

AAAS makes science relatable through diverse efforts

Policy, education, and outreach projects make research relevant

By Becky Ham

When the constitution of the American Association for the Advancement of Science was revised in 1946, its statement of objectives contained new language: "...to increase public understanding and appreciation of the importance and promise of the methods of science in human progress."

The association has since fulfilled that charge in diverse sectors, including policy, education, and public engagement, to make science more relatable and relevant to the public.

Making science relatable also requires a variety of engagement strategies, including facilitating in-depth discussions with local policy leaders, translating technical language into digestible summaries for the classroom, and promoting science role models.

In the case of the AAAS Center for Scientific Evidence in Public Issues or EPI Center, for instance, a successful part of bringing clear and actionable scientific advice to policy-makers has been encouraging discussions among a broad group of experts and policy peers.

During meetings organized by the EPI Center this year, city council members, mayors, water engineers, and local utility managers joined scientists to discuss per- and polyfluoroalkyl substances or PFAS, synthetic chemicals found in drinking water systems. At least two PFAS have been associated with increased rates of some cancers and thyroid disease.

The EPI Center provides nontechnical syntheses of topics for policy-makers, "but one thing we have seen is that examples from their peers that have implemented and used the scientific evidence are much more valuable and easier to understand," said Kathryn McGrath, communications director for the center.

Whether the focus is clean water or voting technology or hydraulic fracturing, the EPI Center strives to make the science of these topics relatable by talking with the public and policy-makers to find out exactly what information would be helpful for them. The discussions allow city council members, for instance, "to ask the science experts what they need to know to go back to their communities and regions and take action on some of these issues," McGrath said.

AAAS's Local Science Engagement Network, a grassroots platform that nurtures local and state science advocates for climate and energy policy, has also found success with local partnerships. In Colorado, Missouri, and Georgia, LSENs work with organizations in each state that "have a good sense of policy landscapes as well as the cultural and scientific landscapes in those areas," said Daniel Barry, local and state advocacy director and head of LSEN at AAAS.

LSENs offer an avenue for engagement and advocacy that AAAS members have been asking for, by connecting scientists with their own elected representatives on the local, state, and federal levels. As both constituents and neutral, honest brokers of scientific information, LSEN participants can be a key resource when legislatures

grapple with the more local implications of climate change, such as modernizing the state power grid, said Barry. "They can step up and say, 'Science, that's what I do, and I live here in this community. I know how to get you the science you need.'"

LSEN members also condense technical research into locally relevant analyses in plain English for business leaders and citizens. So far in 2021, Missouri LSEN partner MOST Policy Initiative has produced more than 80 such "science notes" about pending state legislation.

Among AAAS's numerous education efforts to make science more relevant is Science in the Classroom, an initiative that annotates and provides additional resources to accompany research papers from the *Science* family of journals. The goal is to make scientific papers more accessible to high school, community college, and undergraduate students, while putting a face on the papers' authors in communities with little exposure to working scientists, said program director Suzanne Thurston.

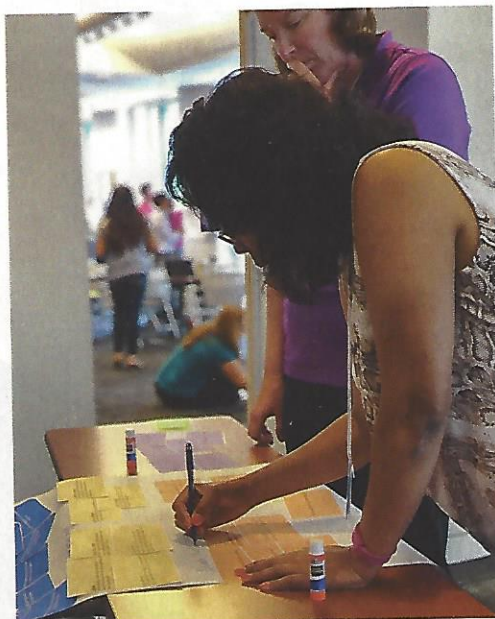
The popular resource had more than 1 million page views in the past 3 years, and the hunger for accessible scientific content during a pandemic year led to a 50% increase in total site visits in 2020 compared to 2019. The program also offers professional development workshops to educators, researchers, and annotators. By showcasing a range of authors and annotators, Science in the Classroom helps "to expose students to diversity within STEM and demonstrates what 'actual living scientists' look like," said Thurston, who serves as a program director in AAAS's Inclusive STEM Ecosystems for Equity and Diversity (ISEED).

The IF/THEN Ambassador program, led by AAAS's Center for Public Engagement with Science and Technology, was another recent effort to show off the diverse faces of science, by highlighting 125 women in STEM as role models for middle school girls.

Lyda Hill Philanthropies, which funds the IF/THEN initiative, wanted to work with AAAS on the ambassador program after the association's success with other public engagement initiatives such as the AAAS Mass Media Science & Engineering Fellowship and the Leshner Leadership Institute for Public Engagement with Science, said Emily Therese Cloyd, director of the AAAS Center for Public Engagement with Science and Technology.

The ambassador program was distinguished by its emphasis on increasing visibility for women in STEM who demonstrate how science is involved in everyday careers beyond the traditional lab, said Cloyd. "We're moving beyond scientists who work at an academic institution and thinking about the ways that a video game designer or a fashion designer might be using STEM every day."

AAAS is committed to making science relatable and relevant for everyone from policy-makers to educators to students. It is at the core of the organization's mission and will continue to be a top priority for years to come.



Teachers at a 2018 Science in the Classroom workshop.