
SMITHSONIAN SCIENCE
EDUCATION CENTER
40
YEARS OF
TRANSFORMATION
40
YEARS
Smithsonian
Science Education Center

LETTER FROM THE LAPP-KEISER DIRECTOR

Dear Friends,

As we celebrate the Smithsonian Science Education Center's 40th anniversary, I'm filled with immense pride and gratitude for the decades of hard work, dedication, and support that have brought us to this milestone. The theme of this report—*40 years of transformation*—captures not only our progress in transforming K–12 education through science, in collaboration with communities across the globe, but also our vision for the future as we empower the next generation of science, technology, engineering, and mathematics (STEM) leaders.

The idea of transformation has always been at the core of our work. Since our founding in 1985, we have promoted innovative, experiential, and integrated inquiry-based K-12 STEM teaching and learning for schools, homes, and communities. We've ensured all students and teachers are included in STEM opportunities and recognize themselves in STEM. Since 2015, we've centered sustainability within our science education resources, curriculum, and professional development programs to advance STEM education for a more sustainable future. As we consider our next 40 years, this spirit of transformation will continue to guide us in creating innovative, inclusive, and sustainable teaching and learning experiences that connect students and educators with the science of the Smithsonian.

Secretary Lonnie G. Bunch III shared his goal for the Smithsonian to reach every classroom and home, helping to build a better shared future. Over the past 40 years, every educator, student, and community we've served has contributed to this mission. Thank you for being part of this effort to create a brighter world together.

With excitement for the future,

Carol L. O'Donnell

Dr. Carol O'Donnell
Douglas M. Lapp and Anne B. Keiser Director

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1985 2025

MISSION

Transforming K–12 Education through Science, in collaboration with communities across the globe

GOALS

Innovation

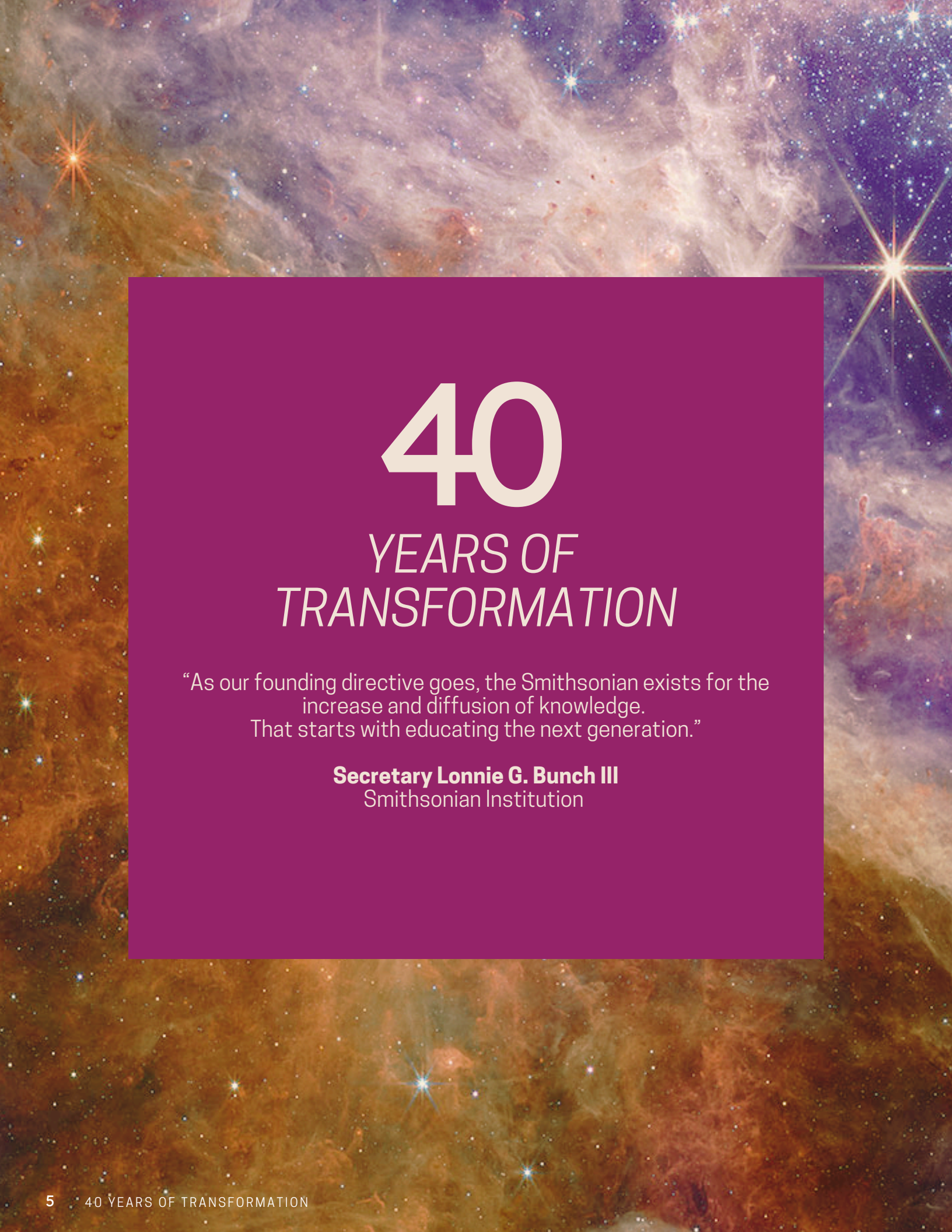
Promoting innovative, experiential, inquiry-based K–12 science, technology, engineering, and math (STEM) teaching and learning

