was survived by his wife,

Augusta Allman Todd, whom he had married in 1878, and five children. His body was interred at Mountain Home Cemetery in Kalamazoo.

The A. M. Todd Company would remain family owned for more than a century, ultimately being sold in 2011 to Swiss flavoring giant Wild Flavors GmbH. Wild Flavors was in turn sold to Chicago-based agricultural behemoth Archer Daniels Midland in July 2014 for \$3 billion. Still standing as a leader in the production of mint oil, the A. M. Todd headquarters remains in Kalamazoo and continues its legacy of mint innovation.

This fall, a 150th Anniversary celebration of the Todd Company will include a special event at the Kalamazoo Valley Museum, with a banner exhibit, guest speaker, and other family-friendly activities. See the calendar on pages 16 and 17 for details!



The Mystical Arts of Tibet Featuring THE TIBETAN MONKS FROM DREPUNG LOSELING MONASTERY

Of all the artistic traditions of Tantric Buddhism, painting with colored sand is perhaps one of the most unique and exquisite. In Tibetan, this art is called dul-tson-kyil-khor, which literally means "mandala of colored powders." A mandala is a spiritual symbol metaphorically depicting the universe and the cosmos in a colorful, geometric pattern.

Mandalas are very common in Tibetan culture, where they promote healing and world peace and represent various philosophies found in Tibetan Buddhism like the structure of the Universe, Wisdom and Impermanence, and Nature of Enlightenment. Millions of grains of sand are painstakingly laid into place on a flat platform over a period of days or weeks to form a single mandala.

In general, all mandalas have outer, inner, and secret meanings. On the outer level, they represent the world in its divine form. On the inner level, they represent a map by which the ordinary human mind is transformed into enlightened mind. On the secret level, they depict the perfect balance of the subtle energies of the body and the clear light dimension of the mind. The creation of a sand painting is said to effect purification and healing on all three of these levels.

A group of Tibetan Buddhist monks from the Drepung Loseling Monastery travel the world creating these incredible mandalas. The monks, also known as lamas, last visited Kalamazoo in 2007, attracting thousands of visitors to the Kalamazoo Valley Museum over the course of four days, who witnessed the incredible creation of a sand mandala and its accompanying ceremonies. This fall, the Tibetan Monks from Drepung Loseling Monastery will return to the Museum for a five-day event called "The Mystical Arts of Tibet" as part of the larger area-wide Connecting Chords Music Festival.

On November 6, an Opening Ceremony will be held inside the Museum. The lamas will begin their work by consecrating the

space with music, chants, and recitation of prayers and mantras. Immediately after the Opening Ceremony, the construction of the mandala will begin.

The mandala begins with the drawing of the design on the base, or tekpu. The monks measure out and draw the architectural lines using a straight-edged ruler, compass, and white pencil. The drawing of the mandala sketch alone can take at least one full day with multiple lamas working on the design.

Once the sketch of the mandala is complete, application of the sand begins. Traditionally, mandalas were not created with sand dyed from natural pigments as they are today, but were made with the pure granules of crushed colored stone or gems. The monks pour the sand from traditional metal funnels called chakpurs. Each monk holds a chak-pur in one hand while running a metal rod on its grated surface. The vibration causes the sands to flow like liquid.

Once the sand mandala is completed on November 10, it will be destructed in a ritualistic way, with accompanying ceremonies and prayers. The different elements of the mandala are removed in a specific order, and the colored sand is swept up as a metaphor of the impermanence of life. The sands are then divided, half of which is distributed to some members of the audience at the closing ceremony to fulfill the function of healing. The remaining sand is placed in an urn and carried in a procession by the monks, accompanied by the public, to a flowing body of water into which it is ceremonially poured to disperse the healing energies of the mandala throughout the world.

The Mystical Arts of Tibet featuring the Tibetan Monks from Drepung Loseling Monastery will be held at the Museum Wednesday through Sunday, Nov. 6 - 10. This event is free and open to the public. See the calendar on page 16 for full details.

WHAT IS IT?





