Each day at the Mississippi Children’s Museum (MCM) during 2017, we will be celebrating national days of recognition. Do you know when the National Day of Robotics is, or how about Apple Day? Do you know there is a National Day of Chess? We will learn new things, explore new concepts, and celebrate the joys of everyday life both large and small.

Speaking of questions, how do you think innovation and technology will change our world in 2017? That is something we, at MCM, keep asking ourselves. As we try to anticipate the myriad of ways the world is changing, we have planned new programs and activities which will promote and encourage Mississippi children to develop stronger science, technology, engineering, and mathematics (STEM) skills. One of the most important roles that the museum can play as we delve into our mission is to foster children’s natural curiosity—encouraging them to seek out those seemingly never-ending questions. In the pages of this issue of the PlayBook, you will see how we are fulfilling this purpose to develop more focus and access to experiences that encourage important 21st century skills.

Please join us at the museum to build, count, create, and make discoveries every day for both our youngest visitors and for the adults who love them.

Susan Garrard, Mississippi Children’s Museum President/CEO
The future of Mississippi depends on its ability to boost student performance in STEM subjects. A recent study from the Alliance for Science and Technology Research in America predicts an 8% increase in STEM-related jobs in Mississippi between 2016 and 2025. Educational initiatives centering on STEM are vital to sustain this economic growth, to keep Mississippi competitive in a global economy, and to create strong communities with diverse, accessible jobs.

Because of this, MCM sees a need to provide today’s students with a much earlier and stronger foundation in math and science than they receive in school alone. MCM is committed to giving children access to quality STEM-based experiences through innovative exhibits, engaging programs, and interactive special events. MCM seeks to foster early interest in STEM subjects while also helping children develop critical thinking and communication skills, creativity, and real-world problem solving.

In addition, MCM has worked to develop strong community partnerships with industry leaders throughout Mississippi to be able to connect children in tangible ways not just to the kinds of learning that they will need to be successful in school, but also to help them explore the multitude of STEM-related career possibilities that exist. This is important if we truly want children to be able to discover and achieve their potential and become the flexible thinkers, adventurous explorers, and innovative doers we need in our 21st century world.
What encourages questions, engages the scientific method, promotes positive changes for better health, incorporates STEM, evolves 22 medical specialties, and creates a strong partnership between two institutions dedicated to improving the lives and well-being of Mississippi's children? It's a question! Discover Inf (QI?DI!), of course!

Since 2013, MCM and Children of Mississippi, a part of the University of Mississippi Medical Center (UMMC), have been partnering for this once-a-month, Saturday program as a way to bring these concepts together by encouraging children to ask questions and have fun discovering the answers. Topics range from dentistry, the brain, bones, heart health, and allergies.

"It's all about health!" says Dr. Frederick ‘Rick’ Barr, Senior Associate Dean for Graduate Medical Education, Susan B. Thames Endowed Professor, and Chairman of Pediatrics, Children's of Mississippi, UMMC.

The ultimate goal for Children’s of Mississippi and UMMC is to improve the health of Mississippi’s citizens. QI?DI! allows us to focus on health literacy, which means we are helping children understand why they are born with a special ability, says “One Saturday a month, our medical professionals are available to share health advice and to interact with children in a non-medical setting. We are always excited to hear how many children are interested in health-related careers.”

"Nearly 32,000 guests have attended the QI?DI! program since 2012. Children’s of Mississippi recently committed to another two years of supporting this program. This is such a great partnership, our two organizations focused on literacy, learning, and health," says Barr. The Mississippi Children’s Museum is a great environment for children to learn while having fun. And because both Children of Mississippi and the Mississippi Children’s Museum are reaching a statewide audience, it enables both organizations to work together toward the same goal.

HEALTH & WELL BEING

STEM COMMUNITY PARTNERSHIPS

"We don’t let them near the kitchen at all," Joe Byrum jokingly tells MCM staff. Byrum is a member of the museum who was formerly convinced that his area was too combative to combine food and fun, but after Tucker with Tuesday at MCM, he’s been forced to reconsider.

Byrum’s two sons, Jase and Jonas, stand behind the counter of the Red Rocket Café with a group of children being instructed by Chef Tom Ramsey, an award-winning, Jackson-based culinary artist. For the entire month of October, Ramsey took participants of Tucker with Tuesday, MCM’s weekly STEM-based program, on an exploration of the science of food.

Designed to be hands-on, Ramsey’s approach held little chef-scientists in experimental taste testing, temperature tactics, picking with pH levels, and making delicious meals from unexpected ingredients.

