

# newscience

NEWS FOR MEMBERS AND FRIENDS OF THE SAINT LOUIS SCIENCE CENTER

SPRING 2021



**ONE BUILDING.**

**Celebrating  
30 years.**



**30<sup>TH</sup> ANNIVERSARY  
SPECIAL EDITION**

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## Connect with curiosity.

Dear Saint Louis Science Center Friends,

We've arrived at a new year, and while the world and our community still face many challenges, I'm heartened and encouraged by the progress that we continue to see. The arrival of not one but multiple vaccines in the fight against the pandemic shows the amazing accomplishments of scientists and researchers across the globe. Never before has such an effective set of vaccines been created so quickly, from research to trials to distribution.

The Science Center team and I couldn't be prouder to serve as a resource for the St. Louis community where everyone can explore science across a spectrum of fields and interests. Personal connections to science are more important than ever. In times when information is at our fingertips, the great gift of science empowers us to better understand our world.

Backing us are you—our members, philanthropic partners and supporters. I cannot express how grateful I am for each of you. Your support, especially over this past year, has helped provide a solid footing that's allowed us to keep the St. Louis region connected with curiosity. If you're able and would like to show additional support for the Science Center, consider **gifting a membership, becoming a Supporting member or making a gift to the Annual Fund or Youth Exploring Science Program.**

This issue of *NewScience* brings a closer look at just some of the exciting things your Science Center has in store for you. Here and throughout 2021, we invite you celebrate a special anniversary: 30 years since the opening of the Science Center's Oakland Building. In this issue, you can also learn about our new special exhibition, *Mummies of the World: The Exhibition*, where you can see real mummies and learn about their scientific and cultural significance. Go behind the scenes of our Ecology & Environment gallery. Read about the history of pandemics and how they've helped shape the course of science and human history. And see what's happening with the Youth Exploring Science (YES) Program as it continues to connect our teens with the educational and professional opportunities of STEAM.

The team and I are ready to make this year a fun and engaging one. Science never stops, and we're excited to keep discovering with you.



Sincerely,

Todd Bastean  
President and CEO

**To ignite and sustain lifelong science and technology learning.** Mission of the Saint Louis Science Center

Connect with us for updates, special events and fun science.



### Hours

For hours of operation, please visit [slsc.org/hours](https://slsc.org/hours).

### Contact

314.289.4400  
[slsc.org](https://slsc.org)  
Saint Louis Science Center  
5050 Oakland Avenue  
St. Louis, Missouri 63110

### Membership

[slsc.org/membership](https://slsc.org/membership)  
[memberships@slsc.org](mailto:memberships@slsc.org)  
314.289.4424

### Reservations

Advance Sales: 314.289.4400

### Education

Field trip information:  
[slsc.org/field-trips](https://slsc.org/field-trips)  
Educator Resources:  
[slsc.org/educator-resources](https://slsc.org/educator-resources)  
Programming information:  
[education@slsc.org](mailto:education@slsc.org)

### Events

Host your next private event at the Saint Louis Science Center. Services and catering provided by Saint Louis Science Center Events. For information: 314.533.8179

### Accessibility

Complimentary wheelchairs and strollers available in the lobby. Motorized scooters are available for a rental fee. Personal Hearing Assistance Devices available at the OMNIMAX® Theater and Planetarium. Captiview captions devices available for all OMNIMAX films.

### Official Partners

The Saint Louis Science Center gratefully acknowledges the support of our Official Partners.



## Features



### 4 Anniversary

Celebrate 30 years of the Saint Louis Science Center opening its doors to the public with the 5050 Oakland Building expansion. Take a look at some of the changes and updates that show how far your Science Center has come over the years.

### 10 Mummies of the World: The Exhibition Now Open

Explore different countries with mummification deeply rooted in their history and culture. Through modern science and technology, the past and secrets of these real people are now revealed.

### 14 Science Today

2020 brought science to the forefront as the world grappled with the coronavirus pandemic. Let's explore how the emergence of different diseases and pandemics through the course of history has helped shape and change science and society as we know it.

### 18 Gallery Spotlight

Go behind the scenes of our Ecology & Environment gallery and discover how we keep learning about dinosaur fossils that existed millions of years ago.

### 28 Community

Help us congratulate our 2021 YES graduates and see what they are hoping for their futures.



Engage with *NewScience* in a more interactive way. If you see this icon, click on it to see more content!

# Building a Bridge to Science.

## CELEBRATING 30 YEARS.

The Saint Louis Science Center has a rich history of transformations and innovations within its walls. As we look to the coming years to inspire and ignite the minds of future generations, we remember our past and where we have been. Whether you have been a member here for decades or have just recently joined the membership community, we would like to take this year to celebrate, reflect and move forward together.

When we officially became the Saint Louis Science Center on July 20, 1985, the James S. McDonnell Planetarium in Forest Park was the sole building of the hands-on learning museum. The success of the Science Center was shown in the increasing number of visitors, and the expansion was needed to sustain the number of people wanting to learn about science and technology. Since new buildings could not be constructed in Forest Park, we had to get creative.

It wasn't until 1991 that we figuratively, and quite literally, started to build a bridge to science. We introduced a new building to our campus to accompany the iconic Planetarium: the 5050 Oakland Building, which was located across the highway on a 4.25 acre site. This massive expansion added an extra 135,000 square feet to the Science Center and opened its doors to the public on November 2, 1991. Distinguished by its unique silver-toned dome, the building connected to the Planetarium in Forest Park via a 700 foot-long bridge, becoming the Saint Louis Science Center you know today.

### A LOOK BACK

Published right before the 5050 Oakland Building opened, read this old *St. Louis Post-Dispatch Magazine* for some fascinating nostalgia.



### So what was at the 5050 Oakland Ave. site before?

You may be familiar with the Lemp Brewery, which started here in St. Louis in 1838. John Adam Lemp introduced Falstaff Beer in 1903, which was one of the brands offered by Lemp Brewery before Prohibition. When it closed in 1920, the Falstaff brand was sold to the Griesedieck Beverage Company, which promptly changed its name to Falstaff Brewing Corporation. As the company expanded to meet the increasing demands of Falstaff's growing sales, the Griesediecks constructed a large office building on Oakland Avenue in the late 1950s.