This paper-made product was used to keep floors dust free. What is it?



This cellophane-wrapped, shelf-stable provision was kept in case of emergencies. What is it?

I helped deliver medication into the body through inhalation as a promising solution to breathing problems. What am I?

> 1. Inhaler. Before the pressurized inhaler. Before the pressurized developed in 1955, breathing nebulized epinephrine distributed from a device such as this was the solution to ending an asthma attack. A person would draw vial, mix it with water in the rubber bulb, and then squeeze to create a fine mist that could be inhaled. By breathing in the vaporized mist, the medication worked faster and gave almost immediate relief from an asthma attack.

2. Paper Dust Mop Head. Made of tan strips of paper, this disposable dust mop head would attach to a thin metal pole for quick and easy cleaning, brought to you by the Kalamazoo Vegetable Michigan. Often called "The World's Model Paper Mill," it produced various types of household papers that you could cook, clean, and decorate with.

3. "Must-Kit" Jelly Bar. The threat of nuclear annihilation hung over the US throughout the 1950s. Emergency preparation was highly encouraged and, in addition to crackers and canned foods, mouth-soluble "carbohydrate part of shelf-stable food kits. This bar is part of n the late 1980s in an underground concrete in the late 1980s in an underground concrete schelter attached to a home built in 1958 on West of leter attached to a home built in 1958 on West shelter attached to a home built in 1958 on West an Wast-Kit Food Survival Pack that was found in the late 1980s in an underground concrete shelter attached to a home built in 1958 on West attached to a home built in 1958 on West and the late 1980s in an underground concrete

FEATURED EVENTS Check out the full calendar at kalamazoomuseum.org

TRAVELING EXHIBITIONS

FIRST FLOOR



WILLARD WIGAN MICROSCULPTOR

OCTOBER 12, 2019 - JANUARY 26, 2020

Ripley's Willard Wigan Microsculptor exhibit showcases remarkable works of art so small they must be viewed through a microscope! Learn the amazing story of how ants and "nothing" inspired Wigan to become a world-renowned artist.

FILLING IN THE GAPS: THE ART OF MURPHY DARDEN

OCTOBER 12, 2019 - MARCH 29, 2020

Selections of longtime Kalamazoo resident Murphy Darden's art will be assembled into four distinct themes: black cowboys, Darden's personal experiences in Mississippi, civil rights heroes, and the African American community in Kalamazoo.

THIRD FLOOR

MINDBENDER MANSION 2

SEPTEMBER 21, 2019 - JANUARY 5, 2020

Enter Mindbender Mansion 2, a place full of puzzles, brainteasers, and interactive challenges that will test the brain power of the most experienced puzzlers!



EXTRA, EXTRA!

THINKTANK DEMONSTRATIONS

Join KVM staff for LIVE weekly demonstrations on different science and history topics. Please call the front desk for our weekly offerings. **FREE**

INNOVATION LAB ACTIVITIES

Put your imagination and innovative creativity to work on a variety of science and engineering activities which change daily. Contact our front desk for today's offerings. **FREE**

THEMED TOURS

Join KVM interpreters for a 30-minute guided Kalamazoo Highlights tour in our exhibits. Program times may vary; please call the front desk for today's offerings. **FREE**

SPECIAL PROGRAMS

GIRL SCOUT BADGE PROGRAM: SPACE SCIENCE BADGE EXTRAVAGANZA

September 21, 8:30 a.m. – 1 p.m. Investigate the Sun, Moon, planets, and stars through fun hands-on activities. Activities are both inside and outside, so please dress for the weather. Registration required at gshom.org. Cost TBD

ART HOP FRIDAYS

November 1, 5:30 - 8:30 p.m.

Murphy Darden: Collecting with Passion Watch the FREE inaugural screening of an oral history dedicated to Darden's lifetime of collecting objects representing the history of African Americans. Show

times at 6 and 7 p.m. Catch The Queen Light Show in the planetarium at 6 and 7 p.m. for \$3/person.

December 6, 5:30 – 8 p.m.

