



VOL. L No. 3 Third Quarter 2020

Revving Up for the Last 10 Percent Push Museum Past the Finish Line

ou now have an opportunity to change the future of the younger generation! And it's so easy. The Museum has reached the 90 percent marker on the road to its Capital Campaign destination of \$6 million to construct the STEM Education Center. We are very thankful for the lead gifts from the FMH Foundation, Scharbauer Foundation, Mabee Foundation, Abell-Hanger Foundation, and the Wayne and JoAnn Moore Charitable Foundation, along with generous support from Concho Resources and Pioneer Natural Resources. These, along with many other donors, have led the way for the successful completion of the STEM Education Center. STEM stands for Science, Technology, Engineering and Math.

We need to raise the last 10 percent of funding to begin building this remarkable new center for our community. We hope you will be a part of this important addition to the Museum.

Museums today play a vital role in educating young people, blurring the lines between museums and schools. Our students need more opportunities for inquiry-based



learning that inspires their curiosity and fuels their passions. With the Petroleum Museum's emphasis on STEAM (Science, Technology, Engineering, Art and Math) programming, we are challenging students of all ages to think critically and creatively. Our summer programs offered a variety of science classes that kept

young people thinking and doing experiments during the virus shutdown this summer. They learned to solve problems, design robots, understand engineering challenges, and build a variety of LEGO projects. Younger students added art to their STEAM assignments.

Whether it is lunch on the patio, exploring nature or experimenting with science, this new facility will provide a great addition for our community. Museum programs such as Family Science Nights, Summer Classes, and school tours and events will benefit with the added classroom space. Museum members will have access 360 days a year to the patio and picnic area during Museum hours.

We can all take pride in taking the Petroleum Museum into an even greater exciting future for our community. Help us roar past the finish line! Contact Luanne Thornton at Ithornton@petroleummuseum.org or at 432-683-4403 for more information about how to donate to the STEM Education Center and impact the lives of young people today and of future generations.







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Permian Basin
Petroleum Museum,
Library and
Hall of Fame
...exploration,
innovations
and legends...

We're Open and Loving It!

After closing our doors in March due to state mandates regarding the COVID-19 pandemic, the Petroleum Museum re-opened on June 1. With over 60,000 square feet on 34 acres, the Museum provides the perfect place for visitors to be able to safely get out and enjoy the exhibits, while still allowing for social distancing capabilities.

The Museum staff has worked diligently to provide a safe experience for guests. Our COVID-19 Safety Protocols include adhering to the capacity limitations and health protocols set out by Governor Abbott, frequent cleaning and disinfecting of regularly touched surfaces, and new hand sanitizer stations throughout the Museum's exhibits (a full list of protocols can be found on the Museum website)

Since June 1, many visitors have safely enjoyed the Petroleum Museum's indoor and outdoor exhibits. We invite you and your family to visit the Museum and safely experience science, history, and art in the Permian Basin this fall.



Our meeting rooms have chairs spaced apart for health safety.

Renting Our Space

ooking for a space to host your next meeting or event? We have several options available for board meetings, cocktail receptions, and everything in between. Our staff is working hard to ensure all of our meeting spaces are sanitized and properly socially distanced, so you don't need to worry about anything but entertaining your guests.

Visit www.pbpetro.org/facility-rentals or email rentals@petroleummuseum.org for more information on our available spaces and pricing.

Who You Gonna Call for Rentals?

n July, the Museum welcomed **Bryan Grant** to our staff as Director of Rentals following the retirement of longtime director, Carey Behrends. Bryan and his wife Amy recently relocated to the Permian Basin from Indiana and his background in customer service and audio-visual technologies make him a great fit for the position in today's ever-changing, technology-driven world. Please join us in welcoming Bryan and his family to West Texas and to our team.



Bryan Grant

Distinguished Lecturer On November Calendar

James McLurkin is scheduled to talk on "Dances With Robots: The Story of One Engineer, 112 Little Robots, and the Toys, Insects, and Star Wars Movies That Made It All Possible" on Thursday, November 12 at 7 p.m. McLurkin is the Arlen Edgar Distinguished Lecturer whose program was re-scheduled from May.

McLurkin offers a lighthearted look at society's views on robots, Hollywood's portrayal of them, the current state of the art, and the future of technology. He will discuss the philosophical questions about the nature of intelligence and conceivable rise of serious problems for the creation of artificial intelligent devices.