"There’s a lot of science behind food," says Ramsey who coordinated the activities and planned the program curriculum. “The first thing we learned was how to make pasta. I showed them how protein and carbohydrates combine to make something that’s really tasty, like flour, use something that sticks together like noodles."

In another session, Ramsey taught about types of heat: radiant, conductive, and convective. Understanding heat types and how to measure them is a skill that’s just as useful for aerospace technicians, engineers, and chemists in a lab as a chef in the kitchen. Using the universal language of food as a foundation for STEM-based cooking makes these complex concepts more relatable and understandably delicious.

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UNEXPECTED METHODS

CAREER EXPOSURE

On October 1, 2016, MCM held the inaugural Mississippi Science Festival (MSF), an event created to showcase STEM subjects and their roles in Mississippi through fun, hands-on activities for children and families. Because many elementary-aged children may not participate in science and technology activities at home or in school, MSF is an exciting way for MCM to encourage STEM education in Mississippi.

Jana Perry, MCM Director of Education and Programs says that the festival allowed the museum to provide families with an up-close look at the wide variety of careers in STEM. "We wanted to strengthen our STEM offerings in the museum and get together with businesses and educational organizations across the state to help students be exposed to STEM concepts and ideas so they would look at careers in those professions a little bit more closely and at younger ages than they have been in schools," Perry explains.

Visitors enjoyed talking to these experts about their careers and many children discovered the surprising science behind things they already love. MCM Assistant Director of Programs Patti Reiss says activities at MSF connected things like robots, beekeeping, and balloons to scientific concepts. "Ultimately, it gave children the opportunity to see what scientists are. Not all children would have been able to name an architect or a beekeeper as a scientist."

In total, the first MSF had 23 presenting vendors representing universities, community organizations, corporations, non-profit organizations, and individual STEM professionals who talked with visitors about their fields and the various STEM-related careers available. Events like the Mississippi Science Festival offer children the opportunity to make hands-on connections between these subjects which may seem abstract and their real-world applications.

"Scientific research often seems like a mystery to kids," says Dr. Michael Ryan, Professor of Physiology and Biophysics and Associate Dean in the School of Graduate Studies at the University of Mississippi Medical Center (UMMC). "They learn prescribed lessons in school, but don’t often get to connect with real discovery."

Ryan seeks to demystify the process of scientific discovery through two events that bring the faculty and students from the UMMC School of Graduate Studies to MCM to engage children in hands-on, research-based, scientific learning. 'PhD in a Day and Discovery U' Day in the spring.

"PhD in a Day is similar in format but rather than exclusively focusing on different organ systems, we have activities that relate to all areas of biomedical research including anatomy, microbiology, biochemistry, pharmacology, neuroscience, biomedical materials, and physiology," he says. Making DNA from strawberries, building a model of osmolarity, and learning about lung volume are just three of the activities that have been offered.

One of the rewards of participating in this outreach is getting to see when those “teachable moments” happen. “It is always satisfying when kids can answer a question about science, and to see the look of excitement on their faces when they learn or experience something new,” Ryan says.

Ryan hopes that giving children these opportunities to meet scientists and do hands-on experiments will be inspiring. “Although it is cliché, I would like them to come away thinking that science is fun and wanting to do experiments at home and at school, so that science and discovery become a part of their lives,” he says. ___
Wiggs says, while Kruse has "otherwise wouldn't do, with new people." Very educational for him to go on new excursions and try new things he entertained," Chris says as she watches the boys play together. "It's MCM is a great teaching tool where he can learn while he's being robots in the visiting exhibit, puppet performances in Readers Theater, and tinkered with transforming adventures at the museum every Thursday afternoon. The lobsters are in the same class at the Redeemer School, they both love snack time, and they together ever since," Arndt says. She values MCM as a "safe place where them here after the first week of school, and we've been coming here to get to know each other," Amilt says. "It really makes MCM as a 'safe place where they can learn what they like.'

Both grown-ups agree that the museum has opened up their children not only socially, but also in their educational experiences. Mason and Robert have harvested fresh basil in the Literary Garden, produced theatrical puppet performances in Readers Theater, and tinkered with transforming robots in the visiting exhibit. Thomas & Friends—Explore the Rails.

‘MCM is a great teaching tool where he can learn while he's being entertained,’ Mrs. Chris says as she watches the boys play together. It's very educational for him to go on new excursions and try new things he otherwise wouldn't do, with new people.'

**Emily Simmons**

Emily Simmons' skills are undeniable aesthetically! With a degree in Art History, a concentration in Museum Studies, and a minor in Studio Art from Millsaps College in Jackson, she was the perfect candidate for MCM’s Art Educator. As the Arts Educator, Simmons oversees a collaborative art space, plans curriculum, orders supplies, and prepares a room full of materials for hundreds of children!