Inclusion

Ensuring all students and teachers are included in STEM opportunities and recognize themselves in STEM

Sustainability

Advancing K–12 STEM education for a more sustainable future



40
YEARS OF TRANSFORMATION

"As our founding directive goes, the Smithsonian exists for the increase and diffusion of knowledge.
That starts with educating the next generation."

Secretary Lonnie G. Bunch III
Smithsonian Institution

Since 1985, the Smithsonian Science Education Center's journey in advancing science education has continually evolved. Each decade tells a story of progress--beginning with our **founding**, the steady **building** of impactful science education programs, **connecting** with K–12 educators and communities, and **expanding** our impact across our country and our world for a more sustainable shared future.

Today, the Smithsonian Science Education Center continues to work in **transforming** education and empowering the next generation of curious minds. This timeline reflects the history and dynamic evolution of the Smithsonian Science Education Center, celebrating four decades of growth, dedication, and a forward-looking vision.

FOUNDING

1985

Public fear that American schools were failing in science and math education culminated in the 1983 publication "A Nation at Risk." With the growing national recognition of the need to improve science education to ensure the United States can remain globally competitive, the Smithsonian Institution and the National Academy of Sciences partnered in 1985 to establish the Smithsonian Science Education Center. The educational landscape was shifting, and there was a strong call for engaging, inquiry-based learning to better prepare students for the challenges of a rapidly changing world. It was in this context that the Smithsonian Science Education Center, then known as the National Science Resources Center, was founded under the leadership of Dr. Douglas M. Lapp. Grounded in the belief that science literacy is essential for all students, we set out to transform the way science is taught, moving away from memorization toward hands-on, object-driven, and inquiry-centered learning. Our founding principles—quality, innovation, and impact—drove our early accomplishments in improving the learning and teaching of science for all students. These core values guided our convenings, leadership development programs, and curriculum resources. The center answered the call for science education reform and launched the Science and Technology for Children (STC) curriculum project for grades one through six that emphasized student-centered learning. With STC, students became active participants in the scientific process. In recognition of this innovative approach, STC earned the Presidential Award for Excellence in Math and Science, affirming our role in reshaping science education nationally. Through these efforts, the foundation was set for what would become a decades-long commitment to fostering curiosity and a love for science in classrooms across the country—and eventually, around the world.

Dr. Douglas M. Lapp, Founding Director of the Smithsonian Science Education Center with materials from an STC curriculum kit.

