

2020 Virtual STEM Expo









A PROGRAM OF





Thank you for supporting **SciFest All Access**, a program of the USA Science & Engineering Festival.

The SciFest All Access virtual expo was available online from September 26 - October 31, 2020. This free event, featuring interactive STEM activities and performances, was designed to inspire students in the STEM fields with the ultimate goal to help bridge the STEM workforce gap.

SciFest All Access was targeted to K-12 students, college students, educators, and families. Seven exhibit zones featured 137 engaging booth activities representing top life science universities, high tech and life science corporations, non-profit organizations, and governmental agencies. Attendees could also view inspiring performances on the STEM Stage, engage in an interactive scavenger hunt, and gear up at the STEM retail store. A career center was available for college students and graduates interested in exploring job opportunities in science and engineering.

We set out to create a fun and visually engaging virtual experience for our student audience. Attendees entered SciFest through the virtual Lobby and were greeted by a Welcome Video to walk them through the main features of the platform. The Exhibit Portal served as their passage into the seven STEM Zones including Defense & Security, Energy, Engineering & Tech, Health & Medicine, Math & Computer Science, Natural Sciences, and Space & Aviation. Each Zone featured multiple rooms of virtual exhibit booths. Attendees had the option to submit questions to exhibitors of interest within each booth.

The STEM Stage was sponsored by 3M and featured 37 inspiring STEM-focused talks, demonstrations, and performances given by over two dozen of our nation's top STEM role models (see full list below). Most STEM Stage videos are now available for <u>on-demand viewing</u> at no cost.

The Scavenger Hunt featured three tracks for various age groups, designed to keep the students engaged and moving through the platform. Attendees earned points for all interactions within the platform and high point earners were awarded prizes weekly. Attendees had access to a digital "Backpack" prefilled with FREE downloadable content contributed by SciFest exhibitors and performers.

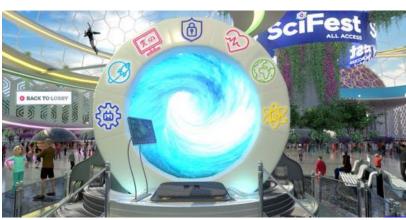
More than 75,000 students, teachers, parents, military families, and STEM enthusiasts registered to attend SciFest All Access representing all 50 states and 99 countries. 67% of the registrants were school groups with educators planning to incorporate the program into their distance-learning curriculum.

To aid educators with student engagement and to better utilize the program as a classroom resource, we provided teachers with downloadable worksheets and other resources that corresponded with the exhibits and stage shows.

We partnered with <u>Passage Productions</u> to deliver high-quality and professional 3D templates, avatars and video production.







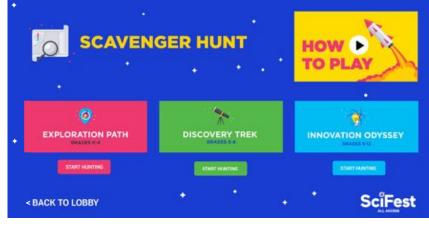
















Jason Latimer World Champion Magician & Science Educator



3M Visiting Wizards Scientists & Engineers from the 3M Company



Grand Hank Master Scientist & Television Personality



Jacqueline Means "The STEM Queen"



Nate Ball Mechanical Engineer, TV Host & Entrepreneur



Roy Moye III Aerospace Engineer & Musician



Dr. Tracy Fanara Environmental Engineer & Research Scientist at NOAA



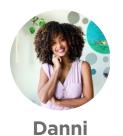
Jason Lindsey Award-winning Science Educator, Author & Meteorologist