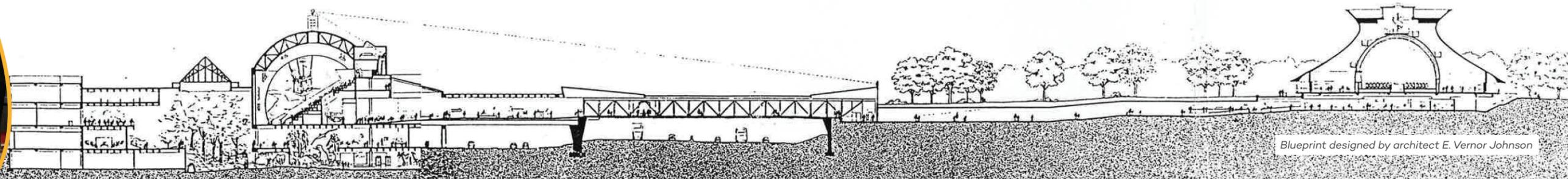
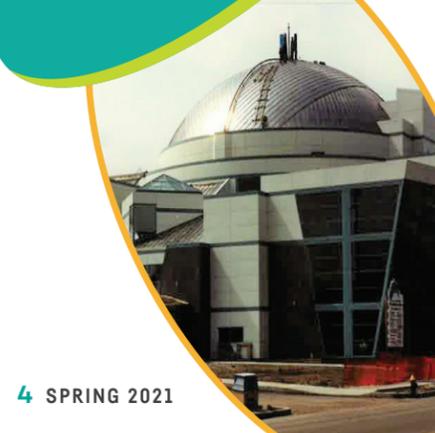
By the 1960s, Falstaff was the third largest brewer in America. The company owned a dozen plants around the nation and by 1966 produced its 7 millionth barrel of beer. However, the inefficiency of many of Falstaff's breweries in the early 1960s, coupled with rising labor costs, price cuts and severe financial losses crippled the company. In 1975, Falstaff put their building at 5050 Oakland up for sale.

### Digging Up History

When the Science Center purchased the 5050 Oakland site, the Falstaff building was torn down. During demolition and excavation of the site to prepare for the new building's construction, crews unearthed some artifacts which date to before the Falstaff building was constructed. This selection of artifacts has become part of the Science Center's Collections and includes various glass bottles, ceramic pieces and stoneware.



Artifacts above (left to right; top to bottom): Medical Bottles/ Mouthwash, Sarsaparilla Vine Tonic, Medical Tinctures and Tonics; Perfume Bottles, Glue Bottle, Shoe Polish Bottle, Face Cream Jar, and Ink Bottle; Selection of Beverage Bottles; Milk, Whiskey, Beer, and Soda; Various Ceramics/ Teacup, Teapot, Creamer Pitcher, Egg Cup, Ladle Handle, Plate Fragment



Blueprint designed by architect E. Vernor Johnson



1

Exhibitions happened in the Exploradome.

The Exploradome was removed and replaced with what is now our GROW Gallery.



3

An “alien xenologist” had a live stage show called the *Alien Research Project*.

Today, Energy Stage is a hub for many different live science demonstrations.



6

You ate in Einstein's Café.

Now, we have Science Café, The Loft, EZ Pizza and Starlite Cup.



7

The original Med Tech Gallery let you take your weight, height and blood pressure.

The gallery space is now home to Experience Flight simulator rides.



2

The Ames Room deceived your eyes.

Now in its place is a gallery for gameplay called GameXPoration.



8

The tunnel connecting the main building and the Planetarium revealed what lurked beneath.

The tunnel now displays traveling exhibits and pieces of our extensive collections.

# Remember When...



4

The main lobby featured the Aviation Gallery.



5

Science Center segways were seen around town.



FROZEN IN TIME

The 1996 Science Center lives on in this archived Saint Louis Science Center website. Take a look.



9

You could explore science outside in Science Park.

Science Park was removed 10 years ago.

Do you have old photos or fun Science Center memories? Send them to us at [memberships@slsc.org](mailto:memberships@slsc.org) and you could be featured in upcoming marketing materials.

# 2021 Members-Only Events

2020 pushed us to reimagine how we serve our members both in-person and virtually. This year, we will continue to offer members-only events that connect you with scientists, researchers and educational programming that will expand your knowledge. If you did not get a chance to attend an event yet, we still have plenty of interesting topics for the rest of the year. We will be offering live virtual chats with experts, behind-the-scenes virtual collections tours and member previews of OMNIMAX® Theater films and exhibitions.

MISS AN EVENT? Catch up here.

JANUARY 21



## Chat with a Scientist: Vaccine Development

We virtually sat down with a panel of experts from Saint Louis University to talk about COVID-19, the research behind it and vaccine updates.

FEBRUARY 26



## Collections Tour: Spectacular Spacecraft

Catch a ride on spacecrafts both real and imaginary in this virtual collections tour dedicated to flight.

SAVE THE DATE



MARCH 25

Virtual Member Mission: The Journey of a Dinosaur Bone



APRIL 15

Virtual Member Chat: Climate Change



MAY 27

Virtual Collections Tour: Members Choice

▶ We are excited to announce that members will help guide our next virtual collections tour. Look out for an email requesting your thoughts on what we should show you next!

## The Evolution of NewScience



One of our staple benefits over the years to our members has been the *NewScience* magazine (yes, what you are reading right now). The first issue debuted in the summer of '85 when the completely renovated Planetarium reopened.

### A LOOK BACK

Read more about this historic moment in the original *NewScience*.



Just like the Saint Louis Science Center, *NewScience* has changed over the years in terms of size, scale and content. It went from a black-and-white issue to a colorful, immersive magazine, now featuring supplemental digital content. We are so proud of the rich stories that we have been able to tell over the years and look forward to telling even more vibrant ones.



## A gift of science learning.

PURCHASE NOW. ACTIVATE LATER.

A Science Center membership is a meaningful gift for any occasion and unlocks a full year of benefits and experiences for you or someone you care about.

When you purchase a regular membership or gift membership today, the membership can be activated up to one year later, so it can be used to enjoy a full year of membership benefits when ready.

**Bonus!** Save \$10 on gift membership purchases for Family & Friends through Family & Friends MAX level memberships.

- **Family & Friends \$79** (reg. \$89)
- **Family & Friends PLUS \$110** (reg. \$120)
- **Family & Friends MAX \$165** (reg. \$175)

**PSST.** Purchase now, activate later memberships can even be bought for yourself.

VISIT [slsc.org/memberships](https://slsc.org/memberships) for more information.





NOW OPEN THRU SEPTEMBER 6

# MUMMIES OF THE WORLD THE EXHIBITION

**Come face-to-face with the largest traveling exhibition of real mummies ever assembled!**

Become enthralled in the stories of mummies from Europe, South America and Ancient Egypt. Through modern science and technology, discover how scientific studies of mummies provide insight into past cultures and civilizations in this remarkable exhibition.

**REAL  
MUMMIES.  
REAL  
SCIENCE.  
REAL  
PEOPLE.**



Forever change your perception of mummies. Watch the exhibition trailer here.