1995

BUILDING

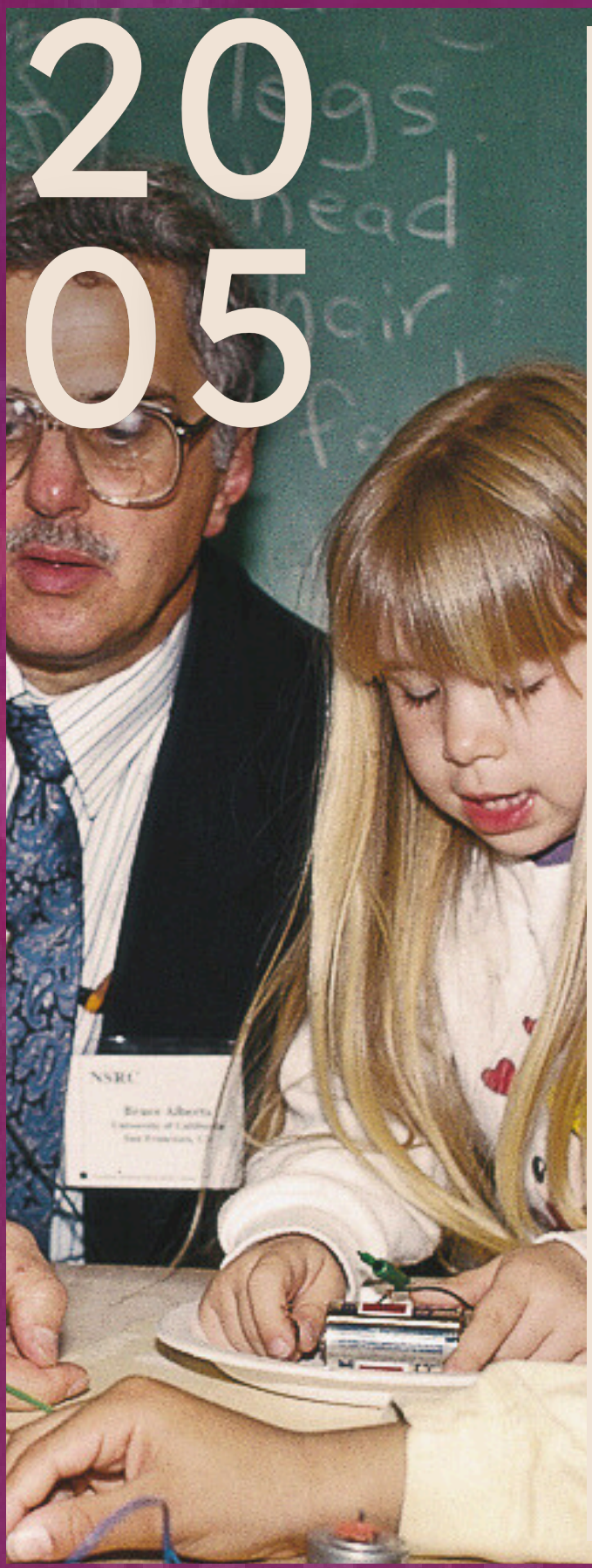
As the digital age dawned, the Smithsonian Science Education Center moved onto the World Wide Web, making our resources more accessible to a larger audience than ever before. This move enabled the center to reach educators in new and meaningful ways, offering hybrid tools like our Discovery Decks to enhance how teachers use our curriculum in classrooms both online and in print. Our reach increased significantly during this time, as more school districts adopted our programs focused on helping teachers inspire students with hands-on science.

With our sights on new horizons, we bolstered our organizational structure by increasing our programming and operations staff to support the expansion of our curriculum to middle school with Science and Technology Concepts for Middle School (STCMS). We held several Strategic Planning Institutes for school districts across the United States through our Leadership and Assistance for Science Education Reform (LASER) model, working closely with educators and administrators to implement programs that could have lasting impact on millions of students. By the early 2000s, we built a comprehensive LASER program where we could scale up and sustain effective programs in schools, support the professional growth of science educators, and provide rigorous, research-based science instruction materials. For the first time, the Smithsonian Science Education Center was also developing a global audience. We broke new ground with the Royal Swedish Academy of Sciences to translate and adapt our curriculum, making it more accessible to more young learners. As we worked to expand our reach and build foundational relationships, we set the stage for deeper connections with educators, students, and their communities.

Teacher attending a Smithsonian Science Education Academy for Teachers (SSEAT) event observing specimens from the National Museum of Natural History's collection.

CONNECTING

2005



Over the course of the first two decades since our founding, the Smithsonian Science Education Center continued to grow our international capacity. Under the leadership of the center's founding Deputy Director, Sally Goetz Shuler, we reached regions around the world through our planning institutes and resources, including Europe, Central America, Africa, the Middle East, and Australia, Through what is now known as the InterAcademy Partnership, a global consortium of, at the time, 95 national science academies, we were able to connect with international groups and play a leading role in improving science education throughout the world. Our work on the global stage earned us the puRkwa Prize in 2009, awarded by the French Académie des Sciences, for our work in promoting "scientific literacy [for] the children of the planet." That same year we also received the International Science Education Award from the Mexican government. These awards affirmed that the Smithsonian Science Education Center was recognized for driving meaningful change in education globally.