Kalamazoo Mandolin and Guitar Orchestra This local group presents delightful holiday music old and new in a festive atmosphere. Two performances at 6 and 7:15 p.m.

January 10, 6 – 9 p.m. Fretboard Festival Play-In Contest Talented area musicians compete for a chance to

perform in the 15th Annual Fretboard Festival!

FAMILY PROGRAMS

October 12, 12 – 4 p.m. Chemistry Day Area chemists come together to explore the Chemistry of Metals!

October 26, 12 – 4 p.m.

Museum Halloween Mayhem! Jenifer Straus shares interactive Halloween Stories at 12:30 and 2 p.m. FREE Ghoulish Planetarium shorts alternate every half hour from 11 a.m. to 4:30 p.m.

November 6 – 10

Connecting Chords Music Festival Presents: The Mystical Arts of Tibet featuring the Tibetan

Monks from Drepung Loseling Monastery

The Tibetan Buddhist Monks of Drepung Loseling Monastery will construct a mandala sand painting at the Kalamazoo Valley Museum in partnership with the Connecting Chords Music Festival.

Opening Ceremony: November 6, 12 p.m. Daily Construction of Mandala: November 6 – 9, 9 a.m. – 5 p.m. "Symbolism of the Mandala" Lecture: November 10,

1:30 p.m.

Closing Ceremony: November 10, 3:30 p.m.

Concert of Song and Dance: November 8, 7:30 p.m. at Comstock Auditorium. Tickets at ccmusicfest.com.



PLANETARIUM

Planetarium closed for yearly maintenance September16 – 20.

MONDAY - FRIDAY AT 11 A.M.

September 21 – November 27 One World, One Sky Big Bird and Elmo explore the sky we all share.

MONDAY, WEDNESDAY, FRIDAY, AND SUNDAY AT 2 P.M.

November 29 – January 3 George and Oatmeal Save Santa NEW Join the search for a missing Santa!

September 22 – November 26

Earth, Moon and Sun NEW Explore the relationship of these three with Coyote.

November 29 – January 3 Ice Worlds Explore the role of ice in our universe.

TUESDAY, THURSDAY, AND SATURDAY AT 2 P.M.

September 21 – November 26 Halloween: Celestial Origins

Halloween is an astronomical celebration!

November 30 – January 2 MI Winter Skies Learn your way around Michigan's winter skies.

DAILY AT 3 P.M.

September 21 – November 27 Habitat Earth Explore the living networks that exist on our planet.

November 29 – January 3 Mystery of the Christmas Star Learn about the star the wise men followed.

SATURDAYS AT 4 P.M.

September 21 – October 26

Ooky Spooky NEW A fun Halloween-themed music light show.

November 2 – November 23 The Queen Light Show: From Mercury with Love NEW A full-dome light show rocks to the music of Queen.

November 30 – January 3 Let It Snow Classic Christmas music set to animation.

SUNDAYS AT 4 P.M.

September 22 – October 20 Measuring the Night Learn how to measure distant objects.

October 27 – November 24 Fate of the Maya Mayans aligned temples to the sky.

December 1 – December 29 Violent Universe Learn what happens when galaxies collide.

All planetarium shows are \$3/person

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CHILDREN'S LANDSCAPE

Closed for yearly maintenance September 3 – 6, 2019.

EARLY CHILDHOOD EXPLORATION Monday – Friday 9 a.m. – 3 p.m. Saturdays 9 a.m. – 5 p.m.

Sundays 1 – 5 p.m. Extended hours and no Circle Time during holiday breaks.

Adults with children five and under are invited to enjoy educational materials that support exploration, investigation, literacy, pretend play, social development, creative arts, math, and science related to Museum exhibits.



September/October Monsters

Travel to "Where the Wild Things Are" and meet a variety of fun-loving monsters along with the way.

November/December Mazes, Puzzles, and More!

Discover playful mysteries to explore and solve together with your little detective.

CIRCLE TIME PROGRAMS Monday – Friday at 10 a.m. Saturdays at 11 a.m.

