



Math Moves!

Experiencing ratio and proportion



In Comparing Forms, visitors learn about the geometric concept of similarity, sitting in chairs that are identical in every aspect except proportional scale. It's a math lesson in the Math Moves exhibit that doubles as a photo opp!

From the Director



Bill McElhone

Soon, the dust will be settling from the renovations of the front desk and first floor exhibit gallery. The Museum will continue to remain open, with full access to all of the exhibits, programs, and planetarium shows during this project.

The annual Storytelling Festival, February 1 – 2, 2019, features the theme of “Life in the Mitten,” and brings professional

storytellers and performers from across Michigan and beyond. As in past years, certified American Sign Language interpreters will be part of the presentation. See article on page 12 for more details.

There will be one new temporary exhibit this winter and spring, Math Moves!, which runs from February 2 through June 2, 2019. Through its interactive features, the exhibit will change how you think about math! See page 3 for “add-itional” details!

The Kalamazoo Fretboard Festival returns for its 14th year. The Play-In Contest during the January 4 Art Hop gives performers a chance to win an honorarium and a timeslot to play in the Festival. The Festival takes place March 1 – 2, 2019, and will feature performers, vendors, and a host of other programs. For more details, please see <http://fretboard.kvcc.edu/>.

The Foodways Symposium, now in its third year, is a collaborative program with the Bronson Healthy Living Campus. It will be held April 5 – 6 at the KVM and KVCC’s Culinary Allied Health building. This free event sponsored by the Kalamazoo Valley Community College Foundation will feature a wide variety of community collaborators engaged in food matters, exploring cultural aspects of Middle Eastern food, and looking at foodways inequities and much more.

The Museum is happy to announce that it will be participating in the Statewide Astronomy Night (SWAN) on Friday, April 12. This free evening program will include special guest speakers, planetarium shows, and free hands-on activities.

There is still time to visit the exhibits Bikes: Science on Two Wheels, What We Carried: Fragments and Memories from Iraq and Syria, and Kalamazoo Wings before they close.

For the full calendar of programs, please check out the Museum’s website at kalamazoomuseum.org. Consider this your open invitation to come and explore your Museum of history, science, and technology. museON, everyone!



winter**2019**
muse**ON**

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Math Moves!

Experiencing ratio and proportion

A new exhibit that opens at the Kalamazoo Valley Museum in February puts a fun focus on the topic of mathematics. In **Math Moves! Experiencing Ratio and Proportion**, visitors explore key math concepts with activities that use their brains, senses, and bodies. Through more than 20 interactive stations, Math Moves! invites visitors to work together to experience ratio, proportion, fractions, geometry, and more in a physical, cooperative, exciting, and memorable way. Visitors will explore, play, and investigate math concepts as they move through the exhibit.

The Math Moves! exhibit stimulates mathematical imaginations and builds the mathematical abilities—interest, confidence, and skills—of children and adults and makes it easier and fun for children to succeed in middle school and high school mathematics. Math Moves! encourages visitors to talk with each other about their experiences and is made accessible by incorporating audio and written labels in English and Spanish.

The Movie Ratios portion of the exhibit involves creating a stop-motion movie and experimenting with changing its speed and length.



In Partner Motion, one of the activities included in the new Math Moves exhibit, visitors can plot their motion—both fast and slow—on a graph, then compare it to the motion of a friend.



Visitors use their body and other measuring tools to explore how three proportional chairs differ in size at the Comparing Forms section.

The Scaling Shapes area involves practicing doubling the size of objects in three dimensions—height, length, and width—with varying levels of difficulty.

Visitors can compare their rate of motion to a friend's and create patterns as their movements are tracked on the screen at the Partner Motion exercise.

Kalamazoo Valley Community College mathematics instructor Kelly Digby said the new exhibit should be a boon for area math educators. "Any time we can enhance learning and make math concepts come alive, students have a better chance of grasping and retaining information," she said. "I think anything we can do to make math more fun and exciting is a great idea."

Math Moves! was developed by a partnership between the Science Museum of Minnesota; Explora, Albuquerque; the Museum of Life & Science, Durham; the Museum of Science, Boston; the Center for Research in Mathematics and Science Education (CRMSE) at San Diego State University; and TERC, Cambridge, with support from the National Science Foundation.



In the Scaling Shapes portion of Math Moves, visitors enlarge simple objects by doubling all three dimensions. Scaling Shapes is one of many activities that appeals to visitors of all ages, giving them a whole new perspective on the ways that math can be fun.

What We Carried:

Fragments and Memories from Iraq and Syria

Since the 1800s, Kalamazoo has been a place of sanctuary for immigrants. Historically, most have come because of economic opportunities, but many, more recently, have relocated to the region because of war and persecution in their homelands.

The American invasion of Iraq in 2003 led to the flight of over 4 million refugees, after a brutal dictator and industrial warfare virtually destroyed the country. Many Iraqis sought refuge in Syria, but as a civil war there began to escalate in 2012, both groups found themselves seeking asylum in Turkey, Jordan, Greece, and other countries.

In 2016, the United States took in an unprecedented 12,587 refugees from Syria and 9,880 from Iraq. The long journey here took months and years of staying in refugee camps and gathering required documentation. The majority of refugees owned nothing more than the clothes on their backs and perhaps a small memento to remind them of home.

Given the dire circumstances, what did the refugees bring with them? That question is what photographer Jim Lommasson explores in his exhibit, *What We Carried: Fragments and Memories from Iraq and Syria*. Since 2010, Lommasson has met with over 100 refugees in their US homes and has photographed treasured objects brought from Iraq or Syria. Refugees were asked to share a personal item significant to their travels to America, such as a family snapshot, heirloom dish, or childhood toy.

Lommasson photographed each artifact and then returned a 13" x 19" archival print to the participants so the items could be contextualized by the owner. Visitors will receive firsthand insight into the consideration of what objects, images, and memories might be chosen if one was forced to leave home forever. The carried objects and the intense personal stories behind them illustrate the common threads that bind all of humanity: the love shared for family, friends, and the places people call home.

"The object photos and stories can help to break down stereotypes and share our common humanity and help to build

bridges," said Lommasson. "Through my project, I realized that the objects and stories helped create an intimate empathy for those of us who saw them. The more powerful understanding is the realization of what was left behind. What was left behind was everything else: homes, friends, family, school, careers, culture, and history."

The exhibit has traveled to cities in Ohio, California, Georgia, Texas, Oregon, and Illinois, among others. Whenever possible, Lommasson worked with local refugee communities in order to supplement the exhibit with additional photographs and stories. The Kalamazoo Valley Museum is extremely fortunate to be hosting the exhibit directly before it is installed at the National Museum of Immigration on Ellis Island. The intent is to have one piece from every community, now including Kalamazoo, among those exhibited at this incredible venue.