As we built connections, both locally and globally, we were continually expanding our programs to serve more educators, students, and their communities. In 2010, we were awarded the largest grant in our center's history, the Investing in Innovation (i3) award, which enabled us to study the efficacy of LASER, our curriculum, and professional and leadership development on student achievement in science across three states and 16 school districts. Our model was systematically transforming education. In 2010, the Smithsonian took on full direction of the center and in 2012 our name officially changed from the National Science Resources Center to the Smithsonian Science Education Center.

Former National Academy of Sciences president Dr. Bruce Alberts with students engaging in an activity with a battery and wires.

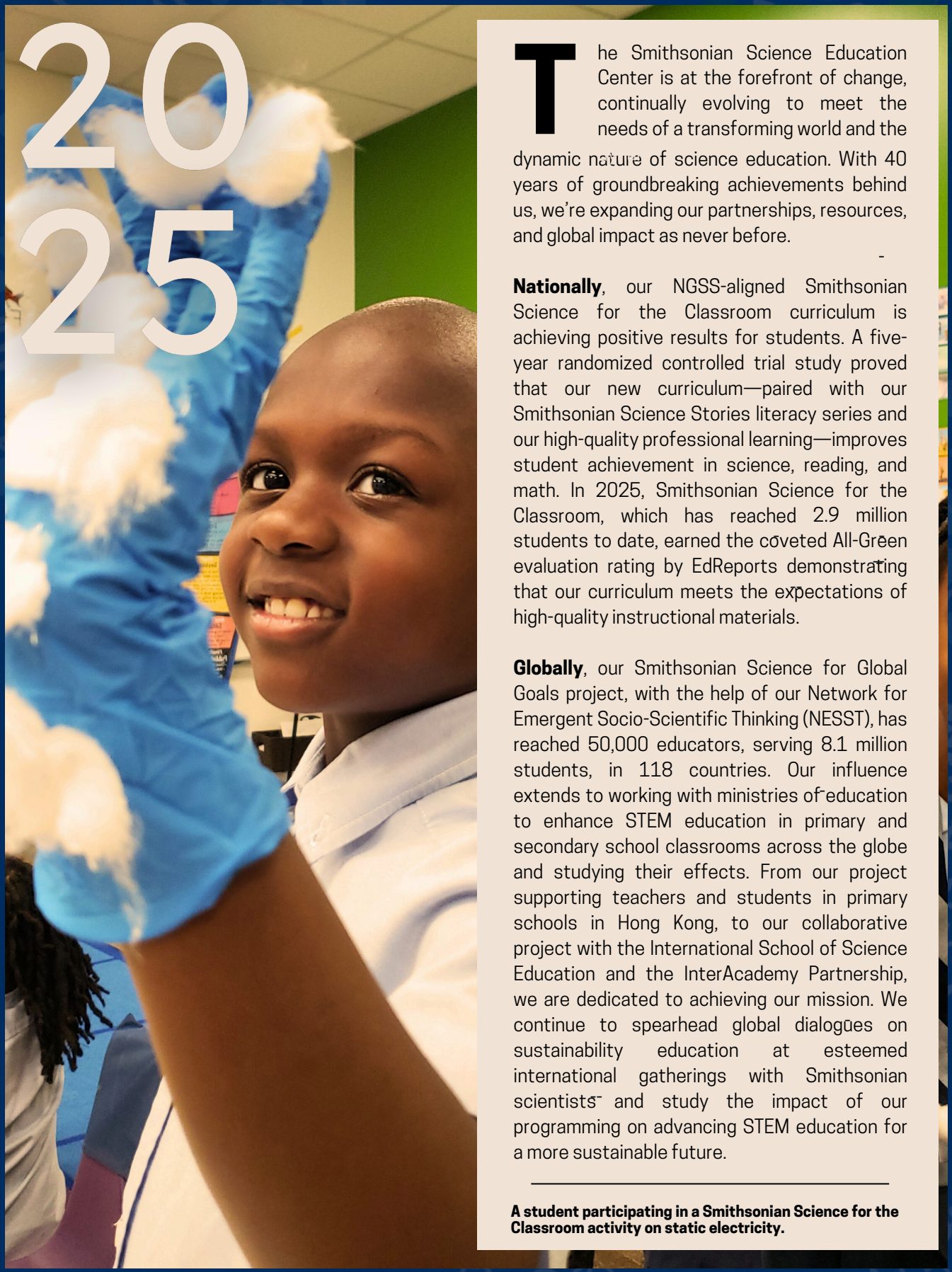
2015

EXPANDING

In 2015, under the direction of a new leader, Dr. Carol O'Donnell, the Smithsonian Science Education Center updated our mission statement to better reflect our full commitment to the Smithsonian and our approach to integrating the history, art, and culture of the Smithsonian into the teaching and learning of science. Our new transdisciplinary mission—*transforming K–12 Education through Science, in collaboration with communities across the globe*—was elevated by three core principles: innovation, inclusion, and sustainability. In the spirit of innovation, we recognized the pivotal role of the Next Generation Science Standards (NGSS) and developed 24 new NGSS-aligned modules, 24 Smithsonian Science Stories literacy books, and supporting digital assets as part of our new Smithsonian Science for the Classroom curriculum. In 2016, we expanded our leadership summits to promote inclusion. We convened over 250 school, district, and state education agency teams to design bespoke logic models focused on ensuring all teachers and students are included in STEM opportunities and recognize themselves in STEM. This program earned the Smithsonian Science Education Center the 2021 National Alliance for Partnerships in Equity Unsung Hero Award. To advance STEM education for a more sustainable future, we launched the Smithsonian Science for Global Goals project in collaboration with the InterAcademy Partnership and colleagues from across