PPG AND CARNEGIE SCIENCE CENTER A Partnership Fueling STEM Exploration



We protect and beautify the world™

The Power of Partnership

>165

K-8th grade students reached by Science on the **Road programs**

-6





school group visitors each year

\$7.5MM

donation to establish the PPG SCIENCE PAVILION™



>130K

students reached by a PPG-sponsored program in 2018

the #1 visited museum in Pittsburgh

PPG and Carnegie Science Center

A Partnership Fueling STEM Exploration



We know firsthand the importance of sparking a passion for science and discovery at an early age. At PPG, we see education as a way to enable possibilities and progress through learning, curiosity and discovery. After all, our scientists, engineers and innovators were once eager young students with an appetite to shape the world around them. We know firsthand the importance of sparking a passion for science and discovery at an early age.

It was this very spark that started our own partnership with Carnegie Science Center, one of the top science centers in the U.S., and its predecessor organization, Buhl Science Center, in 1981. Together, we set out to share our passion and the joy of hands-on learning and experimentation with future inventors.

Today, PPG and Carnegie Science Center partner to make continuous learning possible – and fun! By holding year-round camps and classes for school visitors, hosting ongoing exhibits and traveling near and far with captivating educational programming, thousands of Pittsburgh-area young people are experiencing the life-changing impact of science.



PPG AND CARNEGIE SCIENCE CENTER SPREAD STEM EXCITEMENT AT HOME AND ACROSS THE REGION

Fueled by the PPG partnership, Carnegie Science Center offers action-packed science programs both on-site and around the region.

The signature Science on the Road and Mobile Fab Lab programs travel to area schools with exciting programming and hands-on demonstrations, reaching more than 150,000 students each year.

Students explore firsthand how innovative aircraft fly off the drawing board and into the sky.

FROM BLUEPRINTS TO BLUE SKIES, PPG HELPS "SCIENCE TAKE FLIGHT" ACROSS THE U.S.

With help from PPG and Carnegie Science Center, the future is cleared for takeoff! The Science on the Road program Science Takes Flight has traveled across the country bringing dynamic science to thousands of children in Alabama and California. Students explore firsthand how innovative aircraft fly off the drawing board and into the sky and even take a spin on a hovercraft to feel the fiery roar of propulsion chemistry.





WILD BY DESIGN INSPIRES STUDENTS TO BE WILD FOR SCIENCE

Did you know the wing structure and flight patterns of turkey vultures inspired the Wright brothers' airplane wings? Funded by PPG, the Wild by Design: Innovations from A to Zoo Science on the Road program is a collaboration with Carnegie Science Center and the Pittsburgh Zoo & PPG Aquarium to help hundreds of students in the Pittsburgh region explore the science of biomimetics, just like the Wright brothers. Launched in 2013, the program includes interactive experiments and an exciting video to demonstrate how technology imitates life and how humans can mimic the best structures and systems in nature to build better robots, create better coatings, use energy more efficiently and more.

At SciTech Days, **we open the minds of students by connecting science with sports** and showing students how PPG technology makes hockey nets chipresistant and pucks change colors in the cold," said Brittany Katofsky, PPG chemist and SciTech Days volunteer. "The students' faces truly light up when they see firsthand the excitement and fun a STEM career can provide.



more than 7,400 students

participated in SciTech Days in 2018

FUTURE SCIENTISTS PROPEL REAL-LIFE SCIENCE WITH VISITS TO CARNEGIE SCIENCE CENTER

Through **SciTech Days**, the future scientists of the Pittsburgh region's middle and high schools have extraordinary access to cutting-edge workshops, featured programs and interactive exhibits from leading STEM companies like PPG. The program connects visitors with leading scientists and technologists in a fun, dynamic atmosphere. PPG employee volunteers have shared their expertise and excitement for science with this program since 2013. In 2018, more than 7,400 students participated.

On New Year's Day, more than 2,740 kids and family members got slimy, yucky, ooey, and gooey with messy science experiments at MessFest, presented by PPG.

PPG is an annual sponsor of the **Covestro Pittsburgh Regional Science & Engineering Fair,** a competition of research projects in the fields of science, mathematics and engineering that included more than 1,000 students last year.

By sponsoring the Carnegie Science Awards, PPG helps to honor and celebrate local innovators whose outstanding science and technology achievements make western Pennsylvania great and inspire the next generation.

As a founding partner of the **Duquesne Light Co. Center** for STEM Education and Career Development, PPG helps to further the Center's mission of great teaching, inspired learners and collaboration with programming that reached 90,000 people in 2018.



In July 2018, Carnegie Science Center served as a collaboration hub for a global meeting of PPG research scientists. More than 20 PPG scientists volunteered at a science camp to share demonstrations and experiments with future inventors.