TICKETS ON SALE NOW

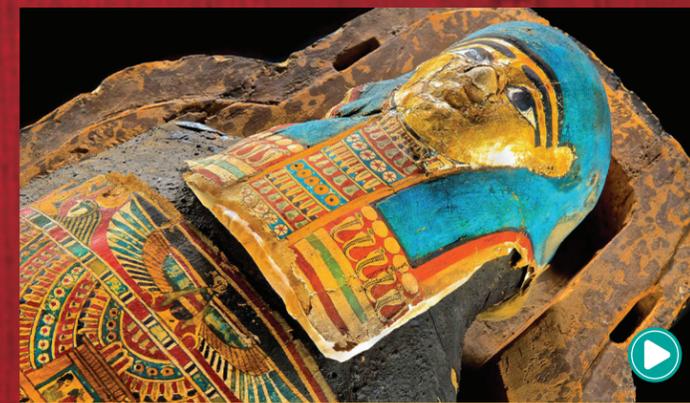
**Members enjoy discount tickets!**

**Members \$12.95**

Non-members: \$19.95 adults | \$16.95 seniors | \$14.95 children | Free for children 4 and under.

Recommended for children 8+

To purchase your tickets, visit [slsc.org/mummies](https://slsc.org/mummies).



The most popular and most well-known of mummies are the Egyptian Mummies. In this exhibition, you will not only learn about the Egyptian Mummies Nes-Hor and Nes-Min, but also discover how mummification happened in other countries and hear new stories about mummies that you never realized existed.

# REAL MUMMIES. REAL SCIENCE. REAL PEOPLE.

## Every mummy has a story to be told.

**E**ACH MUMMY THROUGHOUT THE WORLD has a rich and unique history to be discovered. Many of these mummies in *Mummies of the World: The Exhibition* have helped to advance science and medical technology and knowledge. The stories of these mummies have just begun to be understood, with many questions still to be answered. As you will learn, the mummies reveal the real-life stories of these fascinating people and their stories live on through science and research.



### THE BURNS COLLECTION

*On loan from the Medical Alumni Association of the University of Maryland, School of Medicine*

Dating from the early 19th century, the Burns' medical mummies helped advance the study of the human body. The collection contributed to the teaching of anatomy, pathology and surgery in early medical education.

The Burns Collection was created by Allen Burns who developed skills in dissection and devised new methods for preservation, including embalming. Along with his partner, surgeon Andrew Russel, Burns' process of preservation included chemical solutions containing arsenic, mercury, nitrates, oxides and other toxic compounds. Blood vessels were casted and filled with colored compounds while anatomical structures were identified and dissected. Salt and sugar were the final solution for preservation.

After his death, the collection continued to be part of the history of medicine and science advancement.



### MUMAB

*From the San Diego Museum of Man, where it is on loan from the University of Maryland, School of Medicine*

The first man-made Mummy of the University of Maryland at Baltimore, or MUMAB, was the first modern-day ancient mummy. To understand the methods of Egyptian mummification, Dr. Bob Brier and Ronn Wade created a mummy in 1994. They used a modern body that was donated to science and that died of natural causes—in order to replicate the process as accurately as possible.

They used replica Egyptian tools, organic materials such as natron (similar to a combination of modern-day salt and baking soda), and the mummification took place in the ibu tent, where it was ritually purified with palm wine and water. They even learned how Egyptians removed the brain from the skull of the mummy.

Currently, this mummification process is seen as a success, as there have been no signs of decay.



### THE BARON AND BARONESS

*Permission from Dr. Manfred Baron Von Crailsheim to study the mummies and put on exhibit*

In the 17th century, aristocrat Baron Von Holz took shelter with relatives during the Thirty Years' War in Europe. The baron died at the castle and was buried in the family crypt along with the Baroness Schneck Von Geiern.

When they were found years later, it was discovered that they were not embalmed, so how were their bodies mummified? While the exact reasoning isn't confirmed, it's possible the family became mummified from a desiccation of the soft tissue from a constant flow of air. Through CT scans, they found the Baron had an extra vertebra in his back and the baroness had kyphoscoliosis.

**“ It was discovered that they were not embalmed, so how were their bodies mummified? ”**



### THE VAC MUMMIES

In 1994, these naturally preserved mummies were found in a secret room in a church in Vac, Hungary. The remains of these people showed intact clothing, hair and skin that was caused by the cool, dry air of the crypt and oil from the pine board coffins they were kept in.

With ancient DNA analysis, local scientists and surgeons were able to determine the cause of death for one of the mummies was tuberculosis. In addition, a medical endoscope was used to take a small tissue sample from the mummy's gut to determine other medical problems.

These results are not yet available.



SAM HARNED

Adjunct professor of history at Washington University in St. Louis.

We sat down with Harned to explore the impact of past pandemics and epidemics on society. Read below for an interesting discussion.

# How Epidemics and Pandemics Have Shaped Science and Human History.



View a timeline of pandemics and epidemics throughout history.

## The human race has a long history of fighting illness.

From epidemics (diseases that affect a large number of people within a community, population or region) to pandemics (epidemics that then spread over multiple countries or continents) dating back to ancient times, the world has dealt with diseases and their impacts on populations, society and, not only our history, but also the progress and policies that still impact our world today.

Comparing pandemics of the past and those of modern times (including COVID-19) can give us a better understanding of how they happen, how they've shaped our history and, ultimately, how they've helped drive the advancements in science that protect us from harm.

"One similarity among epidemics and pandemics is that they aren't random. They tend to occur when existing social, economic, political and environmental features of a community are just right to promote their growth and spread," says Sam Harned, adjunct professor of history at Washington University in St. Louis. "For instance, three things infectious agents need to spread to pandemic levels include a mobile population, crowded mass conditions and weak or compromised immune systems."

Looking at the world today—especially here in the United States—Harned points out that ours is a highly mobile and increasingly older population, and many people suffer from pre-existing conditions that make them more susceptible to illness. A major

part of the U.S. economy centers around shipping, and significant portions of the nation's population live in dense urban areas. Harned points out that these facts are reflected in our approach to fighting the current pandemic. "What are the three things we've tried to address with COVID-19? Quarantining, social distancing and developing a vaccine," he says. "This is not to blame people or say pandemics are their fault. This is more about how we have learned to better control pandemics."

Through the course of history, humanity has faced its share of serious illnesses, which can sometimes have lasting effects that go even beyond medical science.

"Back in 1350, the Bubonic Plague, or Black Death, led to revolutionary change," Harned says. Considered one of the worst pandemics of all time, it widely spread to wipe out half the population of Europe. "The resulting labor shortage ended feudalism, giving the working population the freedom to escape the restrictions of serfdom."