Dr. Padhu Seshaiyer **Mathematical Scientist**



Okereke Science Communicator, Entrepreneur, Engineer, Digital Media Producer



Washington Marine Biologist, TV Host & Science Communicator



Baynes

STEM Advocate & Educator



Amelia Draper Meteorologist & TV Weather Forecaster



Steve Wolf Stunt Scientist, Engineer, TV Producer



Tamara Robertson

Engineer, TV Host & Actor



Dr. Michael Barratt

Physician & NASA Astronaut



Justin Shaifer STEM Educator & Science Communicator



Sing, hear, see, and dance your way to mathematical success

WATCH SCIFEST ALL ACCESS STAGE SHOWS

REGISTRANT INFORMATION

Total Registrations: 75,400

School Groups: 67% Individuals: 33%

U.S. Registrants: 93%

International Registrants: 7%

Attendees Returned More Than One Time: 37%

BREAKDOWN OF REGISTERED ATTENDEES BY REGION

Northeast: 41% (DC, DE, MA, ME, MD, NH, NJ, NY, RI, CT, VT, PA) Southeast: 36% (AL, FL, GA, KY, LA, MS, NC, SC, WV, VA, TN, AR)

Midwest: 6% (IA, IL, IN, MI, MN, MO, ND, NE, OH, SD, WI)

Southwest: 5% (AZ, NM, OK, TX)

West: 12% (AK, CA, HI, NV, CO, WY, MT, ID, WA, OR, UT

We also had representation from 99 countries including Algeria, American Samoa, Antigua and Barbuda, Argentina, Australia, Azerbaijan, Bahrain, Bahrain, Bangladesh, Barbados, Belgium, Belize, Bolivia, Botswana, Brazil, Burundi, Cameroon, Canada, Cayman Islands, Chile, China, Colombia, Costa Rica, Cyprus, Czech Republic, Denmark, Ecuador, Egypt, El Salvador, Eswatini (Swaziland), France, Germany, Ghana, Greece, Grenada, Guam, Hong Kong, Hungary, India, Indonesia, Iran, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Kuwait, Libya, Malaysia, Mexico, Morocco, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Pakistan, Panama, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Romania, Russia, Samoa, Saudi Arabia, Serbia, Singapore, Slovakia, South Africa, South Korea, Spain, Sri Lanka, Suriname, Sweden, Switzerland, Taiwan, Tanzania, Thailand, Trinidad and Tobago, Turkey, Uganda, United Arab Emirates, United Kingdom, Uruguay, US Minor Outlying Islands, Uzbekistan, Venezuela, Vietnam, Virgin Islands, United States, and Zimbabwe.

BREAKDOWN OF REGISTERED ATTENDEES BY GRADE LEVEL/AGE

ES (grades 5 and lower)	28%
MS (grades 6-8)	39%
HS (grades 9-12)	26%
College Students	4%
All Other Adults	3%

BREAKDOWN OF REGISTERED ATTENDEES BY SCHOOL TYPE

Public School 65%
Private School 26%
Charter or Magnet 7%
Home School 2%

61% of public schools registered are Title 1 schools

BREAKDOWN OF REGISTERED ATTENDEES BY GENDER

Female 45% Male 40% Prefer not to say 15%

BREAKDOWN OF REGISTERED ATTENDEES BY ETHNICITY

Asian 9%
Black or African American 16%
Hispanic or Latina/Latino 11%
Native American 1%
White 22%
Other 13%
Prefer not to say 28%

ATTENDEE FEEDBACK

86% of attendees surveyed watched the Welcome Video and found it helpful

87% of attendees surveyed visited the STEM Stage

54% of attendees surveyed participated in the Scavenger Hunt

Was SciFest an effective way to get you and/or your students more interested in STEM?

Yes 69% To a certain extent 25% No 6%

Overall Attendee Rating

Very Satisfied 41%
Satisfied 40%
Neutral 11%
Unsatisfied 5%
Very Unsatisfied 1%

PLATFORM METRICS

Our platform partner was not able to provide us with reliable metrics for booth/stage show activity. Fortunately, the USASEF gathered attendee demographic information through the registration process and feedback through post-event surveys.

SOCIAL MEDIA

The event, exhibitors, and performers were heavily promoted across all of our social media platforms. Exhibiting organizations and performers also touted their participation on social media. During the event, we launched a social media campaign called Show Us How You STEM with a goal to engage our audience and increase awareness for the program. The following pages illustrate the campaign and the event reach on social media.