Identifying participants in the project and also engaging Arab Americans, Muslims, and all refugee groups in the region is a task that staff at the Museum are making a priority this winter. Aiding them are several organizations, including the Islamic Center of Kalamazoo, Bethany Christian Services, which is an affiliate of the Church World Service Immigration and Refugee Program, and the Kalamazoo Refugee Resource Collaborative. These groups provide refugee families places to live, offer them language training, and help them find jobs.

Lommasson himself will be traveling from his native state of Oregon to assist with the expansion of the exhibit. Among those he will meet with during his week-long residency in Kalamazoo are three Syrian women who arrived here in 2016. Two are sisters from the city of Homs. Before the Syrian Civil War, Homs was a major industrial center and the third largest city in Syria. Fighting in Homs started in 2011 and continued through 2017, during which time much of the city was destroyed. Reports suggest that Syrian government forces rounded up civilians in Homs, who were tortured and executed in large numbers.



Arab American National Museum

About 3 million refugees have been resettled in the US since Congress passed the Refugee Act of 1980, which created the current national standard for the screening and admission of refugees into the country. During its 40-year history, the total number of refugees coming to the US has fluctuated depending on global events and US priorities. California, Texas, and New York resettled nearly a quarter of all refugees in fiscal 2016, together taking 20,738 refugees. Other states that received at least 3,000 refugees included Michigan, Ohio, Arizona, North Carolina, Washington, Pennsylvania, and Illinois.

However, the American public has seldom approved of accepting large numbers of refugees. In October 2016, 54% of registered voters said the US does not have a responsibility to accept refugees from Syria, while 41% said it does. In 2017, an executive order which has yet to be lifted suspended the admission of Syrian and Iraqi refugees.

The What We Carried: Fragments and Memories from Iraq and Syria traveling exhibition is a collaboration between photographer Jim Lommasson and the Arab American National Museum. The exhibition is funded by The Oregon Regional Arts Council, the Oregon Arts Commission, Ruth Ann Brown, and the Arab American National Museum.

How LES PAUL and GIBSON *Revolutionized the Music World*

Have you seen the Les Paul MAGNETIC MUSIC exhibit that was installed in the Museum's Innovation Gallery last year? Wisconsin-born Les Paul was a gold-record musician, innovative thinker, and inventor of the solid-body electric guitar. He is the only person to be in both the Rock and Roll Hall of Fame and the National Inventors Hall of Fame.

Les often described his childhood as full of curiosity. How did a person's voice come through the radio? Why did holes in a roll of paper create songs on a player piano?

Teenage Lester played his harmonica and guitar at every venue around his hometown of Waukesha. Although he loved his guitar, he did not like how the guitar body vibrated when he plucked the strings. What if he made a guitar out of something solid, something very dense that would not vibrate? He found a piece of discarded train rail. He placed the microphone from his mother's candlestick phone on the rail, stretched a guitar string down the length, and held it in place with two railroad spikes. Then he attached it to a radio. Voila, the first solid body electric guitar! The sound was amazing. Les would joke years later saying that you could pluck the string, go out for a sandwich, and the string would still be vibrating

when you got back. Though impractical, that early invention led to Les Paul's famous Log, a 4 x 4 with an Epiphone neck and homemade pickups that was strung like a guitar. The design may have been crude, but the concept was futuristic.

In 1941, he presented the Log to Gibson with the proclamation that the solid body electric guitar was the future for guitars. It took 10 years of Les pestering Gibson, and finally Leo Fender's solid body electric guitar that catapulted Gibson in 1952, to build Les Paul's vision of what we now know as the Gibson Les Paul solid body electric guitar.

In the late 1940s, Les Paul invented a series of recording techniques that puzzled and revolutionized the industry. His "New Sound" introduced phase shifting, sound-on-sound, echo, reverb, slapback, close miking, delay, and variable speed. His techniques for creating echo were so respected that Capitol Records recruited Les to design the echo chambers for its iconic Hollywood studios. Les also designed the original recording studios for Capitol.

And there is more. Check out Les Paul, the music industry game-changer, at www.lespaulfoundation.org.

The Museum's annual Kalamazoo Fretboard Festival

A celebration of luthiers and other stringed instruments, including the guitar, is now in its 14th year. The Play-In Contest during the January 4 Art Hop gives performers a chance to win an honorarium and a timeslot to play in the Festival. The Festival takes place March 1 – 2, 2019, and will feature performers, vendors, and a host of other programs. For more details, please see <http://fretboard.kvcc.edu/>.



*Les Paul's Rail, circa 1931
Printed with permission of the Les Paul Foundation*



Les Paul and Ted McCarty examine a Gibson Les Paul solid body electric guitar, 1950s.

*Les Paul and his Log. He added wings purely to make it look like a guitar.
Printed with permission of Les Paul Foundation*

American Chemical Society Grants Prestigious National Historic Chemical Landmark Status To

KALAMAZOO SCIENTISTS

As noted in the last issue of museON, the American Chemical Society (ACS) has granted prestigious National Historic Chemical Landmark status to the steroid chemistry achievements of Kalamazoo scientists who worked at the Upjohn Company from 1950 to 1990. "Each Landmark designation represents a pioneering achievement that has contributed to society and the chemical profession," said Alan Rocke, chair of the National Historic Chemical Landmarks (NHCL) Subcommittee. "Upjohn's research in steroid medicines is a prime example, because it enabled the firm to make low-cost, high-quality treatments for debilitating diseases like rheumatoid arthritis. The company's innovations also contributed to the launch of the biotech industry."

The ACS established the NHCL program in 1992 to enhance public appreciation for the contribution of chemical sciences to modern life. To date, 85 Landmark designations have been granted. This designation is the first for west Michigan and only the fourth for the entire state.

"The field of chemistry has transformed our lives, from advancing medicine and industry to creating new products such as steroid medicines, penicillin, plastics, and more," said Steve Secreast, Kalamazoo ACS Local Section 2018 Chairperson. "A public dedication event and other activities are being planned to commemorate the Landmark designation. Plans include a banquet May 16, 2019, honoring the steroid chemistry achievements, a chemistry symposium, and a dedication ceremony on May 17, 2019, to place a commemorative bronze plaque on permanent display at the Kalamazoo Valley Museum."