To reserve a seat, please call 432-683-4403 or sign up on the Museum website: www.pbpetro.org.

ASK Dr. Petro Explain Central Power Unit







QUESTION: What is a Central Power Unit?

ANSWER: With the development of portable drilling rigs, it became common to build a shed in a central location and connect the pumping equipment from each nearby well to an engine located in the shed, a "central power unit." The engine would often be steam powered and required a "pumper" to arrive early every morning to start a fire in the boiler to create steam. The central power unit used a geared

drive wheel to rotate an axle mounted near its rim. An "eccentric," mounted on a bearing on the underside of this axle, was connected to rods running to each well. As the drive wheel rotated, the eccentric orbited the center of the drive wheel without revolving, pushing and pulling each of the rods. The rod lines were supported by A-frame guides that allow the rod to move along the length of the line. An "oiler" would oil the guides every day to allow for ease of movement. At the well head, the rod was attached to the back of the pump jack. The jack had a fixed pivot point so that the back and forth pushing was converted to an up and down lifting motion.



On exhibit in the Petroleum Museum's Oil Patch is a National Supply Company Model 12-C Central Power Unit that is in running condition. This piece of equipment is believed to date from the mid-1930's, though equipment similar to it was made in the early 1920's.

The 18-foot wheel was originally installed on a lease near Grandfalls, Texas. The wheel could pump as many as 12 wells from a central location. In many

fields, especially in California, the moving rods were made to go up hills and around corners while delivering power to the pump jacks.

These huge wheels were economical only where there were several wells in a relatively small space - though it was surprising how far the rods could be made to run. Beginning in the early 1930's, however, the State of Texas passed rigid laws governing production; among these were spacing laws that prevented wells from being drilled close together. The era of the central power units declined with the increased use of pumping units which have their own electric motors.

FROM THE **COLLECTION:**

George Abell commissioned esteemed Italian-born artist, Frank Gervasi, to paint historical scenes of the oilfield. Three of these incredible paintings in the Museum's collection depict a bandwheel central power unit in Pecos County. *These paintings are* shown above. The Museum's Oil Patch central power unit is pictured at far left.

Mineral Gallery Minerals Donated to Museum



Feldspar Pakistan

The Petroleum Museum is excited to accept 12 new mineral specimens into its collection. Dr. Rob Lavinsky, owner of The Arkenstone, has graciously donated 12 beautiful pieces to the Museum. The collection includes minerals from the United States, Japan, China, India and Pakistan.

Dr. Lavinsky has been instrumental over the years in helping the Museum develop its collection by encouraging other mineral collectors to donate specimens or loan minerals for display. His generous donation assures us that we are headed in the right direction. Many thanks to Dr. Lavinsky for all his assistance in helping the Museum work towards developing a beautiful and world-class collection!



Calcite Stalactite China

On the Road Again: With Museum's Traveling Trunks

Are you a teacher looking for a way to keep your students engaged during virtual learning? Have district standards made providing hands-on learning experiences for your students difficult? The Petroleum Museum wants to help!

Our staff in the Education Department
has been hard at work developing a variety of
trunks available for teachers in the surrounding
communities to utilize in their own classrooms. Each trunk
comes equipped with TEKS (Texas Essential Knowledge and Skills)aligned lessons along with all the information and materials needed
to teach each lesson. These trunks provide an easy-to-use method
for teaching science while also branching into other curriculum
fields. Our cross-curricular trunks take the stress and hassle out of
teaching science.

We have trunks designed for PreK through 8th grade that are ready to go to your classrooms today.

Topics include earth and life sciences, ro-

Topics include earth and life sciences, robotics, STEM, physics, math, and more. We know that there is uncertainty surrounding this coming school year, but we want you to know that we are available during this time of virtual learning as well as when your students are back in the classroom. Please feel free to contact education@petrole-

ummuseum.org for more information on pricing and availability.

Many thanks to our sponsors for making these trunks possible: Midland High School-Students in Philanthropy, the Rea Charitable Trust, ConocoPhillips, SM Energy, and the Helen Greathouse Charitable Trust



FALL ROBOTICS; FUNLABS SCHEDULE

Building Bots: K-2 First TuesdaySeptember, October, NovemberBuilding Bots: 3-6 Third TuesdaySeptember, October, November

STEAM Sprouts: 6 weeks

Mondays

9:30 to 10:30 a.m. OR

11:30 a.m. to 12:30 p.m.