The Bubonic Plague also helped lead to the Renaissance, a period of prolific hopefulness, optimism and creativity. Having survived the Plague's horrors, people found new reasons to celebrate life and the world around them.

There are examples in America's relatively short history, too—even stretching back to our earliest beginnings as a nation. "As smallpox began to rage up and down the coast during the Revolutionary

War," Harned explains, "George Washington took the daring step of having the Continental Army inoculated in 1777." Among the troops, 90% of deaths were caused by disease, with smallpox being the worst. Washington even ordered that the local civilian population be inoculated, marking an early example of mass immunization. This saved the Army from the dangers of the smallpox epidemic and allowed the troops to continue the fight for American independence.

Harned shares an additional little-known tidbit: "Even more interesting is the often forgotten Third Amendment to the Constitution," he says. (The Third Amendment prohibits the quartering of troops in homes.) "It wasn't just put in place because of the Redcoats barging into your house. The bigger concern was the threat of smallpox they might bring with them."

Despite the often dark history of epidemics, Harned points out that battling these diseases has resulted in some incredible and life-saving advancements in the medical and scientific fields.

In 1796, English scientist Edward Jenner became a pioneering figure in the use of vaccines when he discovered that exposure to the mild cowpox virus conferred an immunity to smallpox. Nearly two centuries later, Jenner's discovery not only led to the final eradication of smallpox, but according to Harned, "also paved the way for the use and development of vaccination to address other critical epidemic diseases like polio and measles."

The threat of pandemics in the 19th century led French scientist Louis Pasteur and German scientist Robert Koch to advance the field of medical microbiology with discoveries concerning the role of microorganisms and germs in disease. Understanding that disease could be caused by microbes—rather than 'bad air' in a certain location, the alignment of the stars and planets, or other disease theories—prompted the use of sterile techniques in medical procedures to keep infections from occurring.

Even aspects of our daily lives we sometimes take for granted can have connections to past pandemics. Harned points to one of the 19th century's greatest killers, cholera, and the resultant advancements in sewage and water treatment. "In its work to eliminate cholera, science ultimately gave us something quite revolutionary: clean tap water and the amazing underground architecture that helps make that possible."

In what can often be a somber subject, Harned offers this final, positive note. He says, "Whether it's the determination of the scientific and healthcare community to save lives or the everyday dedication of citizens and family members to care for one another, the history of pandemics tells a story of resilient people who not only persevere, but also move forward with creativity, courage and persistence."

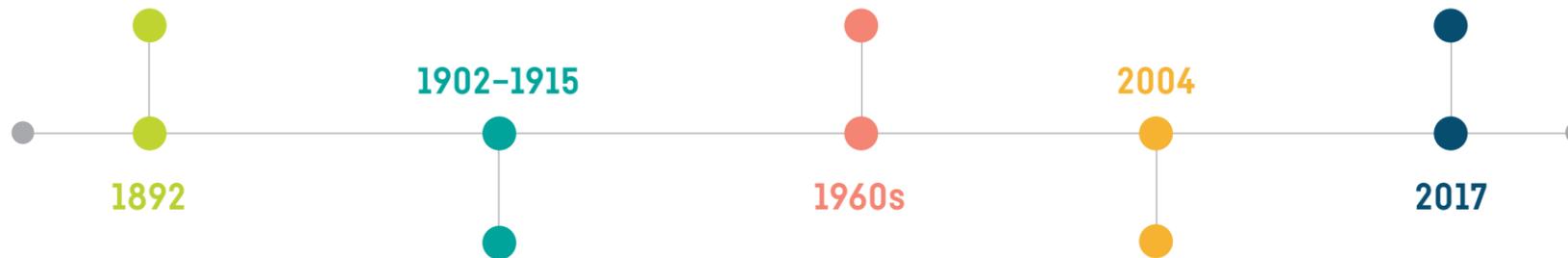
# Three Decades of Membership

## – THE TYRANNOSAURUS REX



Our animatronic *T.rex* turns 30 this year (**Happy Birthday!**) and has been a member since we opened the Oakland Building in 1991. Let's appreciate this large, loud and in charge dinosaur by taking a look at when it was discovered, how its posture was determined and why it may be anatomically incorrect (*gasp!*).

Edward Cope incorrectly identifies a *T.rex* vertebra as "Giant Porous Vertebra." 108 years later, a team from the Black Hills Institute found Cope's dig site and confirmed that the fossil he found was from a *T.rex*.



In 1902, Barnum Brown uncovers a partial *T.rex* skeleton in the Hell Creek Formation. This skeleton was later named "*Tyrannosaurus rex*" by Henry Fairfield Osborn, the president of the *American Museum of Natural History*. In 1915, this fossil holotype was incorrectly displayed upright, with its tail resting on the ground.

Interestingly, all the fossils mentioned below in this timeline, with the exception of the tyrannosauroids from China, were found in the Hell Creek Formation near Jordan, Montana. This is where our very own Fossil Prep Lab volunteers dig up fossils to be reconstructed at the Science Center.

Paleontologists theorize that *T.rex* did not stand upright, but in fact held an angle of 0–10 degrees, balancing on its legs like a seesaw. Despite this, the upright posture continues to dominate most popular culture depictions of the *T.rex*.

Phil R. Bell discovers and examines skin impressions from a *T.rex*, providing compelling evidence that the *T.rex* did not have feathers, and if it did, it was likely only on its dorsum (back).

Xing Xu et. al publishes a study showing that tyrannosauroids had protofeathers from "nose to tail." Scientific illustrators began to depict almost all *T.rex* with feathers.