These activities are a collaboration among the Kalamazoo ACS Local Section, the ACS NHCL Subcommittee, Apjohn Group LLC, Kalamazoo Valley Museum (KVM), Kalamazoo Valley Community College (KVCC), Western Michigan University (WMU), Kalamazoo College (K College), Pfizer, Inc., Zoetis, Inc., and local sponsors.

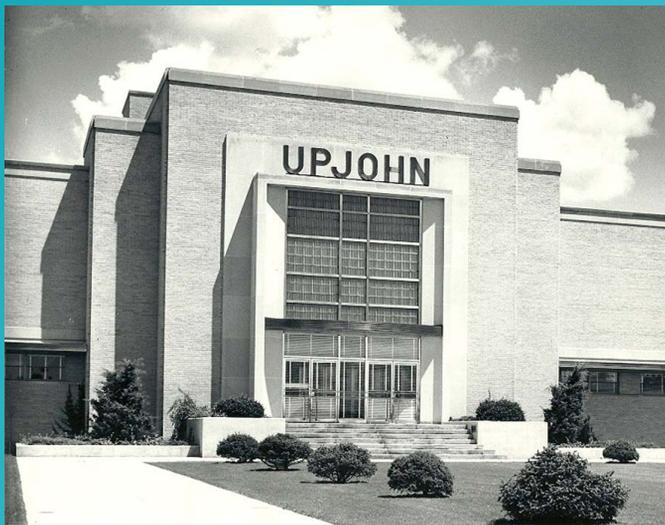
Mention steroids today, and many people think of performance-enhancement drugs. Mention steroids in 1949, however, and most people thought of the new medical breakthrough of corticosteroids,

which could successfully treat debilitating inflammatory diseases like rheumatoid arthritis. The discovery that steroid compounds like cortisone and hydrocortisone were safe and effective medicines was welcome news to millions of people. Unfortunately, in 1949, those medicines were only available from natural extracts or very lengthy manufacturing processes, making them scarce and prohibitively expensive.

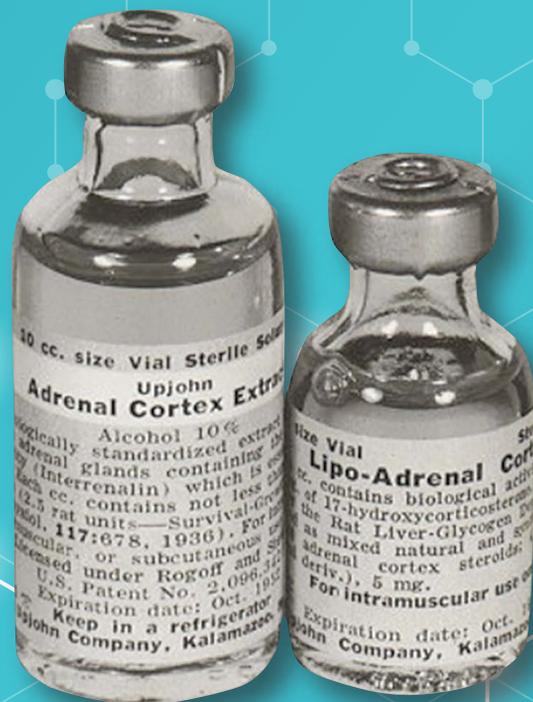
"To make large volumes of the new corticosteroid medicines available at a reasonable cost, the Upjohn Company in Kalamazoo committed to an unprecedented expansion of an already established background in steroid chemistry work in the late 1940s," said Donald R. Parfet, retired Upjohn officer and great grandson of Upjohn Company founder William E. Upjohn. "In 1950, the company started what became an ongoing program of steroid chemistry innovation. The commercial production of beneficial corticosteroids and later general steroid medicines was provided to the world through a continuous string of chemical and microbiological discoveries and inventions by Kalamazoo scientists."

Upjohn scientists developed a process for the large-scale production of cortisone. The oxygen atom at the 11 position in the molecular structure of this steroid is a requirement, but there are no known natural sources. The only method for preparing this drug prior to 1952 was a lengthy synthesis starting from cholic acid isolated from bile. In 1952, Upjohn scientists Durey Peterson and Herbert Murray announced that their development team was able to introduce this crucial oxygen atom by fermentation of the steroid progesterone with a common mold. Over the next several years, chemists headed by John Hogg adapted this microbiological oxidation into a process for preparing cortisone from the sterol stigmaterol. Another key step, the efficient extraction of stigmaterol from soybeans, was engineered by J. Ward Greiner's team.

Following on the successful syntheses of cortisone and hydrocortisone, the steroid chemistry work was further advanced to produce improved, later-generation medicines like prednisone and prednisolone.



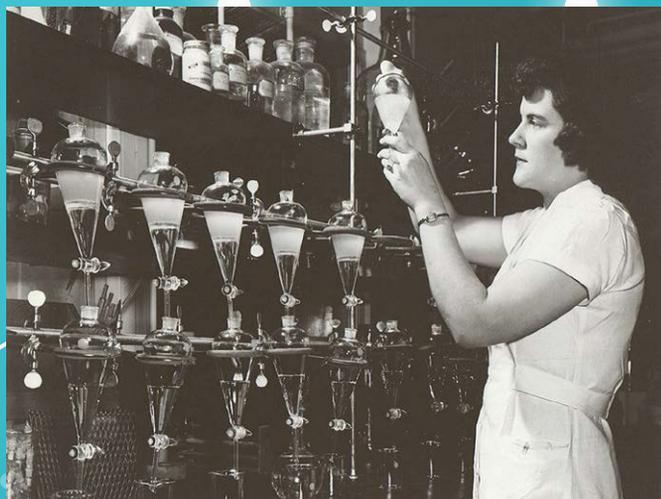
Upjohn Company's 1946-1952 Kalamazoo site for steroid manufacture



Adrenal cortex extractables from the Upjohn Company, pre 1949



Early cortisone research (1952), Murray-Peterson Team



Early cortisone research (1952)

After a series of mergers and changes, Pfizer acquired the former Upjohn Company, at the time Pharmacia, in 2003. Pfizer has maintained Upjohn's large Kalamazoo manufacturing site, which is today the single largest integrated chemical and pharmaceutical site in its portfolio. The Upjohn Company's history of innovative research and development is often referenced by the strong pharmaceutical brands it created throughout its more than 100-year history. Many patients and physicians today continue to benefit from steroid medicines such as Depo-Medrol, Solu-Cortef, Depo-Provera, and Cortaid, as well as other brands like Xanax, Motrin, Cleocin, Rogaine, and Kaopectate. Today, society benefits from continuing innovations by Kalamazoo

scientists not only at Pfizer, but also at nearby companies like Bridge Organics, Kalxsyn, Kalsec, and many others, and local colleges such as K College, KVCC, and WMU.