the Smithsonian. By developing over 15 freely available research guides for youth ages 11-18, we challenged young people to use their community as their laboratory to discover, understand, and act on the world's most complex socio-scientific issues of our time. This program earned the Smithsonian Science Education Center the 2018 Smithsonian Innovation Award and the 2024 One Smithsonian Award.

Dr. Deanna S. Taylor participating in the Smithsonian Science Education Center's STEM Leadership Summit.

TRANSFORMING 2025



The Smithsonian Science Education Center is at the forefront of change, continually evolving to meet the needs of a transforming world and the dynamic nature of science education. With 40 years of groundbreaking achievements behind us, we're expanding our partnerships, resources, and global impact as never before.

Nationally, our NGSS-aligned Smithsonian Science for the Classroom curriculum is achieving positive results for students. A five-year randomized controlled trial study proved that our new curriculum—paired with our Smithsonian Science Stories literacy series and our high-quality professional learning—improves student achievement in science, reading, and math. In 2025, Smithsonian Science for the Classroom, which has reached 2.9 million students to date, earned the coveted All-Green evaluation rating by EdReports demonstrating that our curriculum meets the expectations of high-quality instructional materials.

Globally, our Smithsonian Science for Global Goals project, with the help of our Network for Emergent Socio-Scientific Thinking (NESST), has reached 50,000 educators, serving 8.1 million students, in 118 countries. Our influence extends to working with ministries of education to enhance STEM education in primary and secondary school classrooms across the globe and studying their effects. From our project supporting teachers and students in primary schools in Hong Kong, to our collaborative project with the International School of Science Education and the InterAcademy Partnership, we are dedicated to achieving our mission. We continue to spearhead global dialogues on sustainability education at esteemed international gatherings with Smithsonian scientists and study the impact of our programming on advancing STEM education for a more sustainable future.