REACH FOR USA SCIENCE & ENGINEERING FESTIVAL SOCIAL HANDLES ON TWITTER, FACEBOOK, INSTAGRAM AND LINKEDIN

5.25 million impressions

TOP CONTRIBUTERS	REACH ACROSS FACEBOOK / TWITTER
AstraZeneca	74.8k
DoD STEM	8,039,494
FAA	337.7k (Twitter Only)
NASA	65,269,819
NASA Internships	67.4k (Twitter Only)
NASA Exhibit	9,542 (Twitter Only)
NASA Landsat Program	61.9k (Twitter Only)
NASA Universe	219.6k (Twitter Only)
NASA People	40k (Twitter Only)
NASA Armstrong	311.6k (Twitter Only)
NBC4 (Amelia Draper)	24.1k
U.S. Air Force	14.9k (Twitter Only)

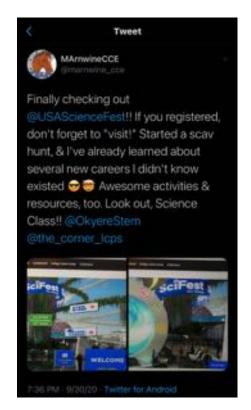
















GOVERNMENT AGENCY PARTICIPATION

Department of Energy - including Brookhaven National Laboratories, Idaho National Laboratory, Los Alamos National Laboratories, National Energy Technology Laboratory, National Renewable Energy Laboratory, Oakridge National Lab, Office of Energy Efficiency and Renewable Energy, and STEM Rising

DoD STEM - including U.S. Army Educational Outreach Program

Federal Aviation Administration (FAA)

Food and Drug Administration (FDA) - including Center for Devices and Radiological Health, Center for Tobacco Products, and Office of Regulatory Affairs

NASA

National Institutes of Health (NIH) - including National Eye Institute and National Institute of Mental Health, and National Institute of Neurological Disorders and Strokes

National Science Foundation - including Centers for Chemical Innovation and National Radio Astronomy Observatory

Office of the Director of National Intelligence - including National Reconnaissance Office, National Security Agency, and Office of Naval Intelligence

U.S. Air Force

U.S. Department of State

U.S. Geological Survey

ATTENDEE QUOTES

Educator Attendee: "My 3rd grade students, especially one of them, kept asking me, "when are we going to do SciFest again?" ...even long after the event was over! She really enjoyed exploring the SciFest virtual world and kept sharing with us everything she was learning. All the students really enjoyed helping each other figure out how the scavenger hunt worked (even after watching the video) and exploring new ideas. Another student even got a very detailed email reply from one of the booth questions she asked and was so excited to share in class! Thank you for this wonderful free event. Even if you can do this live in the future, I think you should keep the virtual option as well if possible for those who are unable to travel. If I had more time not being a teacher, parent coach, and wife, I would have spent more time inside SciFest as well! Thanks again!"

Homeschool Educator: "The event was great and innovative. It provided awareness on working areas and topics that children normally don't have access or know that they exist. Powerful tools for teachers. We, as Homeschooling Educators and parents, are very thankful for this opportunity. We expect to participate next time too. Thanks & Regards."

Homeschool Educator: "My student was instructed to spend a certain amount of class time at the site. She enjoyed it so much that she ended up spending hours exploring the site jumping from one booth to another. Thank you for such an amazing gift of free focused exploration!! We look forward to next year!"

Student Attendee: "I really like the concept you have built and it's an amazing platform for kids like myself, 100% awesome to me!"

Educator Attendee: "The SciFi All Access was fantastic! As an educator I was especially pleased with the opportunity to visit exhibits, view stage shows and videos of many professionals in their field of expertise. The content provided and STEM curriculum was extremely helpful in developing the STEM programming for my TRIO programs. During this COVID-19 pandemic the virtual platform provided educators, such as myself, with a wealth of content for our participants. We normally visit the US Science and Engineering Festival in Washington, D.C. but had to cancel due to the pandemic, to the dismay of our students. They were thrilled to have the opportunity to still participate on a virtual platform. BRAVO!!"