The Kalamazoo Valley Museum is proud to be able to offer a permanent home for the ACS National Historic Chemical Landmark plaque. For more information about the American Chemical Society and the National Historic Chemical Landmark program, visit www.acs.org and www.acs.org/landmarks. For a schedule of local events associated with the May 2019 activities, visit www.kalamazooacs.org/events/

Astronomy Event Unravels Mysteries of **THE NIGHTTIME SKY**

Michigan stargazers will have the opportunity to look skyward and partake in free astronomy activities around the state, including those at the Kalamazoo Valley Museum, on Friday, April 12, 2019. As part of Michigan State University's Science Festival, Statewide Astronomy Night (SWAN) has become one of the most popular events that numerous planetariums, museums, and observatories across the state have partnered with since 2016.

Organized by the Michigan State University Science Festival, there were 13 different locations last year that offered visitors the opportunity to attend free programs such as planetarium shows, tours, guest speaker talks, hands-on learning, and observing opportunities. The 2019 event is just as ambitious and again includes participation by the Kalamazoo Valley Museum planetarium. This year's MSU Science Festival will be April 5 through 20, 2019.

This year's SWAN event at the KVM will take place from 4 to 8:30 p.m. and includes a variety of hands-on opportunities, information about dark sky sites in Michigan to observe from, a children's program, and opportunities to see several shows in our planetarium. One of the programs under the dome will feature stargazing for families with tips about how to learn and enjoy the beauty of a starry night.

In addition, two featured speakers have been lined up. Eric Schreur, former KVM Planetarium Coordinator, will talk about how to take pictures of the night sky, and Glen Swanson, Founder of Quest Magazine and former NASA Historian, will talk about Michigan's ties to the Space Program. The presentations will be followed by a showing of Dawn of the Space Age in the planetarium in honor of the upcoming 50th anniversary of the first Moon landing, which occurred in July 1969.

Michigan has a diverse offering of astronomical resources that include the dark sky preserves, observatories, planetariums, and astronomy clubs for people of all ages and abilities. Through MSU's Science Festival, SWAN has united institutions from both peninsulas with the goal of connecting science

and an appreciation of the night sky. "We invite all ages and aim for experiences that dazzle, delight, educate, inform, and spark curiosity," said Roxanne Truhn, MSU Science Festival Coordinator. "Looking up at the night sky inspires timeless and universal questions about our world. We want to inspire everyone to explore and ask questions, and learn what scientists are doing to answer these questions."

"Astronomy is one of the oldest sciences and directly led to the formation and success of human civilization," said Kalamazoo Valley physics instructor Trevor Stefanick. "Our ancestors used it to predict planting and harvesting seasons, navigate on long voyages, and even as a 'book' to pass on stories and lessons! Today, the average person has lost the connection with the stars that our ancestors thrived on, and it can even seem intimidating to learn about astronomy. The SWAN program is a great way to dip your toes in, to further your knowledge, or even to help introduce others to astronomy!"

The theme for this year's Festival is "Unraveling the Mysteries," and like the KVM's mummy, nature may invoke a sense of curiosity and a desire to see what else might be revealed. Science is a logical process that is used to answer questions about natural phenomena that draws from a body of information gained from experiences that can be verified or tested. This year's SWAN at the KVM is an opportunity to "unwrap" some of the layers, including understanding how to use a telescope, recognizing constellations, and learning why the Moon goes through phases. SWAN is a FREE opportunity for children, families, and adults to be curious and peek beyond the atmosphere of our planet to ask about other wonders in our universe.

We hope to see you on April 12 and encourage you to check the opportunities that are planned as part of Michigan State University's Science Festival. Be sure to visit www.kalamazoomuseum.org for specific times and activities for the KVM's SWAN. More information on the Statewide Astronomy Night and the 2019 MSU Science Festival is available at sciencefestival.msu.edu.



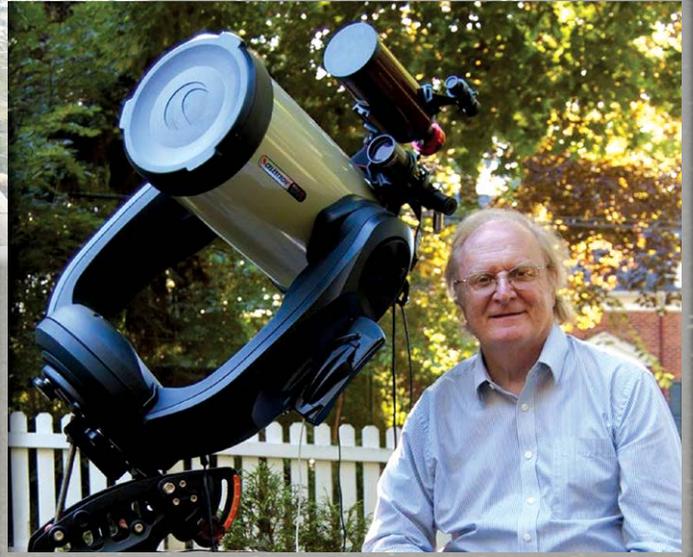
Glen Swanson

**About Our SWAN Speaker:
Glen E. Swanson**

Glen E. Swanson has had a lifelong interest in the history of spaceflight. After working in education and the aerospace industry, he founded Quest, the world's only scholarly journal dedicated to the history of spaceflight, now in its 25th year. Glen served as the chief historian of NASA's Johnson Space Center, where he managed their oral history program to help preserve the stories of the half a million people who worked in support of the Apollo program. His award-winning book, *Before This Decade Is Out: Personal Reflections on the Apollo Program*, now entering its third printing, contains a selection of those oral histories. After leaving NASA, Glen returned to Grand Rapids, where he continues to research and write about space history.

**About Our SWAN Speaker:
Eric Schreur**

Managing the Kalamazoo Valley Museum's planetarium from 1983 until his retirement in 2015, Eric Schreur has long drawn inspiration from the night sky. For decades, he has helped others find inspiration from that same source, in part through his stunning images of astronomical subjects.