Robotics, FunLabs Energize Fall

The Petroleum Museum is rolling full speed ahead into the Fall semester with **Building Bots Robotics & Engineering Funlabs** that kicked off September 1. Building Bots classes enable students in grades K-6th to develop skills in critical thinking, creativity, and problem solving while they complete engineering challenges, robotic design, and inventive projects. Classes for students in kindergarten through second grade utilize our LEGO WeDo 2.0s, Osmos, Kubos, and Sphero equipment while classes for third through sixth grade students feature LEGO Mindstorm EV3s, Osmos, Spheros, and Tetrix PRIME robotics equipment.

Building Bots classes meet on the first Tuesdays of September, October, and November for students in grades kindergarten through second and the third Tuesdays of September, October, and November for students in third through sixth grade. Each class is held from 5:30 to 7:30 p.m.

We will also be holding our fall **STEAM Sprouts** six-week session beginning on Monday, September 21. This session will feature hands-on STEAM (Science, Technology, Engineering, Art, Math)-based curriculum for children ages 4 to 5. Students will engage in age-appropriate LEGO Simple Machines curriculum as well as creative activities designed to tie science and art together. Two identical time sessions are available: one from 9:30 to 10:30 a.m. or 11:30 a.m. to 12:30 p.m. Students will be registered for the entire six-week session.

For all our fall programming, pre-registration is required. Go online to **www.pbpetro.org** to sign up today!

Need Volunteer Hours? Call Us!

Calling all Legacy volunteers! If you are needing volunteer hours for your Legacy scholarship, the Petroleum Museum is a Legacy approved agency and we would love to help! Whether it is helping with our Building Bots classes, prepping Family Science Night 2GO boxes, or feeding animals, our Education Department is always needing help. To arrange your volunteer hours, check out the online needs we have posted at www.mssconnections.org or contact our Education Department at education@petroleummuseum.org. We look forward to working with you soon!



APPLAUSE, APPLAUSE

We want to give a round of applause to the following friends, companies and businesses. Their in-kind contributions of time, assistance or services are appreciated:

ASCO Equipment Helmerich & Payne, Inc. Plains All American Pipeline

Safe Summer Science

Even with the COVID-19 outbreak, our Education Department was still able to provide fun and safe science programs this summer for students ages 4 to 12. Check out all the fun we had!









Thank You, Teachers!



We had the unique opportunity to offer internships to several teachers in the surrounding communities this summer. Teachers from Midland ISD and Ector County ISD helped with a variety of education programs including our STEAM Sprouts Mini Camps, Summer Science Camps for students ages 6-12, and Movie Maker Mondays. We provided deeper insight into the world of STEM while they provided meaningful connections and education for our students. We greatly appreciate their hard work.

Family Science Night: Try It **2**GO In a Box

Introducing **Family Science Night 2GO:** The Museum's way to bring Family Science Night to you despite the limitations surrounding the COVID-19 outbreak. "Out of this World" Family Science Night 2GO brings the fun, quality science education you expect during Family Science Night to the comfort of your own home.

Each Family Science Night box comes equipped with all the



supplies and information you need to conduct 10 astronomy-themed experiments and creative activities. You can join our Education Department for a Facebook Live on **Thursday, September 10, from 6:15 to 6:45 p.m.** to interact with us and conduct some of the experiments together. We have a limited number

of boxes available so **reserve your box online at www.pbpetro.org!**We want to extend a special thank you to **Chevron** for making this



free, educational experience possible.

Be sure to mark your calendar for "Grossology" Family Science Night 2GO on Saturday, October 31!

Looking ahead to 2021, we have scheduled "Journey Through the Jurassic" for January 21 and "Wild for Wildlife" on April 15.



Two visitors enjoy petting Flynn, the newest critter.

Critter Corner: Welcome to Wallaby Flynn

Walking past the Education Hall you might catch a glimpse of our newest addition hopping around! Join us in welcoming **Flynn**, a Bennett's wallaby! Also commonly called the red-necked wallaby, these are members of the marsupial family. They are native to Australia with a significant population existing in Tasmania as well. Bennett's wallabies are considered medium size, typically standing 36 inches tall and weighing between 30 and 40 pounds. From their head to the tip of their tail, wallabies can be as long as 6 feet, with most of that being its tail!