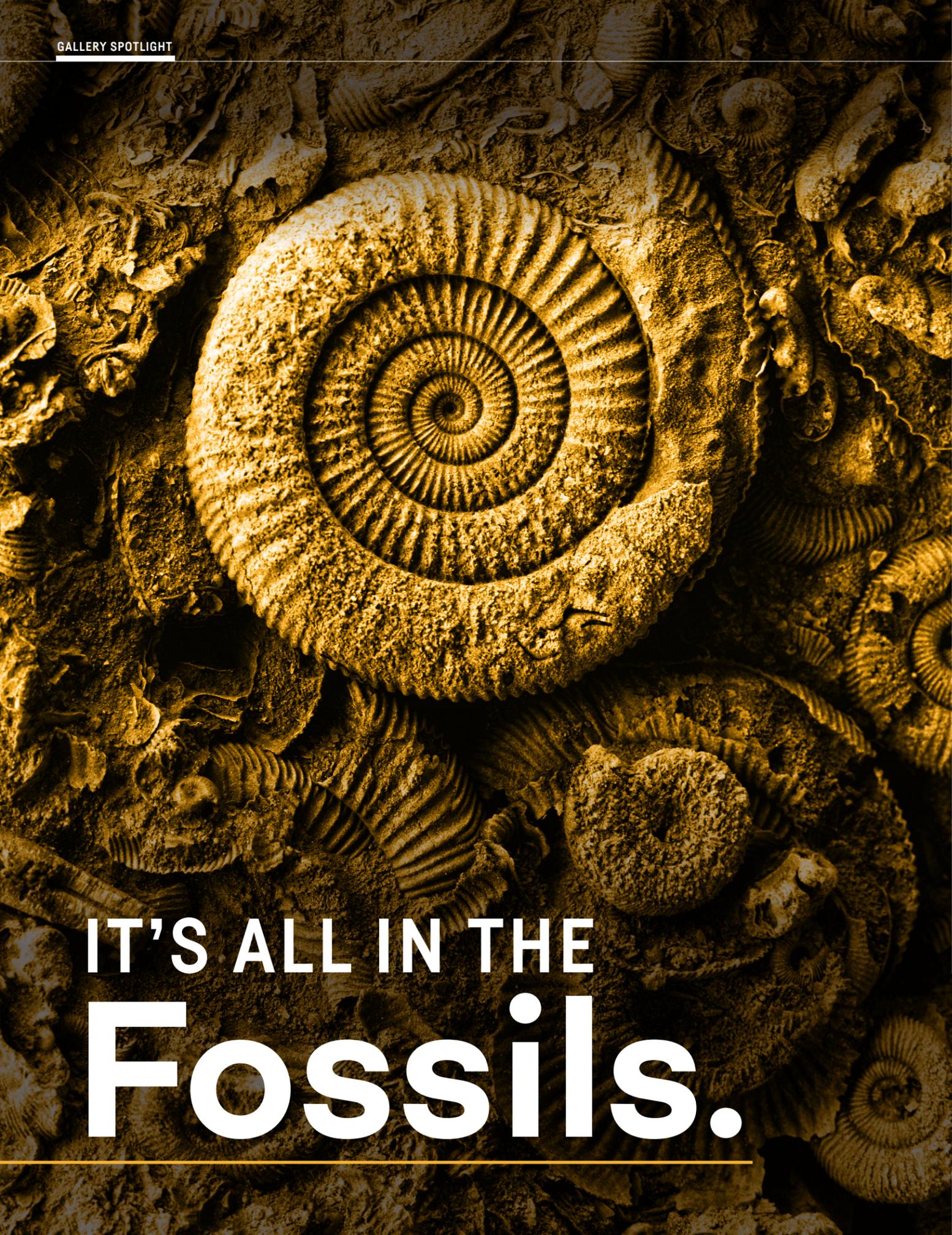
### So, is the *T.rex* model at the Science Center accurate?

The answer is...**maybe!** Paleontologists are hard at work to uncover more fossils and analyze them for clues that will lead them to further answers about the soft tissues of dinosaurs. In the meantime, swing by our old friend in the Ecology & Environment Gallery and get your selfie with him. He always enjoys the company, especially during lunch.

### A LOOK BACK



The *T.rex* has many stories to tell. See our favorite *T.rex* making a home at the Science Center and see how his friends in Dinosaur Park made the long trek here as well.



# IT'S ALL IN THE FOSSILS.

## Rediscovering the Ecology & Environment Gallery and Fossil Prep Lab.

During the pandemic, we're always looking for new and safe ways to bring you closer to science. Last year and continuing into this year, our Fossil Prep Lab operations in the Ecology & Environment Gallery have looked a little bit different to keep physical distancing in mind. Instead of "dino chats" our resident Fossil Prep Lab Volunteer Gene "Woody" Woodford spends Thursdays in the Fossil Prep Lab working on fossils and finding creative ways to engage our visitors from a safe distance.

If you stop by and give him a wave, you will get to see a *Hadrosaur* jaw, a *Triceratops* horn and so much more up close—all while Woody pretends to be a dinosaur with some very real props!

You can also stop by the Ecology & Environment Gallery and ask an educator to view these fossils a bit closer. Our team brings them out daily so you can see them firsthand and ask your most curious questions. Learn about the process of finding fossils in the field, putting them together in the prep lab and what happens to them after they leave the Science Center.

We hope to see you soon.



### A LOOK BACK

Check out the Ecology & Environment Gallery 30 years ago!



### SCIENCE @ HOME



Even though you're not likely to find a *T.rex*, *Triceratops* or even *Hadrosaur* fossil in your backyard, you CAN find lots of crinoid, trilobite, gastropod and bivalve fossils in the area surrounding St. Louis. This is because the layer of exposed rock in our area was deposited by an ancient sea. To find these fossils, grab an adult, hunt for yellowish-brown layered rock and search for formations that look like small clam shells, sea stars, insects, screws with no point and snail shells.

To confirm what you have found, search online for Missouri fossils and compare.



# Collecting our history at the Saint Louis Science Center.

Most science centers do not collect, or have collections of artifacts, because their approach to learning is experiential and hands-on with interactive exhibits. What makes the Saint Louis Science Center unusual among science centers is that we **do** have collections—featuring over 100,000 amazing artifacts.

So why does the Science Center have collections? That answer lies in our history as an institution. The Academy of Science of St. Louis was founded in 1856, bringing together members who were serious collectors of objects in traditional disciplines such as archaeology, paleontology, zoology and geology. The accumulation of objects and this group's interest in science, led to the creation of a number of exhibit spaces in different places over a number of years, finally resulting in the formation of the Museum of Science and Natural History in 1959. The Academy of Science gave up control of their collections to the new museum, and the collections continued to expand and grow over the next few decades. Technological, cultural and medical objects were added to the collections during this time. In 1985, the Museum of Science and Natural History merged with the city's Planetarium to become the Saint Louis Science Center.

When the Science Center first opened to the public in July 1985, the Collections items played an important role by providing the backbone for many of the new exhibits. Even though the newly formed Science Center focused on informal science learning through hands-on exhibits, staff recognized the importance of these items and specified that the Collections items would be maintained and would support the Science Center's mission and goals through their use in education, programs and exhibits. However, combining with the Planetarium illustrated a need for Collections to expand further in the area of space sciences in order to fully support the Science Center's mission.

The completion of the 135,000-square-foot Oakland Building provided more opportunities to display Collections artifacts, and efforts to include artifacts in the galleries were consistent throughout the new building. Since 2013, standalone Collections displays have popped up throughout the building to support OMNIMAX® Theater films, special exhibitions, First Fridays, Member events, SciFests, temporary exhibits and many other Science Center programs and events. Other displays have found a more permanent home, such as the Artifact of the Month display and the Collections Wall displays outside of GameXPloration. Through it all, the Collections are still growing, bringing in artifacts to support the Science Center's mission and help tell those all-important science and technology stories like only the Collections can.