Eric Schreur



STORYTELLING

-2019-

FESTIVAL

LIFE IN THE MITTEN

Life in the Mitten celebrates Michigan's past and present with stories and songs during the Seventh Annual Storytelling Festival, February 1 and 2, 2019. Discover the voyage from Montreal to Michigan with Genot "Winter Elk" Picor. Picor is a professional storyteller, musician, and feature writer for *The Great Lakes Pilot* and *The Mackinac Journal*. Benjamin Thompson becomes Sheepshank Sam, an old time Michigan lumberjack sharing stories of how trees were felled, cut into logs, skidded out of the woods, decked on sleds, stacked along rivers, and floated to saw mills throughout Michigan during the late 1800s. Willie W. Payne narrates stories and struggles of southern fugitive slaves to escape captivity and how Michigan abolitionists and free blacks assisted them on the Underground Railroad.

Adam Mellema, storyteller, actor, and producer, will share *Remembering World War II*, stories of those who were there in their own words. Meet Meyer Fishbein, a slacker engineer who dreamed big and made the army proud. Evelyn Sholley—Mellema's own grandmother—who found adventure and a husband, and James A. Tinker. Their stories come alive with familiar tunes as the audience watches Mellema age on stage from 18 to 75. Jenifer Strauss of *Story Be Told* adds her program *Michigan, My Michigan* to the festival's lineup. Her collection of Great Lakes stories includes lumber-era

legends, mining stories, shipwreck and lighthouse tales, mysteries, ghost stories, traditional how and why tales, and personal narratives based on a lifelong love affair with the Mitten State.

Local storyteller Robin Nott adds to the mix with his program *Tall Timber and Blue Waters*, featuring stories and songs from Michigan's lumbering and Great Lakes lore. Allison Downey, frequently featured at *The Moth* in Ann Arbor, presents songs and stories of Michigan. Nott and Downey will kick off the Festival Friday night during *Art Hop*.

The Storytelling Festival, geared for all ages, will have a lunchtime concert by singer-songwriter and author Carl "Bearfoot" Behrend on Saturday. Bring a lunch or purchase one onsite. A full lineup of Michigan authors and books on Michigan for all ages will be available for purchase during *Author Breaks* between the storyteller presentations Saturday.

Don't miss a stroll through the Kalamazoo Valley Museum's history gallery, *Kalamazoo Direct to You*. Discover the history of Southwest Michigan through the *Community We Created*, the *Places We Built*, and the *Dreams We Shared*.



Genot Picor



Benjamin Thompson



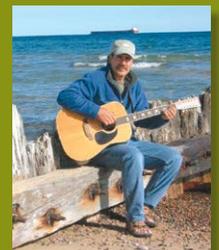
Willie W. Payne



Adam Mellema



Robin Nott



Carl Behrend

A Pure and Hallowed SUMMIT

Mountain Home Cemetery on West Main Street, started by a group of trustees March 28, 1849, is full of artistic and historic life. Granite, marble, and even white bronze (a.k.a. zinc) markers in the shape of obelisks, spheres, and urns dot the hilly grounds. A lamb marks a child's grave, and remnants of plot curbing show a grouping of family graves. Symbolic decoration of the markers adds additional meaning and depth to the era people were laid to rest.

The rolling landscape of the cemetery originally totaled 17 acres and was purchased in 1850. The next year, visiting Detroit W. H. Coyle wrote a poem about the cemetery, noting that "The velvet green sod" appeared carpetlike, as if woven by "Unseen fairies' fingers." In 1866, Temple B'Nai Israel purchased land for a Jewish Cemetery adjoining Mountain Home. Early cemeteries in the US were essentially park spaces created away from city centers. The early arbiters of the 'rural cemetery' movement created burialscesapes with winding roads and lovely views, fashioning open-air sculptural museums with ample greenspace. The platting of Mountain Home is no exception, playing up the hills instead of fighting them, with winding paths throughout.

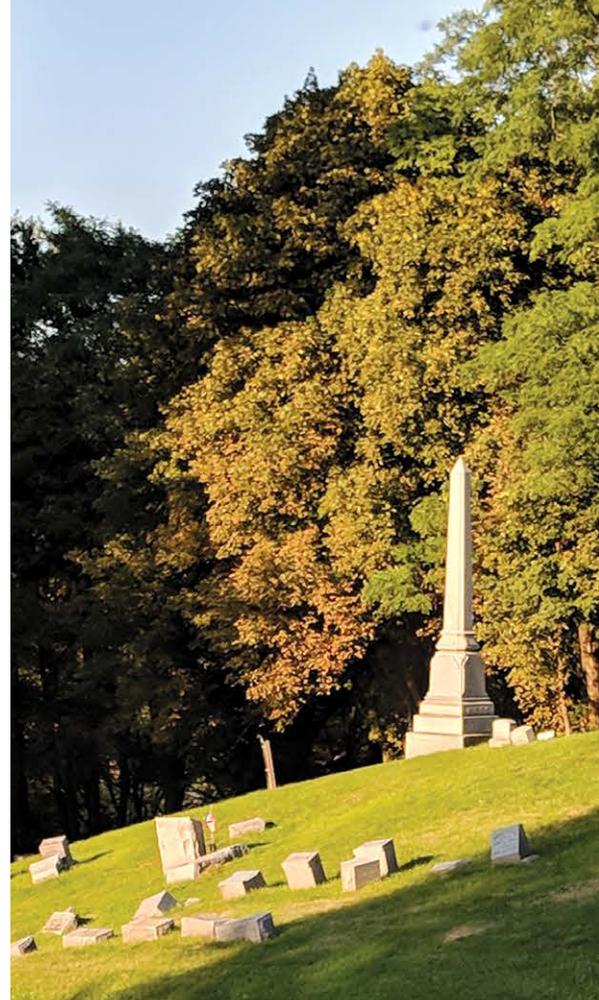
This early park atmosphere led to some issues. Horseracing, raucous picnics, and hunting were popular activities, prompting the trustees to create cemetery rules. Guidelines were put in place for lot maintenance and décor, as well as visitor restrictions. Trustees controlled entrance to the cemetery using admission tickets, and only owners of lots could enter the grounds on Sundays or holidays. Much of the ability to enforce these restrictions came in the form of the sexton.

The earliest listing of a sexton at Mountain Home dates to 1856. William Oliver is the first listed, and was a skilled gardener and landscaper. Early sextons lived in a frame house on the property, near the entrance. 1892 marked the completion of the current Richardsonian Romanesque building, which became the central location for cemetery business as well as the flower shop which utilized greenhouses on the property.

With advancements in medicine, a separation began to form between the living and the dead. In the early 1900s the convivial atmosphere of cemeteries had shifted with changing social norms, and a cemetery visit became a more somber affair. In 1940, the City of Kalamazoo took on administration of Mountain Home and began planning work, including drainage and improvements to pathways.