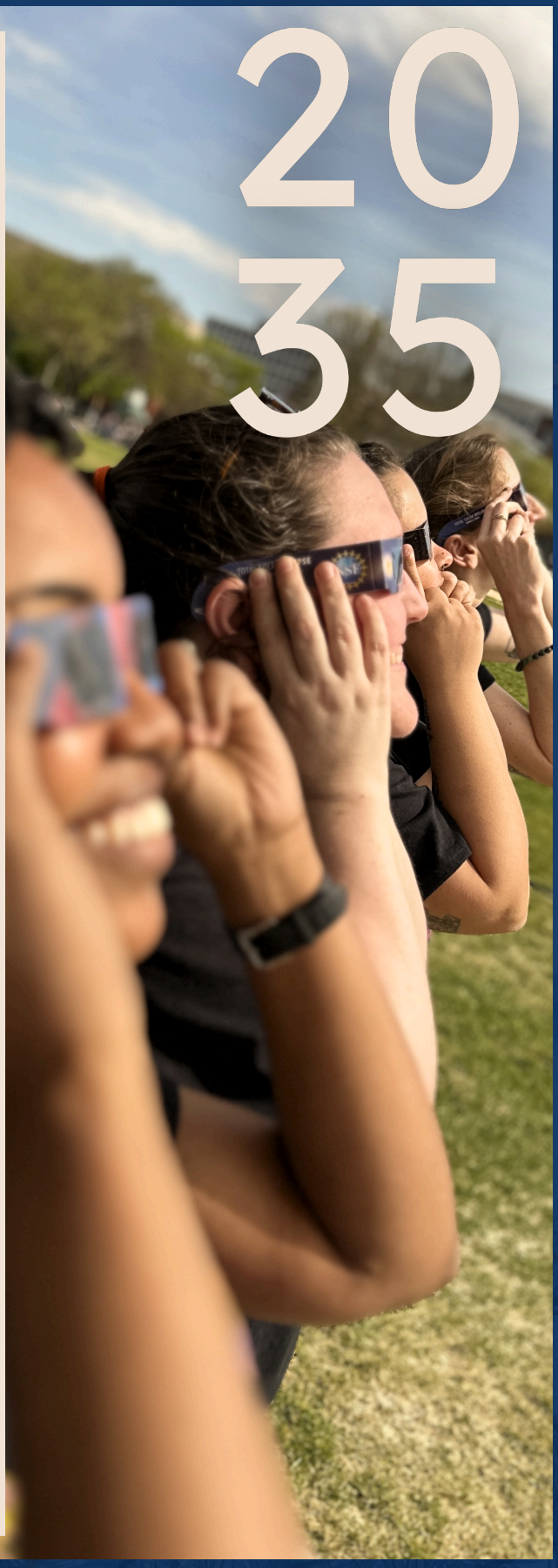
A student participating in a Smithsonian Science for the Classroom activity on static electricity.

2035

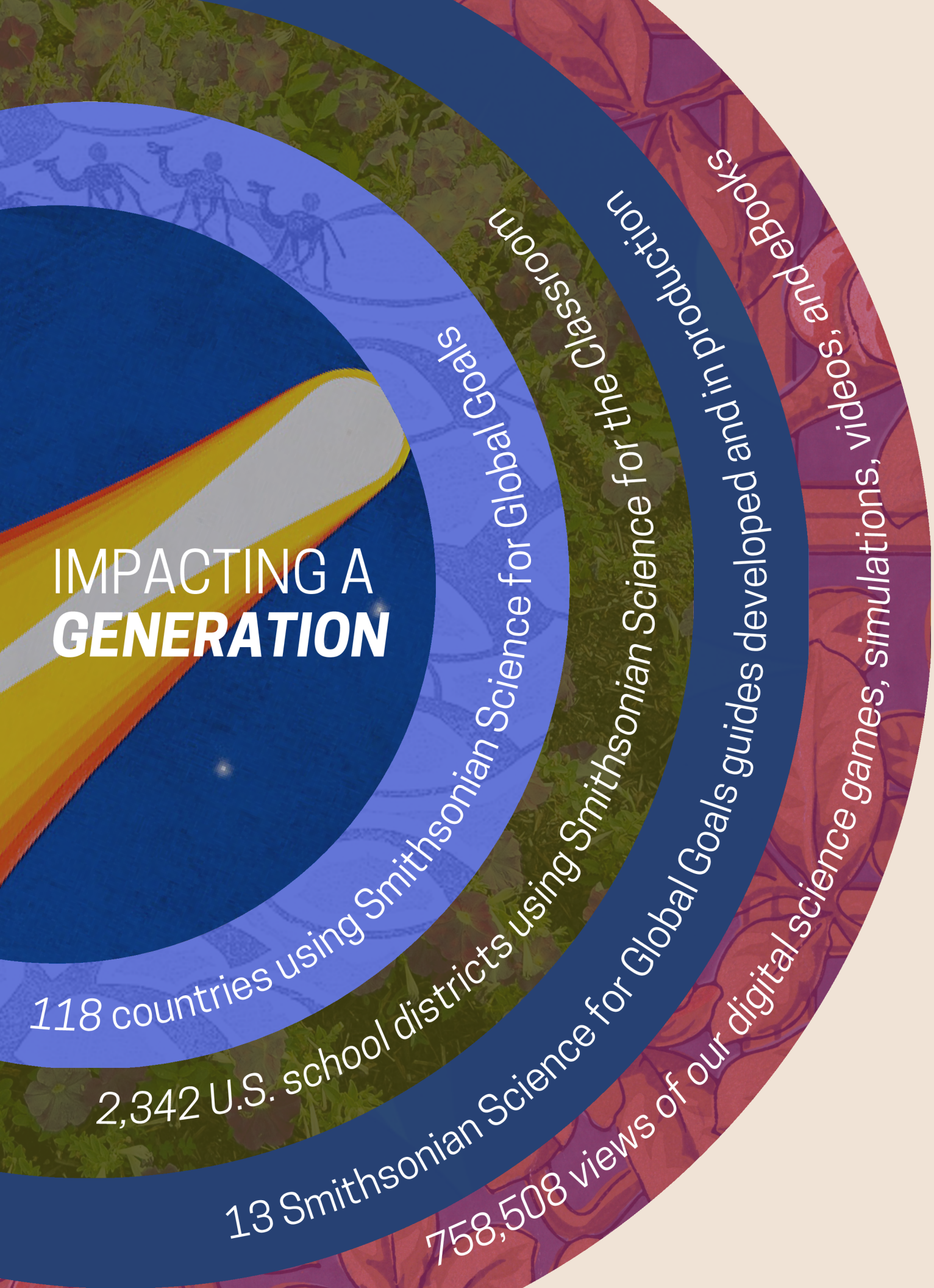
At the Smithsonian Science Education Center, we take pride in our collaborative approach to improving young students' understanding of the natural world amid rapid technological advancements. The next decade for the center promises transformative strides in science education as our society continues to change.