Student Attendee: "I've learned so much about STEM because of SciFest! It greatly broadened my knowledge about career options and showed many new and incredibly useful applications of STEM. It also introduced great resources that I can use in the future! I've learned a lot!"

Student Attendee: "It was the best platform for all students across the globe to engage in stem activities which nurtured the inner scientist inside them."

Educator Attendee: "We are a very small, rural school, and SciFest provided wonderful, ongoing opportunities for our students to take part in exciting Stem activities through the month of October. Through SciFest, our students experienced new horizons opening to them that they had never seen before. Thank you for making all this possible."

Homeschool Educator: "The SciFest was an AMAZING experience! We really appreciated the time extension as there were so many fantastic activities and resources and not even close to enough time to exhaust them all! Engaging exposure to such a wide range of topics in one, easily accessible location was unprecedented for us! Thank you for providing a bright spot in education during an otherwise challenging time! We were sad to see the month end!"

Educator Attendee: "Science Festival 2020 was amazing. It provided students from year one through college to explore a wide variety of topics. It created a sense of wonder and curiosity that really engaged all students. Even those students who were quite advanced found their curiosity ramped up. They can't stop talking about it."

Student Attendee: "SciFest All Access experience was absolutely amazing and it was beyond my expectations. I loved it and it was perhaps the best virtual experience and I would love to join again. I simply couldn't leave the site as the graphics were excellent and everything worked perfectly."

Educator Attendee: "The SciFest is an excellent opportunity to access a vast array of scientific areas through a user friendly platform which is structured in a very interesting way, making it appealing and extremely useful with regard to the related gain of knowledge! My sincere compliments to all those people that contributed to its creation, you all did an amazing job and the outcome was superb!"

Educator Attendee: "I like that the students had a choice of what they see. They seemed to enjoy the live performances and for those "nonscience" kids they did greatly enjoy the military site to see what sort of jobs were available to them. They were surprised they were considered STEM jobs."

Homeschool Educator: "One thing I noticed this year was the attempt to add diversity into all aspects of this festival. Kudos!!! We were able to see many that looked like us in both the images and the STEM Stage. I was super impressed. I loved the fact that we even had a remote option this year instead of a total cancellation and was able to gather lots of information to incorporate into our world of science this school year. This appeared to be a tremendous undertaking and you were able to pull it off successfully. Having access all month long was also a plus as it gave people an option for when to engage based on their schedule."

Educator Attendee: "In a time when coming together and creating shared experiences has become a challenge, SciFest All Access was a unique and fun way for my students and I to engage with the world of STEAM. Nothing can beat the awesome, in-person Festival, that we have come to look forward to and appreciate, but SciFest All Access was a well-thought out and creative extension of the Festival that gave us the opportunity to explore the wonderful world of Science in a self-paced, tech-savvy environment. Thank you to all the exhibitors, performers, and behind-the-scenes individuals for putting on a Sci-tastic event!"

EXHIBITOR QUOTES

NASA: "Although 2020 was incredibly challenging for our community, one of the highlights for our Public Engagement team was NASA's presence at SciFest. NASA was delighted to be involved with USASEF and reached existing and new audiences via the virtual USA Science and Engineering Festival, with nine separate exhibits and multiple speakers over the course of the event."

IEEE-USA: "Overall, we saw value as an exhibitor, and I'm glad something like this was available for the kids, educators, and adults. There was a lot of cool stuff to be found."

Science Cheerleaders: "USASEF did a great job pivoting to an online platform for the festival. It was easy to still share all of our content, and we saw a lot of other great booths!"

Daniel Alexander Payne Community Development Corporation: "I enjoyed the questions from the students. Several related our booth to a personal, family experience."

American Academy of Sleep Medicine: "Converting this traditional in-person fest to an online platform was a brilliant idea! I hope this continues to be an option in the following years and when it returns to the in-person format."

Exhibitor: "I think the SciFest team did a fantastic job at this virtual event. I really enjoyed being a part of it. Although I did miss the personal interaction with attendees."

We thank you for your generous support of this program and look forward to working together again.

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- The USA Science & Engineering Festival Team