Today at 170 years old, Mountain Home Cemetery is still an active burial ground, with over 7,200 burial sites. In recent years, weather, erosion, and vandalism have led to a loss of some of the beautiful markers. In May of 2018, the Kalamazoo Historic Preservation Commission convened a cemetery inventory day at Mountain Home. Volunteers reported on grave marker condition, type, material, and location, and photo documented each grave marker. If you are interested in finding out more about this continuing project, email gravesquadkzoo@gmail.com.

Tipped and broken markers create trip hazards and other safety concerns. Before heading into the cemetery, check out the cemetery safety materials available on the city of Kalamazoo's website: www.kalamazoo.org/docman/public-services/cemeteries/555-cemetery-safety/file.



Mountain Home Cemetery, 1894



Mountain Home Cemetery survived the 1980 tornado, but not without significant damage.

Image courtesy of the City of Kalamazoo Department of Records Management, Research, and Archives

The Food We Carried: MIDDLE EASTERN FOODWAYS IN MICHIGAN



Kalamazoo's Third Annual Foodways Symposium will focus on Middle Eastern culture, cooking, and food. The event takes place April 5 – 6 at the Kalamazoo Valley Museum and the Bronson Healthy Living Campus of Kalamazoo Valley Community College. The Kalamazoo Foodways Symposium inspires and empowers the Greater Kalamazoo community to honor our agricultural history and heritage cuisines, celebrate good food, and work together to build a just and healthy future for all.

The Symposium continues Saturday with workshops, conversations, and hands-on cooking demonstrations for all ages at the Kalamazoo Valley Culinary & Allied Health Building. Aghajanian will team up with local chefs to bring authentic recipes to life. Local experts and Kalamazoo Valley culinary students and faculty will present sessions on various food and farming topics throughout the day. All Saturday activities are free, family-friendly, and open to the public.

The Museum will host keynote speaker Liana Aghajanian in the Mary Jane Stryker Theater at 6 p.m. on Friday night. A journalist specializing in storytelling and international reporting, Aghajanian has focused much of her work on marginalized communities, immigration, displacement, and identity. Recently, she has been documenting the Armenian experience in America through food. Her project, "Dining in Diaspora," traces the intersection of cuisine and agriculture with genocide, immigration, identity, and more.

Aghajanian's writings have appeared in the New York Times, The Guardian, BBC, Al Jazeera America, Newsweek, the Los Angeles Times, and several other national and international publications. In 2015, she won herself a house in Detroit by winning the "Write A House" residency competition.

For the first time, organizers are introducing a companion event, a Summit on Racial Equity in the Food System, to be held during the day on Friday, April 5, in downtown Kalamazoo. This one-day, action-focused event will highlight the various ways race intersects with labor practices, business ownership, and access to land in Michigan. For more information or to join the growing coalition of community partners who are planning this event, email goodfoodbattlecreek@gmail.com.



The Foodways Symposium is a collaboration between the Museum and the Bronson Healthy Living Campus. The program and activities provide historical, cultural, and practical insights into food and food systems in Southwest Michigan. It serves as a convening point for students, practitioners, and the community to come together to build a strong, vibrant local food system.



Above: Liana Aghajanian

Left : Participants in last year's Foodways Symposium try their hand at a new recipe.

WHAT IS IT?



1 This tool could determine if you had been a victim of fraud. What is it?



2 I might be a little leathery and rough looking, but I'm pretty important. Great care was taken in preparing me. What am I?



3 This incredible invention produced something invisible that revealed previously unseeable things. What is it?

3. Coolidge X-Ray tube. When you take all of the air out of this tube and shoot electrons at the target in the center, an invisible "new kind of ray" is produced that can pass through solid objects. Scientists named these powerful rays "X-rays" to symbolize their mysterious and unknown nature. Today, we have a much better understanding of the power and dangers of using X-rays.

2. A mummified lizard. Animals held great significance to ancient Egyptian culture and religion. As a result, just as great care was taken in mummifying humans, animals were also preserved for the afterlife. Some may have been pets of mummified people, while others may be offerings to gods or goddesses. A mummified lizard may have been an offering to the god Atum.

1. Counterfeit coin detector. This small scale was used in the 1800s to determine the authenticity of British Sovereign coins. Counterfeit coins tended to be larger and lighter than real ones, making the scale unbalanced, thus proving that they were fake. Authentic coins balanced to fit snugly through the slots. the scale and were the proper thickness

SPECIAL EXHIBITIONS

FIRST FLOOR

WHAT WE CARRIED: FRAGMENTS AND MEMORIES FROM IRAQ AND SYRIA

DECEMBER 16, 2018 – APRIL 15, 2019

Documentary photographs of personal objects carried by Iraqi and Syrian refugees on their journey to America. Images paired with stories, the exhibit showcases these chosen items and the cherished memories of the refugees' homeland.



THIRD FLOOR



BIKES: SCIENCE ON TWO WHEELS

SEPTEMBER 22, 2018 – JANUARY 6, 2019

The history and evolution of the bicycle are revealed through interactive exhibits and over 40 bikes on view. Visitors will enjoy the science behind this invention!

This exhibit is organized by Carnegie Science Center in cooperation with the Bicycle Museum of America.

Math Moves!

Experiencing ratio and proportion

MATH MOVES: EXPERIENCING RATIO AND PROPORTION

FEBRUARY 2 – JUNE 2, 2019

Math Moves is a multi-sensory interactive exhibit that encourages visitors to set up, measure, describe, and compare ratios and proportions in a fun and active approach to problem solving.

PLANETARIUM

MONDAY – FRIDAY AT 11 A.M.;
SATURDAY AT 1 P.M.

January 5 – March 15

Polaris: The Space Submarine and the Mystery of the Polar Night **NEW**

A penguin and polar bear investigate the seasons.

March 16 – June 14

Did an Asteroid Really Kill the Dinosaurs?

Did a space rock really wipe out the dinosaurs?

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

January 5 – March 14

MI Winter Skies!

Learn to read a star map and enjoy our winter skies.

March 17 – June 13

The First Stargazers

How did the Sun and stars inspire the first stargazers?

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

January 6 – March 15

The Secret of the Cardboard Rocket

Take a magical voyage through the solar system.

March 17 – June 14

In My Backyard

Explore Fred Penner's backyard through story and song.

DAILY AT 3 P.M.

January 5 – March 15

Invaders of Mars

What have we learned from probes sent to Mars?

March 16 – June 14

Dinosaurs at Dusk

Adventure back in time to the age of the dinosaurs.

SATURDAYS AT 4 P.M.

January 5 – March 9

Pink Floyd's The Wall

Experience "The Wall" like never before.

March 16 – June 8

Led Zeppelin

Classic Zeppelin songs pair with amazing graphics.