As our country prepares to celebrate its 250th birthday in 2026, the Smithsonian STEAM Education Initiative, led by the Smithsonian Science Education Center and the National Museum of Natural History will launch the pan-institutional, Smithsonian STEAM Schools of Distinction Innovation Award. This award will recognize schools across the country that are bringing Smithsonian resources into their classrooms to promote experiential, inquiry-based K–12 STEAM teaching and learning for a more innovative and sustainable future. We will expand our National STEM Leadership Summits to include regional summits co-created with education collaborators in the United States. We plan to extend our Smithsonian Science for the Classroom curriculum to middle school, while integrating artificial intelligence and cutting-edge Smithsonian research. To complement our newly endowed Director's position, we will also work to endow our Education Chair positions to ensure the center can continue to reach science educators and students with our high-quality resources and STEM programming.

STEM education is more important than ever before. As we look forward, the Smithsonian Science Education Center will continue to inspire the next generation of leaders and problem-solvers by preparing young people for **our shared future.**



Smithsonian Science Education Center team members Sherrell Williams, Kat Francher, Addy Allred, and Shellie Pick viewing a solar eclipse on the National Mall.


IMPACTING A
GENERATION
118 countries using Smithsonian Science for Global Goals
2,342 U.S. school districts using Smithsonian Science for the Classroom
13 Smithsonian Science for Global Goals guides developed and in production
758,508 views of our digital science games, simulations, videos, and eBooks


8.1 million students using Smithsonian Science for Global Goals
2.9 million students using Smithsonian Science for the Classroom

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Smithsonian
SCIENCE
NOW CAN WE

SPECIAL THANK YOU TO DR. DOUGLAS M. LAPP AND ANNE B. KEISER

In 2024, the Smithsonian Science Education Center announced the endowment of the center's director position through a gift from Douglas M. Lapp and Anne B. Keiser. The naming of the Douglas M. Lapp and Anne B. Keiser Director pays homage to Lapp's incredible achievements as the Center's founding director (1985-2001), as well as to the deep and meaningful relationships that Lapp and Keiser have fostered with O'Donnell and throughout various areas of the Smithsonian over the years.

Dr. Douglas M. Lapp and Anne B. Keiser are long-time pioneers, supporters, and friends of the Smithsonian Science Education Center from our **founding**— and with this endowment—toward our **future**.

OPPOSITE: Dr. Douglas M. Lapp, Dr. Carol O'Donnell, and Anne B. Keiser looking at a Smithsonian Science for the Classroom teacher's guide.