Explore the different types of artifacts the Science Center Collections began with.



**EARLY CHILDHOOD PROGRAM**

# Discover Science with Me

Members enjoy discount tickets!

At this time, Discovery Room sessions are temporarily closed. However, we invite you to try out our new early childhood program, Discover Science with Me.

Sessions inspire wonder and curiosity for young children and give adult caregivers the confidence to support their child's learning. Each 45-minute session, guided and facilitated by a museum educator, features experiments and playful hands-on STEAM experiences for young scientists that are focused on developing motor skills, enhancing language acquisition, encouraging exploration and discovery and helping children deepen their understanding of the world. Programming is designed especially for children ages 3–6. However, older siblings and friends are welcome.

To learn about safety protocols and procedures, please visit [slsc.org/discover-science-with-me](https://slsc.org/discover-science-with-me).

Member Discount: \$20 per table (reg. \$25 per table)—Up to 5 people per table  
Call 314.289.4424 to make your reservations today.



**UPCOMING SESSION TOPICS:**

Fridays and Saturdays 11:00 AM and 2:00 PM | Sundays 12:00 PM and 2:00 PM

<b>Magnificent Magnets</b>	March 5, 6, 7	This session is sure to attract young scientists as we explore how magnets work. We will experiment with different types of magnets, conduct magnet investigations and even create art with magnets.
<b>Tinker Time</b>	March 12, 13, 14, 19, 20, 21	We will turn our table pods into mini Tinkerlabs. Learn about the engineering design process. Come design, build and create anything you can imagine.
<b>Sink or Float</b>	March 26, 27, 28, April 2, 3, 4	Conduct your own experiments to determine what sinks and what floats. Learn why certain things float and why others do not. You will even get to build your own floating boats!
<b>Coding Capers</b>	April 9, 10, 11, 16, 17, 18	Explore the beginning concepts of coding with fun, interactive games. Meet Botley and learn about Ozobots and Coding Critters, too!
<b>Plant Power</b>	April 23, 24, 25, 30, May 1, 2	What do plants need? How do they grow? What's inside of a seed? Little botanists are invited to join us as we explore the power of plants.
<b>Dino-mite Dinosaurs</b>	May 7, 8, 9, 14, 15, 16	Learn about different dinosaurs. Create dinosaur art. Make your own fossil casts and dig for dinosaur bones.
<b>Sensory Celebration</b>	May 21, 22, 23, 28, 29, 30	Little scientists will have fun exploring different materials, textures and tools as well as making their own sensory bags or bottles. Grown-ups will learn about the many benefits of sensory play for their young scientists.

## SAVE THE DATE for these upcoming events



**Join us for robotic fun!**

Makerspace | Ozobots | March–May | 2–4pm

Explore coding and robotics without the use of a computer! Get off the screen and use your hands to draw a track which controls your little robot. What kind of track will you create?



**Save the Frogs Day!**

Life Science Lab | Saturday, April 24 | All Day

Save the Frogs Day is an international event hosted by the non-profit organization Save the Frogs! to promote amphibian appreciation through community-led citizen science projects. Stop by the Life Science Lab on Saturday, April 24th, to celebrate all things amphibian with themed activities and stations. Learn about what makes these tiny critters so special and what you can do to protect them.



**Learn about Climate Change!**

Energy Stage | Spring 2021

Come watch our intriguing interactive show, *Our Changing Earth*, as we explore the various effects of rising CO2 levels in our atmosphere. Educators shine a light on the state of our climate, the change our oceans are undergoing, and the thickening heat trapping blanket that is created by greenhouse gases.



**Missouri Beef Day**

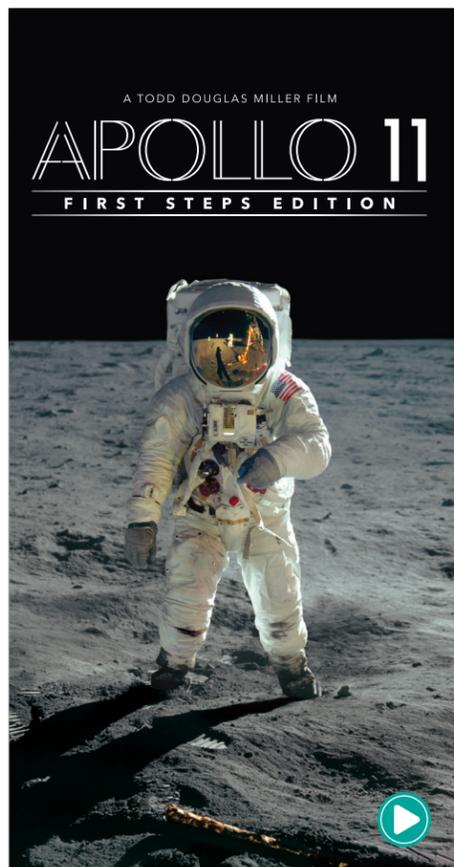
GROW Gallery | Saturday, May 22 | All Day

Meet real Missouri farmers and the animals they care for at our fun-filled day of activities and presentations. Don't miss the Missouri Beef giveaways.

# Join us in the OMNIMAX® Theater

Members receive free documentary film tickets.

Take a trip to space or the lush green lands of Earth from the comfort of your own seat. In order to keep you safe and provide you peace of mind, know that we have reduced capacities to maintain social distancing between guests and developed enhanced protocols and cleaning procedures between each film. For more information on your OMNIMAX Theater experience and film schedules, visit [slsc.org/omnimax](http://slsc.org/omnimax).



**CLOSES APRIL 29**

Join Neil Armstrong, Buzz Aldrin and Michael Collins, the Mission Control team and millions of spectators around the world, during those momentous days and hours in 1969 when humankind took a giant leap into the future.



**NOW PLAYING**

Venture into deep space for a fascinating look at asteroids, their cosmic origins and the potential threat they pose to our world.



During our Member Preview for *Asteroid Hunters*, producer and writer Phil Groves joined us via Zoom and answered questions about asteroids from you—our members.

Watch the conversation here.



**OPENS MARCH 12**

Join this amazing adventure to save California's enchanting Channel Island Fox, China's fabled Golden Monkey and the wondrous migrating crabs of Christmas Island.

SAVE THE DATE: [Member Preview | March 11](#)



McDONNELL PLANETARIUM

## Reach for the stars

Join us in the James S. McDonnell Planetarium for our live star shows each day. The Planetarium has taken precautions to ensure a safe star show with reduced capacities and enhanced cleaning. For more information on the Planetarium and star show schedules, visit [slsc.org/planetarium](http://slsc.org/planetarium).