Simmons uses arts integration techniques on a broad spectrum of ability levels so that children with a wide range of ability can enjoy, learn, and create in the same dedicated art space. Nearly every craft is self-directed with familiar materials to give meaningful context to children, whether it helps them understand the world around them or examine how things work. Just as art is constantly changing and progressing, Simmons too is evolving. She currently is taking classes to complete her Master's degree in Art Education. Her goal in the next few years is to make all of the children's art activities at MCM more impactful. Simmons believes that when children have interactive art experiences, they are more open to learning and thinking outside the box.

**MCM Volunteer | Wendy Putt of Fresh Cut Catering & Floral**

Wendy Putt and her colleagues at Fresh Cut Catering and Floral have given their time and talents to MCM ever since the museum opened. They are the creative professionals behind several of the most imaginative and successful culinary and decorative thematic experiences at MCM’s events.

Putt majored in floral design at Mississippi State University and founded Fresh Cut Catering and Floral in 1990. Perhaps best known for her work within the wedding industry, she is no stranger to party planning small or large. Putt has even worked on two inaugurations—arranging for Governor Haley Barbour and Floral design for President George Bush.

Putt credits her success to a love of her work and a close-knit team who are more family than colleagues. "I get to go to work and play with my friends every day, and we get to plan the most amazing events with awesome people. I get to build with beautiful flowers and spend the weekends with beautiful brides," Putt says. With this success, Putt says it is only natural to want to give back. "I have been given so much opportunity myself and have been so blessed that I feel a desire to contribute back to the community. I love helping others, and I love people," she asserts. For Putt, there is no question about why she supports MCM. "It’s so important to our state and the children of Mississippi. It’s so professionally done and every exhibit is supported by local businesses. Plus, it gives children a fun and safe environment to play in,” she says.

"We work as a family and treat every customer as if they were part of that family," Putt says. "We, at MCM, are grateful to be considered a part of her family, and we count Putt and her team among our museum family, too!"
This quote by Dr. Martin Luther King, Jr. captures the essential spirit behind MCM’s volunteer group, the Mississippi Children’s Museum Partners (MCM Partners). Founded in 2008, MCM Partners are dedicated to promoting and financially supporting the museum. MCM Partners plan and host MCM’s signature fundraisers, volunteer during designated museum programs and special events, and increase awareness of MCM throughout Mississippi and the Southeast.

In planning the museum’s three big fundraisers, MCM Partners embrace the museum’s tagline: “We take fun seriously,” to create fun events with a serious financial purpose. YACs have helped with everything from dressing up in costume as guests to meet their favorite heroes, to mapping Spin Art Outside the Lines, to working one-on-one with children on crafts during Holiday Spectacular. Not only are these YACs developing professional skills, they are also learning the importance of leadership through service.

MCM would not be possible without the tireless efforts of our MCM Partners. They inspire us with their love of children and their desire to create the most unparalleled experiences for them as possible. Their enthusiastic support and dedication to the museum’s mission and vision helps us in everything we do and reminds us that, together, we truly will be able to make a difference so that all of Mississippi’s children will be able to discover and achieve their potential.

“Everybody can be great, because everybody can serve. You don’t have to have a college degree to serve. You don’t have to make your subject and your vocation agree to serve. You only need a heart full of grass, a soul generated by love.”

ANNUAL DONORS

Contributes to the Mississippi Children’s Museum from June 01, 2015 - May 31, 2016

ANNEX DONORS

Contributes to the Mississippi Children’s Museum from June 01, 2015 - May 31, 2016

QUARTERLY DONORS

Contributes to the Mississippi Children’s Museum from July 15, 2015 - November 15, 2015

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 scrub dog, the golden retriever
The Junior League of Jackson (JLJ) established the Forget-Me-Not Fund to create a reserve for MCM to sustain it as an educational and inspirational resource for generations of children to come. This fund allows MCM to meet the museum’s ongoing needs from improving the physical campus, to repairing and replacing its exhibits, to making enhancements which will not only keep the museum vibrant and engaging for generations of children to come. This fund allows MCM to meet the museum’s ongoing needs from improving the physical campus, to repairing and replacing its exhibits, to making enhancements which will not only keep the museum vibrant and engaging for generations of children to come.

The new car was shipped from the Nissan Vehicle Assembly Plant in Canton, MS to Cincinnati, Ohio, where it was transformed into the new exhibit. The exhibit fabricator who worked on the Altima, Mike Murphy of ADEX International, is well acquainted with MCM’s exhibits—he was one of the lead fabricators for the Explore Mississippi gallery—so he was familiar with the museum’s needs.