SUNDAYS AT 4 P.M.

January 6 – February 3

The Dark Matter Mystery **NEW**

What keeps the universe from breaking apart?

February 10 – March 10

Hot and Energetic Universe

Invisible wavelengths of energy tell the story of our universe.

March 17 – April 21

Out There: The Quest for Extrasolar Worlds

Explore planets beyond our solar system.

April 28 – June 9

From Earth to the Universe

Enjoy an overview of astronomy with stunning imagery.

All planetarium shows are \$3/person

MARY JANE STRYKER THEATER

SUNDAY SERIES

Join us for science and history programs on second and fourth Sundays at 1:30 p.m. **FREE**

January 13

Light in the Darkness

Benje Daneman's SearchParty

January 27

The K-Wings in the International Hockey League

Stephen Doherty

February 10

A Change in the Weather

Keith Thompson

February 24

The Douglass Community Association: Then and Now

Sidney Ellis

March 10

Unraveling the Mysteries

Dr. Deborah Coates

March 24

Words That Damage the Sisterhood

Coty Dunten and LaSonda Wells

April 14

Most Unusual Products of The Upjohn Company

Jeremy Winkworth

April 28

From Undercover to OutFront, the Story of Kalamazoo's LGBTQ Community

Denise Miller

ART HOP FRIDAYS

January 4, 5 – 9 p.m.

Fretboard Festival Play-In Contest

Talented area musicians compete for a chance to perform in the Fretboard Festival!

February 1, 5 – 8 p.m.

Storytelling Festival

Life in the Mitten will feature Michigan stories. Opening Friday with stories and songs from Robin Nott and Allison Downey, the fun continues on Saturday.

Special planetarium music light show! 7 p.m. Pink Floyd's The Wall, \$3/person

March 1, 5 – 9 p.m.

Kalamazoo Fretboard Festival Kickoff

Stringed instrument makers, music lovers, and fans of all ages won't want to miss the kickoff to this fourteenth annual festival with Shari Kane & Dave Steele. The Festival continues on Saturday with more performances and workshops!

April 5, 5 – 8 p.m.

Foodways Symposium Keynote Speaker

Kick off Friday night with the keynote speaker and light food. The symposium will continue Saturday at KVCC's Culinary and Allied Health building.

FAMILY PROGRAMS

January 26, 11 a.m. – 2 p.m.

Chili Cook-off

The Kalamazoo Valley Museum joins the Chili Cook-off with the help of the Food Bank of South Central Michigan and chefs from Firekeepers Casino. Come in for a taste of a new vegan black bean and corn chili!

SPRING BREAK HANDS-ON HAPPENINGS

1 – 4 p.m. daily
Numbers on Parade

April 1 – A moving counting adventure of elephant style, strength, and swagger.

April 2 – A colorful exploration of how “one” takes a stand against bullying.

April 3 – Partake of a spy mystery full of numbered proportions.

April 4 – Discover what gives numbers their shape and value.

April 5 – Primates, portraits, and counting identifiable differences.

April 2, 12 p.m.
Chautauqua Express Concert

April 3 or 4, 11 a.m. – 12 p.m.
4th Wall Theatre Workshop

Interactive workshops for children of all abilities. Space is limited, registration suggested.

SPRING BREAK PLANETARIUM SHOWS

Daily, April 1 – 5, \$3/person

11 a.m. Did an Asteroid Really Kill the Dinosaurs?

12 p.m. Space Shapes **FREE**

1 p.m. SpacePark 360

2 p.m. The First Stargazers

3 p.m. Dinosaurs at Dusk

SENSORY SATURDAYS

Join us for a wide variety of activities during the day and alternating family performances and adult lectures at 11 a.m.

January 19

Reinforcement: How Can I Help Make This More Fun?

Strategies for repetition, rewards, and the tricks of the trade that really work.

February 16

Joe Reilly in Concert

Enjoy songs, stories, and crafts about peace.

March 16

When Will My Child Be Ready for a Play Date?

How do you prepare all those involved for a play date?

April 20

Gemini in Concert

Create, play, and hear stories about musical instruments.



CHILDREN'S LANDSCAPE

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 times during spring break.

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.

January/February
Life in Michigan

Explore Michigan – from the wildlife to the lakes, streams, and forests.

March/April
Numbers and Counting

Counting toys, clocks, measuring tools, and puzzles will help you learn your numbers.

May/June
Read All About It

Puppets, puzzles, and toys will all be matched to a picture book for creative play.

CIRCLE TIME PROGRAMS

Monday – Friday at 10 a.m.

Saturdays at 11 a.m.

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.



INNOVATION LAB ACTIVITIES

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

ART OF ANIMATION PANEL

March 23, 10 – 11 a.m

Patrick Stannard, Powerhouse Animation Studios, will lead a panel discussion on animation.

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.

FESTIVALS AND SPECIAL EVENTS

Fretboard Festival Play-In Contest

January 4, 5 – 9 p.m.

Local musicians compete for slots in the fourteenth annual Fretboard Festival during this public performance.

Storytelling Festival: Life in the Mitten

Friday, February 1, 5 – 8 p.m.

Saturday, February 2, 10 a.m. – 5 p.m.

This all-ages festival will feature professional storytellers, musicians, and authors sharing about life in Michigan. See our website for details.



Fretboard Festival

Friday, March 1, 5 – 9 p.m.

Saturday, March 2, 10 a.m. – 6 p.m.

Instrument designers, workshops, and performances from area musicians are featured both days. See our website for details.



Foodways Symposium 2019

The Foods We Carried: Middle Eastern Foodways in Michigan

Friday, April 5, 5 – 8 p.m.

Saturday, April 6, 9 a.m. – 5 p.m.

Kick off Friday night at the Kalamazoo Valley Museum with the keynote speaker and light food. The symposium will continue Saturday at KVCC's Culinary and Allied Health building with classes and demonstrations. See our website for details and registration.

Statewide Astronomy Night (SWAN)

April 12, 4 – 8:30 p.m.

Celebrate astronomy with this all-ages festival featuring hands-on activities, free planetarium shows, and thought-provoking speakers.

New Acquisition

SANFORD D. EARL'S 1861 POCKET DIARY

Diaries and journals can tell us amazing things about people's lives. We can discover the writers' innermost feelings, their chores and work life, the cost of food and rent, and more of what daily life was like. Sanford D. Earl's diary is an example of detailed diligence. This "Pocket Diary," published in New York, measures 7 inches high by 3 ½ inches wide. With spaces for writing about each day and a small pocket in the back to keep receipts, notes, etc., it contains an entry for each day of the year 1861.