"Surrounding ourselves with the youthful excitement for discovery not only set the tone for sharing knowledge across PPG's scientists, but provided us a venue to share our own expertise and reallife experiences with the next generation of scientists," said Andy Surface, PPG scientist and product manager. "Carnegie Science Center brought us back to our own childhood memories and aspirations and allowed us to share our joy of science with the students."

PPG Science Pavilion has served as a hub for a multitude of educational events from river chemistry camps to coding classes.



\$7.5 MILLION

gifted by PPG and PPG Foundation

PPG SCIENCE PAVILION – THE FUTURE OF SCIENCE, TODAY.

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At PPG, the work we do in our labs helps to create innovations and inventions that improve how we move, work and live. We're on a journey to expand our passion for exploration beyond our labs and connect young innovators with our love and mastery of STEM.

In 2017, PPG and the PPG Foundation gifted \$7.5 million to *SPARK!* A Campaign for Carnegie Science Center, and creation of the *PPG Science Pavilion*, reflecting both PPG and the Science Center's lasting commitment to education, life, and career prospects of children and the economic vitality of the Pittsburgh region.



Since its opening in June 2018, *PPG* Science Pavilion has served as a hub for a multitude of educational events, from river chemistry camps and coding classes, and strengthened the Science Center's ability to inspire the next generation of creative thinkers and prepare them for the workforce of the future.

We're #PPGProud to celebrate the oneyear anniversary of the *PPG Science Pavilion* at Carnegie Science Center. It's our home away from the lab and launching point to help prepare today's students for tomorrow's opportunities.

A Community Enriched with Science



···.. square-foot expansion

9 NEW

learning spaces in the FedEx[®] STEM Learning Labs 14K

square-foot Scaife Exhibit Gallery



coated with PPG PAINTS™ SPEEDHIDE[®] interior paint, MEGASEAL[®] by PPG and more



I stood at a window for a moment with a student as we shared in the magnificent view in the new *PPG Science Pavilion*. Looking at the river and the green engineering that had grown around the science center, **she made the connection that people are really thinking about how to build for the future.**

- Ellen Cavanaugh, Ph.D., Director, Baden Academy Charter School







80K

visitors for

THE ART OF

THE BRICK

traveling

exhibition

BRICK BY LEGO[®] BRICK, EXHIBIT BUILDS PILLARS FOR CREATIVE POSSIBILITIES

The world's largest LEGO® art exhibition was a perfect fit as the *PPG Science Pavilion*'s first traveling exhibition. THE ART OF THE BRICK inspired nearly 80,000 visitors in the Scaife Exhibit Gallery, where hundreds of *LEGO* brick sculptures and activity tables entertained and educated adults and children alike from June 2018 through January 2019. Artist Nathan Sawaya's blockbuster exhibition made a colorful splash with its fascinating intersection of art, science and engineering.



5K students participated in hands-on STEM activities

SUMMER PROGRAMS PAVE CAREER PATHS

Fueling interest in STEM-related careers is part of our DNA at PPG. Many of us were inspired by the possibilities STEM fields have to beautify our world. The next era of scientists in grades K-12 took part in the Science Center's summer camps and classes in the FedEx® STEM Learning Labs. Through hands-on activities, Science Center educators demonstrated to nearly 5,000 students how STEM concepts apply to our everyday lives, and highlighted STEM career paths.



Da Vinci the exhibition on display through 09.02.2019



CRACKING THE CODE TO CREATIVITY

At PPG, we know the impact color and creativity can make in our communities, just like original Renaissance man himself. A traveling exhibition celebrating the works of Leonardo da Vinci opened at the *PPG Science Pavilion* within the Scaife Exhibit Gallery and wows visitors of all ages with a stunning collection of da Vinci's art and inventions. Activity tables with building challenges and artistic prompts engage visitors as they wander through recreations of da Vinci's many machine designs and masterpieces. The exhibition depicts engineering, science, art, and creativity at work, inspiring visitors to explore the STEM disciplines with as much fervor as da Vinci. It is on display through Sept. 2, 2019.



Thirteen-year-old Donovan Lovejoy, who attends Manchester Middle School, is a science camp veteran. He says it's even better than hanging out at the pool.

"The pool gets old," says Lovejoy. "Science is fun."

During a break in the DNA Detective camp, he adds, "I like to learn what is inside of people and inside of animals and how it works and all comes together."

His favorite camp this summer is another new offering: Art + Tech. "It was cool to see how digital art works," he says. "I do traditional art at home."



As a sign of appreciation and to spread science inspiration throughout our community, we offered all PPG PAINTS™ store customers a a voucher for \$5 off admission to Carnegie Science Center.



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