In the wild their diet consists mostly of grasses and herbs. Flynn's diet at the Museum consists of a wide variety of vegetables, dry wallaby food, and lots of hay. Wallabies have a keen sense of smell and hearing. Their large ears are capable of moving 180 degrees independently, allowing them to remain alert for potential predators, such as dingoes. Flynn will enhance our Animal Outreach program by teaching children and adults about animal adaptations, ecosystems, and mammal specifications.

Be sure to hop on by the Education Hall to say hello to Flynn!

One Day of Giving Lifted Basin Nonprofits

ermian Basin Gives was a oneday event encouraging people to create a meaningful unified impact through the nonprofits that serve our communities. There is power in numbers, and area nonprofits used Permian Basin Gives as an opportunity to encourage donors to make a bigger impact by giving together. The Permian Basin is known for its strength and resilience. Throughout history, the people of this region have faced challenges head-on with grit and determination. On August 25, the Permian Basin

community raised \$2.3 million for over 100 nonprofits in the Permian Basin! There's a fundamental truth that gives us hope - that together we can do extraordinary things.

Wow, what a day we had! You helped the Petroleum Museum meet and surpass our goal for Permian Basin Gives. You also doubled your impact with our matching funds gift. Thank you!

You can still make a difference; it's not too late!

GIVE - There are many ways to participate in sustaining the Museum. Donate to

the Museum, become a Museum Member, shop at the Museum Store, and use AmazonSmile.com for your everyday purchases.

FOLLOW - Follow us on Facebook, Instagram and LinkedIn.

SPREAD THE WORD - Encourage friends and family to join you in creating a real impact in the Permian Basin.

Call, email or go online at www.pbpetro.org to donate to the Museum. Luanne Thornton can assist you at 432-683-4403 or Ithornton@petroleummuseum.org.

Membership Gives Perks All Year Long

No time like the present to join or renew your membership! Museum membership has many perks beginning with free admission and store discounts. To become a member, log on to our secure website at www.pbpetro.org or contact Luanne Thornton at 432-683-4403.

Welcome to our newest and renewed members as of August 26:

Contributing Family

Clarissa & Caleb Austin Mara Bland Mr. & Mrs. J. Barr Bolger Mr. & Mrs. Michael Brady Stacie & Arthur Browning Mr. & Mrs. John Burkholder Lia Cless

KerryKay & Tom Cook Terry Foster Kathryn Frerich Amy & Bryan Grant Katarina & Michael Graves B. Pat Gray Geriann Green Heather & Andrew Gyger Patience & Davie Matthew Jones Mr. & Mrs. Taylor Kalen Lucky Services, Inc. Kristine & Mike Manera Katie McCain Mr. & Mrs. Don McClurg Sharon & Jeremiah Moody Mr. & Mrs. Don L. Parks Dan Pemberton Maggie Pryor Mr. & Mrs. William C. Robinson Debra & Dale Strauss Kristin Vordick Elizabeth White

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Director

Chevron

Memorials

Memorial contributions to the Petroleum Museum are deposited in the permanent endowment fund, unless donor advised, to provide ongoing tribute to the individuals recognized in bold. Donors are listed below the honoree. Contributors as of August 26 were:

IN MEMORY OF... Ted Collins, Jr. Mr. & Mrs. Cadell Liedtke Marge Duke Mr. & Mrs. Cadell Liedtke

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Mary Baker Jim Byerlotzer Pam Howell Christine Rodriguez Ashley & Michael Rodriguez M.A. Shute Gail Spann Michelle & Trevor Stribling Wesley Sweet Luanne & Randy Thornton

Notable Dates

SEPTEMBER

September 10

Family Science Night 2GO

Out of This World

FREE Family Science Experiment & Activity Boxes: All materials and information needed for experiments is included. Facebook Live experiments start at 6:15 p.m. Pre-registration and pick-up signups required. Go to www.pbpetro.org for more information.

Sponsor: Chevron

September 15

Building Bots: Robotics & Engineering FunLab

5:30 to 7:30 p.m.