We know from census records that Sanford was born in New York around 1830. Somewhere between 1851 and 1860, he arrived in the Cooper Township area. The 1860 Federal Census lists 30-year-old Sanford living with his wife, Elizabeth, age 29, and son, Francis, age two. His occupations throughout his life included wagon maker, carpenter, and farmer. From some of the notations in his diary, you can see him working on chores and tasks that relate back to both daily life and carpentry. He spent January 1 – 6, 1861, splitting wood. He notes taking wood to his father's house and into Kalamazoo to sell. It's these details that are key to learning how people during this time period were moving about and how long it took them get places.

Along with noting his daily work, he also documents the people he meets with. His brother, Stephen, comes by often, many times staying the night. Sanford notes when

neighbors come over and when he goes to help a neighbor raise a barn or sit with them and their sick horse. He notes his children's illnesses also, writing down that son Francis had scarlet fever and a swollen neck. On Saturday, March 9, he sends for Dr. William Weyburn, who lived in the Village of Kalamazoo and had offices on North Burdick Street. Sanford heads to his parents' house to get flax to make a poultice for Francis' neck after the doctor's visit. He continues to track his family's illnesses, noting ups and downs and remedies sought out.

Socially, much of his interaction with people involves working on neighboring farms and visiting people for business. Sanford does mention a dance being held at W.S. Delano's farm on Tuesday, January 22, but does not report on whether or not he had a good time. William S. Delano, a neighboring farmer, was an early settler in Cooper Township, and today, the Delano farmstead is part of the Kalamazoo Nature Center.

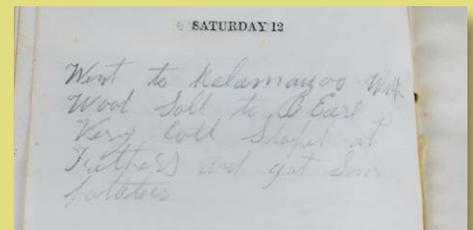
The information in this diary is invaluable. With 365 days to look at, it will take some time to comb through the wonderful information Sanford Earl left behind. There is no telling what the diary will reveal for us about life in Kalamazoo County in 1861.



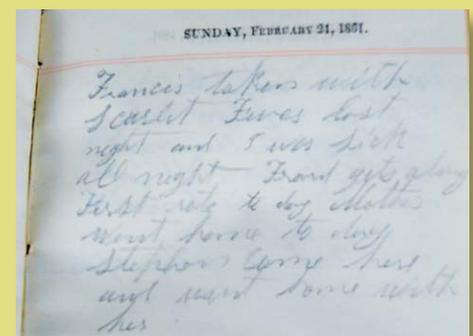
Sanford Earl, c. 1860



Diary from 1861



Sections from 1861 diary



JUNETEENTH CELEBRATION

June 15, 2019, 1 – 4 p.m.

A celebration to commemorate the history of Juneteenth. Free and open to all ages, this family-friendly event will include live performances, vendors, visual arts, hands-on activities, and more.

Juneteenth is the oldest known celebration commemorating the ending of slavery in the United States. Dating back to June 19, 1865, Juneteenth was established by African-Americans and is observed annually in remembrance of emancipation.

Amusement Park Science and TEAM UP!

Explore the Science of Sports

June 15 – September 8, 2019

Explore how our favorite amusement park rides work, and then test your skills in sports such as basketball, soccer, tennis, and football while learning about math and physics.

Amusement Park Science and TEAM UP! Explore the Science of Sports were created and are circulated by Discovery Center Museum, Rockford, Illinois. The exhibit was made possible with funds provided by the National Science Foundation.

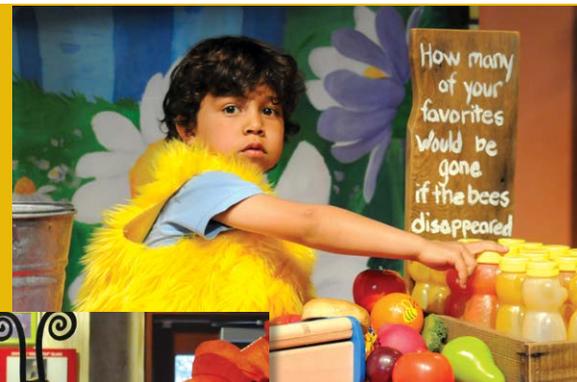


THE SECRETS OF BEES

June 1 – September 30, 2019

Learn about the lives of bees, their importance in our world, and the influence humans have on them.

This exhibit is created by Imaginarium.



Sensory Saturdays

The Kalamazoo Valley Museum welcomes families with children on the autism spectrum with this new series!

Interactive Lecture Series by Specialists from the Center for Autism and Related Disorders

Jan 19, 2019

11 a.m. – Reinforcement: How Can I Help Make This More Fun?

Mar 16, 2019

11 a.m. – When Will My Child Be Ready for a Play Date?

Family Days

Feb 16, 2019

11 a.m. – Joe Reilly Concert

12 p.m. – *Little Star That Could**

1 p.m. – *Polaris: The Space Submarine and the Mystery of the Polar Night**

1 – 3 p.m. – Peaceful Stories

1 – 4 p.m. – Peaceful Crafts

Apr 20, 2019

11 a.m. – Gemini Concert

12 p.m. – *Soothing Celestial Sights & Sounds**

1 p.m. – *Did an Asteroid Really Kill the Dinosaurs?**

1 – 3 p.m. – Musical Stories

1 – 4 p.m. – Musical Crafts

* 12 p.m. and 1 p.m. planetarium shows at a lower volume. All planetarium shows \$3/person

FESTIVAL SEASON IS HERE AGAIN!



LIFE IN THE MITTEN

Friday and Saturday, Feb 1 – 2

This all-ages festival features professional storytellers, musicians, and authors. This year's theme: Life in the Mitten.

Festival admission and all performances and workshops are FREE. See our website for more details.



Friday and Saturday, Mar 1 – 2

Instrument designers, workshops, and performances from area musicians, now in its 14th season!



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

Kalamazoo VALLEY™ Museum

230 North Rose Street
Kalamazoo, MI 49007

269.373.7990 | 800.772.3370

www.kalamazoomuseum.org

[/KalamazooValleyMuseum](https://www.facebook.com/KalamazooValleyMuseum)

[@kalamazoomuseum](https://twitter.com/kalamazoomuseum)

Accessible environment. Sign language interpreters may be scheduled with a minimum of two weeks' notice. Assisted listening devices are available in the planetarium and Theater. 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