These 20-minute programs are free of charge to families and preschool groups. Literacy-based programs may include musical activities, games, and an art project. Programs take place Monday through Friday at 10 a.m., and Saturdays at 11 a.m. Programs are designed for preschool children ages 3-5.



MARY JANE STRYKER THEATER

September 12 Visiting Scientist Lecture

Noted scientist Dr. Timothy L. Hawthorne will speak with students about the growing importance of citizen science in the field of geography. He will also deliver a formal research presentation.



SUNDAY DISCOVERY SERIES

Join us for dynamic topics related to Museum exhibits and the community one Sunday a month at 1:30 p.m. **FREE**

September 22 Mint to Be: A 150-Year Empire of Kalamazoo

A.M. Todd descendants and current employees will present the prolific legacy of the local company.

October 13 The Rise and Fall of Allied Paper

Jeremy Winkworth presents the little-known history of one of Kalamazoo's most important industries.

November 10 Symbolism of the Mandala

Learn about mandalas and pictures created through the ancient art of sand painting as seen during this last day of creation by the Tibetan Monks from Drepung Loseling Monastery.



December 8 Preparing for the Holidays Special quest Melissa Grant will

Special guest Melissa Grant will help you plan now for the holiday chaos and discover ways to keep your family calm and peaceful with helpful tools anyone can use.

HOLIDAY SPECIALS

GHOULISH PLANETARIUM SHORTS

October 26, 11 a.m. – 4:30 p.m. Shows on the hour and half hour as part of the Museum Halloween Mayhem program. FREE

CELEBRATING IN SONG

NOVEMBER 9, 12 – 4 P.M. Local choirs perform throughout the afternoon following the Holiday Parade. Come sing along!

SPECIAL PLANETARIUM SHOWS

November 29 and December 23 – January 3 \$3/person

11 a.m. George and Oatmeal Save Santa **12 p.m.** Space Shapes *FREE!*

- 1 p.m. Season of Light
- 2 p.m. (Mon, Wed, Fri) Ice Worlds
- 2 p.m. (Tues, Thurs) MI Winter Skies 3 p.m. Mystery of the Christmas Star
- **4 p.m.** Let It Snow

BRONSON PARK TREE LIGHTING CEREMONY

NOVEMBER 29, 5 – 7:30 P.M. The KVM will be providing holiday ornaments

for children to decorate during the ceremony. See us there!

WINTER BREAK FAMILY PERFORMANCES

12 P.M. FREE

Performances for the whole family in the Mary Jane Stryker Theater will liven up your break.

Benjammin

DECEMBER 27 Sing, dance, and play instruments in this interactive concert for the whole family.

Gemini in Concert

DECEMBER 30 This musical duo will entertain the whole family with their music and songs.

Joe Reilly

DECEMBER 31

Sing along to songs about nature and finding peace.

John Dudley JANUARY 2

Be amazed by this magician extraordinaire! You will laugh and wonder how he did that.



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New Acquisition: LAUNDRY BOX

Metal with a canvas strap, this laundry box was used by Willard Raymond Hess while he was a student at Kalamazoo College. From 1948 to 1952, Bill Hess used this box to send home his dirty clothes to his parents, Claude and Irene Hess, in Buchanan, MI.

College students today may be more inclined to head to a laundromat or use the facilities in their building to do their laundry, a luxury that students did not have while Hess was in school. The machines we know and use today were not yet widely used, and it was cheaper and more time efficient to send dirty clothes home than seek out a laundry service. Plus, early washing machines were met with resistance from homemakers, who were reluctant to use these new machines, not trusting that the mechanical hands could get the clothes as clean as they knew they could. Laundromats were first put on the scene to help get people, women in particular, used to the idea of the washing machines. This began to work in urban areas in the 1930s, and in-home laundry appliances slowly became more commonplace.

During Hess' time as a student, however, sending laundry home was still the better option. Hess was involved in the Century Forum literary society, and the Join House Council (dorm representative), and played intramural sports. He married Donna Brenner, Kalamazoo College class of 1955, on September 5, 1953. Following school, Hess served as a marine and worked as a chemist at The Upjohn Company for 36 years. He died in February of 2015 in Bentonville, Arkansas.