### Spring Stars & Constellations

When you are not enjoying these live star shows with us, you can become an astronomer in your own backyard. Here are the stars you will see rise just after sunset in spring. Look east around 9pm to catch sight of these beautiful wonders.

#### 1: "The Big Dipper" / Ursa Major

The Big Dipper is often the first star pattern people learn, but it is not an official constellation. Instead, this familiar asterism is part of the larger constellation named Ursa Major, the Great Bear. Ursa Major is rising from its winter slumber and will climb higher in the sky during the spring and summer.

#### 2: Arcturus

Follow the 'arc' created by the three stars in the handle of the Big Dipper as they point to the bright star of spring, Arcturus. This red giant in the constellation of Boötes the Herdsman is the 4th brightest star in the night sky. The pattern of Boötes often is described as looking like a kite or ice cream cone.

#### 3: Spica

Below Arcturus is another bright star named Spica. The name for this blue-white star comes from Latin where it means "wheat." To early farmers, Spica's appearance in the east after sunset was used to mark the start of spring, and its disappearance in the west nearly six months later began the annual harvest. Spica is carried across the sky by the Zodiac constellation Virgo the Maiden.

#### 4: Leo the Lion

March is often described as coming "in like a lion and out like a lamb." In the stars, our springtime lion is the famous Leo climbing high in the sky during the spring. For those with a telescope, this pattern contains the famous Leo Triplet—a group of three interacting spiral galaxies roughly 35 million light years from Earth. The triplet is best viewed during the spring from dark skies.

#### 5: Coma Berenices

This seemingly empty patch of sky is our James S. McDonnell Planetarium Manager Will's favorite spring constellation! Don't see anything? Blame that on the city lights of St. Louis. This small constellation contains few stars bright enough to be seen in and around the city, but its hidden beauty is revealed from a dark location. Coma Berenices, named for the Egyptian queen Berenice II, contains countless faint stars, rich galaxy clusters and more hidden treasures.



FROM HOME

# FIRST FRIDAY

We are happy to announce that we will be continuing First Fridays From Home. All events listed below are virtual but we are working on bringing back First Fridays physically to the Science Center. For the most up-to-date information on First Fridays, please visit [slsc.org/first-fridays](https://slsc.org/first-fridays).



### MARCH 5 Jurassic Park

"Life uh...finds a way" at our March First Friday From Home virtual event. Join us for Jurassic Park-themed trivia, dino-sized educational activities, a featured speaker, and be on the lookout for a surprise cameo from everyone's favorite St. Louis dinosaur.



### APRIL 2 The Office vs Parks and Rec

Which would you call home: Scranton or Pawnee? Dive into your favorite mockumentaries by learning about the psychology of human relationships, why conservation of natural resources is so important and how to make your own paper! The evening will include virtual trivia, educational activities and a featured speaker.



### MAY 7 Black Widow

Join us on the evening of the premier of *Black Widow* (2021) for real science behind everyone's favorite Marvel spy, Natasha Romanoff. The evening will include virtual trivia, educational demonstrations and a featured speaker.

SAVE THE DATE | MAY 29

## SciFest: The Great Outdoors

Come explore and be immersed in a special day of free activities, presentations, and STEM concepts themed around life outdoors. Meet STEM experts and participate in gallery activities covering topics such as outdoor safety, weather, nature and space.

You can visit [slsc.org/scifest](https://slsc.org/scifest) for the most up-to-date information.



SAINT LOUIS SCIENCE CENTER

# Esports



## Open gameplay for the **gamer in you.**

During the winter season, we pivoted from esports competitions to open video gameplay sessions on select Saturdays. These sessions were free and were set up in our Boeing North Exhibition Hall allowing for ample space so people could physically distance and stay safe. There were about 100 people per session, and sessions were streamed on our Twitch account ([@STLScienceCenter](https://www.twitch.tv/STLScienceCenter)). The most popular games included Rocket League, Super Smash Bros, Mario Kart and Fortnite.

Starting in March, esports will continue in a different location.

For the most up-to-date information, please visit [slsc.org/esports](https://slsc.org/esports).

If you are interested in learning more for yourself, a group or a school, please email us at [esports@slsc.org](mailto:esports@slsc.org).



# Congratulations to the YES Class of 2021!

Starting in their freshman year, YES (Youth Exploring Science) teens meet regularly in sessions that develop the tools needed for a successful transition into higher education or a career. This year, 34 seniors will be graduating from the YES Program in April. They will be going into fields as varied as law, child psychology and neonatal nursing. The future is bright for all the graduating YES seniors, and **we wish them well!**

**90%** of the seniors are going on to college, while others chose military or a trade school.



**LIZZETTE SNIDER**

Career Goal: Air Force

“For me, the YES Program was a place where you can explore and learn new things. A place that can help you be more open and confident in yourself. This place prepares you for life and opportunities for the future. I am so glad that I got to work in a place like this.”



**JARED GROVE**

Career Goal: Mechanical Engineering

“The YES Program has given me work experience as well as providing me with experiences that most people probably wouldn't get to experience in their life. I learned a lot about aviation and I once again worked on overcoming my social awkwardness.”



**JE'NAI BURNS**

Career Goal: Forensic Pathologist

“The YES Program has helped me by improving my communication skills. I have learned to speak with volume in my voice and make sure what I say is heard.”



**SIDRA AHMED**

Career Goal: Cardiologist

“YES means a lot to me because it was my first job and I have had so many experiences. It prepared me with how to communicate with people no matter what their ages, such as kids, teenagers and adults.”



**CHRISTION WYNN**

Career Goal: Pharmacist

“The YES Program helped me learn three things: how to collaborate with a small group to help a larger group; how to entertain people of all ages, backgrounds, and experiences; and how to make good connections with professionals.”

## Thank You for Supporting YES

We would like to thank all our donors to the YES Program and especially recognize our donors who gave \$500 and above from January 1 –December 31, 2020.

- American Family Insurance
- Dreams Foundation
- Bellwether Foundation
- Best Buy Foundation
- Blues for Kids
- The Boeing Company
- Burroughs Wellcome Fund
- Cardinals Care
- Dana Brown Charitable Trust
- Electrical Connection
- Graybar
- GrowingGreat
- GSK/The Franklin Institute
- Frank Leta Auto Group
- Heartland Coca-Cola
- Henry A. Jubel Foundation
- Mr. and Mrs. Michael J. Honigfort
- Laura J. Niles Foundation
- Thomas and Sharon McPherron
- Missouri Beef Industry Council
- Norman J. Stupp Foundation
- Olin Corporation Charitable Trust
- The Saigh Foundation
- Society for Information Management –St. Louis Chapter
- Toyota U.S.A. Foundation

**YES Program Donations**  
visit [donations.slsc.org/give](https://donations.slsc.org/give)

# GrowingGreat Foundation Grant Supports YES Agribusiness



An outstanding supporter of empowering children and parents to make healthy food choices through hands-on STEM and garden education, the GrowingGreat Foundation in partnership with Del Monte Foods, Inc. has awarded generous grant funding to the Science Center's Youth Exploring Science (YES) Program.