Grades 3-6

Pre-registration required. For more information or to register online, visit **www.pbpetro.org**

September 16 - October 13

Connect 2 STEM: Session 2

Tuesday - Thursday each week

7:45 a.m. to 3:45 p.m. (late pick-up add-on available) Connect to your school virtual classroom at the Museum and engage in STEM activities and socialization. Grades K-6

Pre-registration required. For more information or to register online, visit **www.pbpetro.org**

September 21, 28, October 5, 12, 19, 26

STEAM Sprouts: LEGO Simple Machines 9:30 to 10:30 a.m. OR 11:30 a.m. to 12:30 p.m.

Ages 4-5

Mondays for 6 weeks. Must register for all 6 sessions. Pre-registration required. For more information or to register onlone, **visit www.pbpetro.org**

OCTOBER

October 6

Building Bots: Robotics & Engineering FunLab 5:30 to 7:30 p.m.

Grades K-2nd

Pre-registration required. For more information or to register online, visit **www.pbpetro.org**

October 13

Brown Bag Lunch & Lecture Series

Speaker: Jeff Thomas, manager & co-founder,

Tall City Brewing Co. 11:30 a.m. to 12:30 p.m.

Free admission. Drinks & dessert provided.

Sponsors: Norma J. McGrew & Hahl Proctor Charitable

Trust, Bank of America, N.A., Trustee

October 14 - November 10

Connect 2 STEM: Session 3
Tuesday - Thursday each week

7:45 a.m. to 3:45 p.m. (late pick-up add-on available) Connect to your school virtual classroom at the Museum and engage in STEM activities and socialization.

Grades K-6

Pre-registration required. For more information or to

register online, visit www.pbpetro.org

October 20

Building Bots: Robotics & Engineering FunLab

5:30 to 7:30 p.m.

Grades 3-6

Pre-registration required. For more information or to

register online, visit www.pbpetro.org

October 31

Family Science Night 2GO

Grossology

FREE Family Science Experiment & Activity Boxes: All materials and information needed for experiments is included. Pre-registration and pick-up signups required.

Go to www.pbpetro.org for more information.

Sponsor: Chevron

NOVEMBER

November 3

Building Bots: Robotics & Engineering FunLab

5:30 to 7:30 p.m.

Grades K-2nd

Pre-registration required. For more information or to

register online, visit www.pbpetro.org

November 10

Brown Bag Lunch & Lecture Series

Speaker: **Randy Wilson** *Veterans Make a Difference*11:30 a.m. to 12:30 p.m.

Free admission. Drinks & dessert provided.

Sponsors: Norma J. McGrew & Hahl Proctor Charitable

Trust, Bank of America, N.A., Trustee

November 11 - December 17

Connect 2 STEM: Session 4

Tuesday - Thursday each week

7:45 a.m. to 3:45 p.m. (late pick-up add-on available) Connect to your school virtual classroom at the Museum and engage in STEM activities and socialization.

Grades K-6

Pre-registration required. For more information or to

register online, visit www.pbpetro.org

November 12

Arlen Edgar Distinguished Lecture Series

Speaker: James McLurkin

Dances with Robots: The Story of One Engineer, 112 Little Robots, and the Toys, Insects & Star Wars

7 p.m.

Free ticketed event. Call for reservations or go online to

www.pbpetro.org

Sponsor: Abell-Hanger Foundation

November 17

Building Bots: Robotics & Engineering FunLab

5:30 to 7:30 p.m. Grades 3-6

Pre-registration required. For more information or to

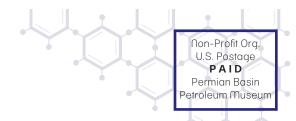
register online, visit www.pbpetro.org

For more information about any of these programs or events, contact the Petroleum Museum at 432-683-4403 or www.pbpetro.org.



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Museum Bit & Bytes is published quarterly by the Petroleum Museum. For more information call 432-683-4403 or visit the website at pbpetro.org. 9/20

The Museum Store



Inspire your child this fall with science activities from the Museum Store! Shop for budding scientists of every age with a variety of science kits and supplies! Museum Members always receive **15 percent off** purchases. We are open from 10 a.m. to 5 p.m. Monday through Saturday and 2 to 5 p.m. on Sunday. Or, shop online at **pbpetro.org/shop anytime**.

Our Mission: We will share the petroleum and energy story and its impact on our lives.