MCM Assistant Director of Exhibits, Samantha King, says that the new Altima included some of the popular things from the old car, but also brings new experiences to visitors at the museum as well. “This car has lots of new things like sounds and light. They have installed buttons around the car that will be different from the old ones,” she explains. “At the radio inside the car, there are four buttons for different stations. One button highlights Nissan with facts and figures, while the other buttons are fun music clips or sound bites you hear in the car. We wanted to make the experience more authentic and exciting.”

The Junior Auxiliary of Meridian, founded by Melanie and Manny Mitchell, was a generous $50,000 contributor to MCM’s Forget-Me-Not Fund. This donation was made in honor of Richard Vise, a generous $50,000 contributor to MCM’s Forget-Me-Not Fund. This donation was made in honor of Richard Vise, a long-time supporter of the museum.

Jen and John Norham, Meryl Lee and William, L. Nursery, Helen and Mike Arms, Amy and Brian Temple, Nancy and Ed Walden, Gay and Sonny Waldrep, Linda Wardlaw, Inc., Walt Pardo Advisors.

$1,000,000+
The Phil Hardin Foundation
$250,000 - $999,999
Southern Pipe & Supply
Hall Timberlands
$100,000 - $249,999
East Mississippi Oral & Facial Surgery
$50,000 - $99,999
Sissie and Frederick Wile
Urelaine Simon-Hart and George Hart
Kelley and Otis Gowdy, Jr.
Kimberly and Dru Denison
Linda and Marty Davidson

$500,000 - $999,999
Junior Auxiliary of Meridian
Melanie and Manny Mitchell

$250,000 - $999,999
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Lindsey and Cody Aad
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Amanda and Matt Cannon
Charlie Ludkin Family

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For more information about MCM’s exhibits and programs, visit the museum’s website at mcm-mississippi.org or call 601-356-1111.

FUTURE LOOK!

REIMAGINING THE NEW YEAR WITH A NEW GIFT

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MCM has begun the process of reimagining and reinterpreting the exhibits within our galleries. This means refraining not just what is important for learning now but also thinking towards the concepts children will need for the future.

In World at Work, which is MCM’s gallery that focuses on industry in Mississippi, a redesign already is underway. One of the most popular exhibits at MCM has been the 2010 Nissan Altima, giving hundreds of thousands of children the chance to take their families on exciting adventures. Through a donation from Nissan North America, MCM has received a brand new 2016 Nissan Altima that replaced the original exhibit this winter. In addition to a Nissan Altima, Nissan also made a generous $50,000 contribution to MCM’s Forget-Me-Not Fund. This donation was made in honor of Richard Vise, a long-time supporter of the museum.

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Mississippi’s First Lady, Deborah Bryant and children marvel at the newly installed 2016 Nissan Altima
TEST TUBE MATH!

How full is this test tube?

Fill this test tube \( \frac{1}{2} \) full.

Fill this test tube \( \frac{1}{3} \) full.

SCIENCE WORD SCRAMBLE!
Can you unscramble the following words?

CALSE ____________
MEINTEXPER ____________
TMAO ____________
BKERA ____________
AADT ____________
CULEMEOL ____________
EEATHRW ____________
SCEPA ____________

Challenge a friend to a game of TIC-TAC-TOE!

DID YOU KNOW?
A magnifying glass uses the properties of a convex (curved or rounded) shaped lens to magnify an image, making it easier to see.

What is something small you might need to use a magnifying glass to see?

CREATE YOUR OWN VIOLIN
1. Draw violin on cardboard, and cut it out.
2. Use a paint stirrer to make the neck of the violin.
3. Add pipe cleaner strings!

DID YOU KNOW?
The violin is the smallest and highest pitched instrument of the string family!

TINKER WITH TUESDAY
SPONSORED BY GEORGIA-PACIFIC
Join us every Tuesday @ 3:30 PM

A signature project of the Junior League of Jackson
This project is partially funded through a grant by Visit Jackson.

TICK TACK TOE!

A magnifying glass uses the properties of a convex (curved or rounded) shaped lens to magnify an image, making it easier to see.

What is something small you might need to use a magnifying glass to see?

Scale
Weather
Molecule
Data
BEAKER
ATOM
EXPERIMENT
SCIENCE

SCIENCE WORD SCRAMBLE!
Can you unscramble the following words?

CALSE ____________
MEINTEXPER ____________
TMAO ____________
BKERA ____________
AADT ____________
CULEMEOL ____________
EEATHRW ____________
SCEPA ____________

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