The funds are supporting the YES Program's Agribusiness component that focuses on agriscience and entrepreneurship. "We are very excited about the opportunity that the GrowingGreat grant has provided for our teens to discover the amazing science behind the food we use to power our minds and bodies. Our teens and I are also excited about the opportunity to create activities and recipes to help inspire children and their families to incorporate healthy food options," says Lauren Patrick, YES senior educator.

The YES Agribusiness teens have participated in virtual training with a professional chef and nutritionist and have learned about seasonality of fruits and vegetables, nutrition, cooking techniques, and creating a well-balanced meal plan. The YES teens are taking what they learned to create engaging recipes and activities to teach younger children and their parents how to incorporate healthy foods into their diets. Through research and experimentation, the YES teens have created smoothie recipes that use healthy produce that is readily accessible in most areas.

The Agribusiness teens will continue to create videos and additional activities to inspire healthy eating. The YES teen-created recipes and activities are shared through the Science Center's social media platforms and with YES community partners and families.



# Educating Outside Of The Box



## Adapting to Change

As we finish out the academic year, the Science Center's Student and Teacher Program reflects back on the ways in which they had to adapt to the changing learning environment and how to better serve their community. Much like many other education and learning programs around the world, we had to find alternative ways to effectively teach and educate outside of the classroom.

We reached out to new patrons, such as the Washington University Neurofibromatosis Center. With the Wash U. partnership, we used Tinkercad to teach participants how to 3D draw and edit their hands to later be 3D printed into cookie cutters and ornaments. Also, we were able to provide digital programs including awesome science demonstrations, hands-on activities and Storybook Science.

Currently, we are rebuilding and adding more to our catalog of digital programs so that we cater and customize to our community. We look forward to more local partnerships to build up our programs and bring our expertise to the table as we create more robust programming in the coming months.

## YES Program Provides Hybrid Education Model

The Youth Exploring Science (YES) teens 2020 summer and fall classes were held virtually to adapt to the COVID-19 pandemic. Beginning in 2021, the YES Program moved to a hybrid model to provide YES teens with the ability to choose how they would like to receive their education. 47% of teens chose to continue using the virtual format, while 53% of teens chose to return to in-person sessions. The Saint Louis Science Center worked with Dr. Fredrick Echols, the Director of the city of St. Louis Department of Health, and followed all local and state guidelines, including wearing masks, social distancing and capacity restrictions. The Taylor Community Science Resource Center, where the YES teens meet, has been fitted with signage, cleaning supplies, and directional instructions.



Featured, left to right: Joe Brown, Michael Brown, Frank Leta and Steve Brown

## Frank Leta Honda Donates Two New Minivans to YES Program

Frank Leta Honda has donated two 2020 Odyssey minivans to support STEM outreach programming for the Saint Louis Science Center's Youth Exploring Science (YES) Program that for over 20 years has helped prepare under-resourced high school students to become the next generation of STEM professionals.

With a corporate philanthropic mission of positively impacting the community by providing safe and reliable transportation to those in need, Frank Leta Honda has been a generous supporter of the Science Center since 2007.

Company founder Frank Leta and his grandsons Steve, Michael and Joe Brown agree, "We are thrilled to support the Science Center's YES Program that does so much to both help disadvantaged teens to realize their potential to become STEM career professionals and bring STEM education to our community."

The new Honda minivans will be used to transport YES teens and educators as they present STEM learning outreach initiatives throughout the St. Louis community once health guidelines allow for public interaction. YES teens can be found delivering "Pop-Up Science" STEM demonstrations, conducting "Science Savvy" on-the-street interviews and providing many other STEM outreach activities at community centers, parks and area venues throughout the summer. Each minivan will have magnetic signage featuring the Frank Leta Honda donation in support of the YES Program. The signage will be donated by the long-time Science Center supporters, ADgraphix.

"The YES Program is truly grateful for the Frank Leta Honda minivans that will enable our YES teens to continue to bring STEM activities to thousands in the community who may not have access to the Science Center including underrepresented populations in STEM fields," says Siinya Williams, senior director of Community Science. "When our YES teens reach these under-represented populations, they have the unique opportunity to share what they have learned in the YES Program and spark an interest in STEM for audiences that are often from demographics like themselves and show that they too can be the next generation of scientists, engineers and innovators of the future."



## Saint Louis Science Center Receives Boeing Grant to Support YES Program

The Saint Louis Science Center is proud to announce an \$80,000 grant award from The Boeing Company, which will help fund our nationally recognized Youth Exploring Science (YES) and Summertime Science programs.

"We are grateful for the funding from Boeing Global Engagement Grant and the significant support it will provide to bring innovative STEM learning to under-resourced students in our community," says Siinya Williams, senior director of Community Science for the Science Center. "These programs are fundamental to the Science Center's mission to ignite and sustain lifelong science and technology learning in our community."

Boeing's contribution will support the Science Center's impactful educational programs which bring engaging, project-based STEM learning opportunities to youth that have limited access to high-quality, out-of-school learning experiences. The year-round YES Program helps prepare under-resourced high school students through informal STEM learning for graduation, college and future careers. Funding will support the YES Aerospace and Cyber Security components which are particularly relevant to the St. Louis community's need for a well-educated and trained STEM workforce. These two popular components address both the rich history of aviation in St. Louis and the documented need for filling the workforce pipeline with technology-savvy college graduates and technicians.

The Boeing Global Engagement Grant will support the YES Summertime Science program that provides free STEM learning for thousands of under-served elementary, middle and high school students from local community organizations and camps. The YES students plan the curriculum, hands-on STEM activities and lead the programming that demonstrates for these young learners just how much of their lives, interests and experience connect with STEM. If health and safety guidelines prevent in-person Summertime Science programming, the YES teens will deliver the programming virtually to the community organizations and camps.

Boeing funding will also enable YES students to bring Pop-Up Science events, once health and safety guidelines allow, to several thousand in the community throughout the summer at high-visibility St. Louis parks and community centers. YES students will deliver engaging activities for the public that promote an appreciation for STEM learning.





ONE BUILDING.

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CELEBRATING  
30 YEARS.