SUPPORT THE SMITHSONIAN SCIENCE EDUCATION CENTER

Ways to Give

Giving to the Smithsonian Science Education Center supports the development and dissemination of free science education instructional resources; digital interactives; professional development for teachers; and leadership summits for schools, school districts, state education agencies, and other education organizations. We believe Smithsonian science is for everyone.

The Smithsonian Science Education Center receives no federally appropriated funds. Every dollar donated to the Center supports our operations, programs, and resources for educators and students around the world.

To donate online, please visit **ssec.si.edu/donate**

Or to contribute by mail, please send a personal check made payable:

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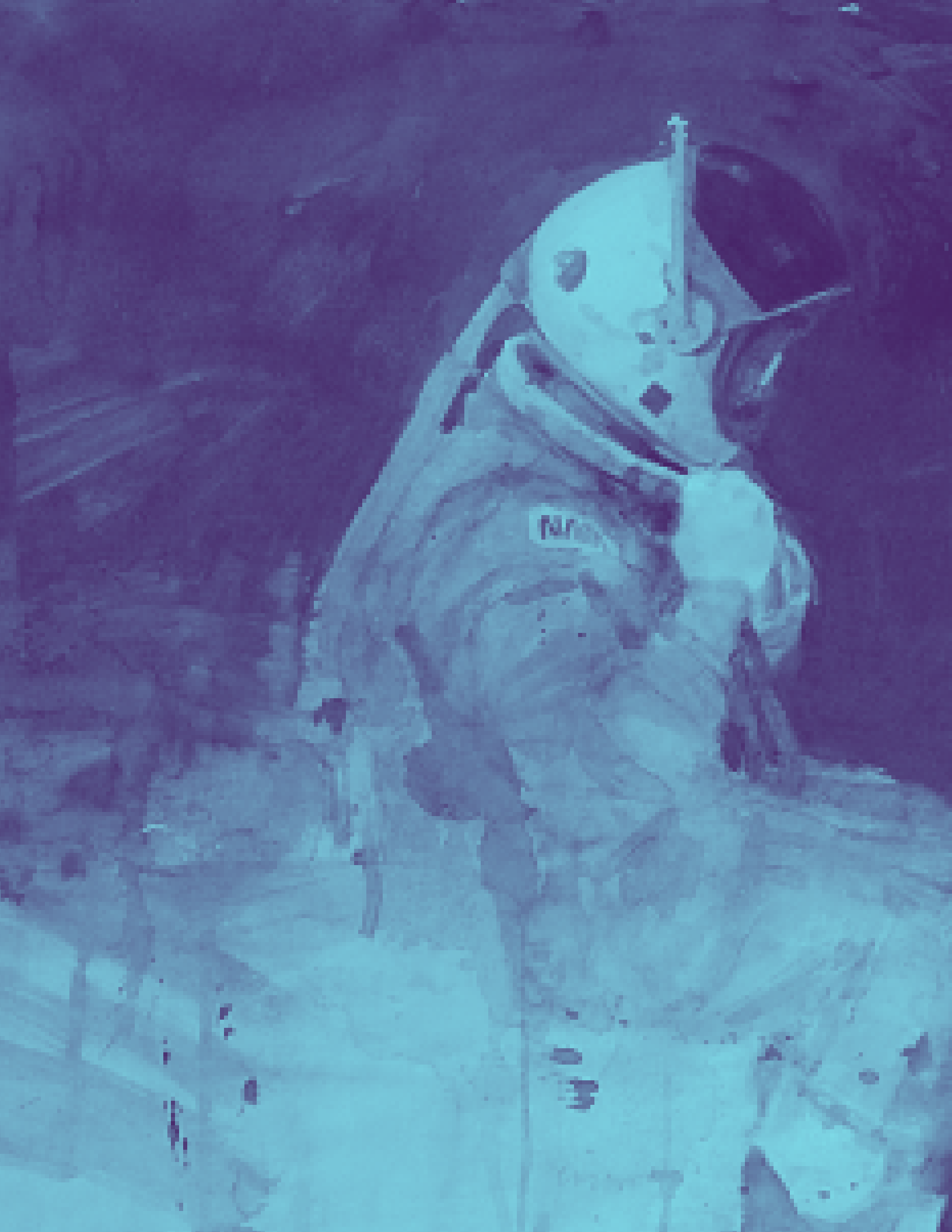

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Celebrating 40 years of
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