Willard R. Hess Accepted As Student Kalamazoo College

Willard Raymond Hess of 111 W. Front St., has been accepted as a new student for Kalamazoo college, it is announced by the registrar's office.

Mr. Hess has successfully met the requirements for admission to this liberal arts college which will begin its 116th year on Sept. 13. The college is the oldest in Michigan, having been founded in 1833.

Mr. Hess is a graduate of Buchanan high school. He has expressed interest in chemistry, and plans to do work in Kalamazoo college's highly rated chemistry department which is headed by Dr. Allen B. Stowe, who is now also chairman of the administrative committee in charge of cellege affairs.



Wicked Plants: The Exhibit January 25 – May 17, 2020

Explore a creepy Victorian home and learn about botany, medicine, and history through an interactive exploration of the villains of the plant world!

Based on author Amy Stewart's best-selling book, Wicked Plants: The Weed That Killed Lincoln's Mother & Other Botanical Atrocities, this fun and educational traveling exhibit takes visitors through the fascinating world of plants and how their amazing adaptations can be harmful to humans and animals.

Wicked Plants: The Exhibit is funded by The North Carolina Arboretum Society and the Creel-Harrison Foundation.



Patient No More: People with Disabilities Securing Civil Rights February 9 – June 7, 2020

Uncover the stories behind a moment in history when people with disabilities successfully held protests across the country to get Section 504 of the Rehabilitation Act of 1973 signed into law.

Patient No More: People with Disabilities Securing Civil Rights brings to light an overlooked moment in US history and the fight for Disability Rights.

Patient No More: People with Disabilities Securing Civil Rights is is presented by the Paul K. Longmore Institute on Disability at San Francisco State University, made possible with support from California Humanities, and traveled by Exhibit Envoy.



Lydia Larson triumphantly held a fist in the air while exiting San Francisco's Federal Building after the signing of Section 504

Courtest of the San Francisco Examiner Archive, Bancroft Library, University of California, Berkeley

FRETBOARD FESTIVAL







HOLIDAY BREAK DECEMBER 23 - JANUARY 3

Come to the KVM over break for hands-exhibits, demonstrations, free performances, and daily planetarium shows.

MINDBENDER MANSION 2 - Through January 5 WILLARD WIGAN MICROSCULPTOR - Through January 26 FILLING IN THE GAPS: THE ART OF MURPHY DARDEN - Through March 29

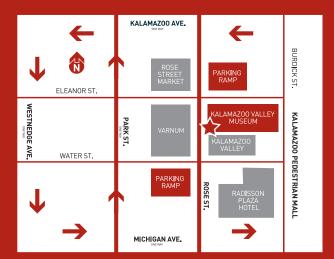
FREE Family Performances at 12 p.m.

December 27: Benjammin December 30: Gemini December 31: Joe Reilly January 2: John Dudley

Open 1 to 5 p.m. January 1!

Planetarium shows \$3/person

12 p.m. Space Shapes (FREE short show!)
1 p.m. Season of Light
2 p.m. (Mon, Wed, Fri) Ice Worlds
2 p.m. (Tues, Thurs) MI Winter Skies
3 p.m. Mystery of the Christmas Star
4 p.m. Let It Snow



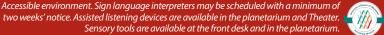
FREE GENERAL ADMISSION

Monday–Saturday 9 a.m.–5 p.m. Sunday + Holidays 1 p.m.–5 p.m. Closed: Easter, Thanksgiving, Christmas Eve, and Christmas

KalamazooVALLEY MUSEUM 230 North Rose Street

Kalamazoo, MI 49007 269.373.7990 | 800.772.3370

> www.kalamazoo**museum**.org /KalamazooValleyMuseum @kalamazoomuseum



Sensory tools are available at the front desk and in the planetarium. The Kalamazoo Valley Museum is operated by Kalamazoo Valley

Community College and is governed by its Board of Trustees

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