As a boy, Emmy Award-winning actor Alan Alda was fascinated with the world around him. He yearned to know exactly how things worked and often developed his own makeshift experiments for fun.

At age 11, he turned to his science teacher for answers to his latest conundrum: What is a flame?

"A flame didn't seem like anything else I'd ever seen — hot, but with no substance, full of color — I wondered how it got that way. I asked my teacher, and after thinking about it for a moment, she said it was oxidation," Alda recalled. "Then I had two things I didn't understand!"

While Alda ultimately chose to pursue a career in acting, his curiosity for science remained. For 12 years, he was the host of "Scientific American Frontiers" on the PBS network, which explored the latest innovations in science and medicine.

The show gave Alda the chance to have lively, personal conversations with scientists. "Instead of giving prefabricated answers to questions, they had to relate to me, my curiosity and lack of understanding. It gave us a dynamic relationship, and I began to realize that it was possible to train scientists to communicate in that way," he said.

Soumyadeep Mukherjee, a Stony Brook post-doctoral researcher in public health, has benefited directly from that training. Middle school students from around the world selected Mukherjee from 100 entrants as a finalist in the Alan Alda Center for Communicating Science's 2018 Flame Challenge.

Located at Stony Brook University and founded by Alan Alda, The Alda Center seeks to bridge the gap between researchers, the media and laypeople. It hosts more than 100 workshops internationally every year, exposing participants to the art of improvisation and other theatrical techniques to improve their communication skills. Mukherjee was a recent participant in one of those workshops.

Alda recalled that for years, he would meet with university presidents nationwide to see if any were interested in helping scientists communicate better.
“No one was willing to consider the idea except for Stony Brook. A lot of places felt that they had a lot of science to teach and that there wasn’t time for anything else,” Alda said. “But I think now people realize in a very serious way that you can’t do science without good communication. If you’ve done great science but can’t communicate it well, it’s liable to die on the vine.”

Alda shared the puzzling conversation with his science teacher in a guest column for Science magazine several years ago. In the column, he issued a challenge to readers: Do what his teacher couldn’t and successfully explain flame in a way an 11-year-old could understand. Hundreds of responses poured in.

That contest in 2012 was the first Flame Challenge, which is now an annual event. The topics since have included time, energy and others, with all submissions judged by thousands of eager and honest 11-year-olds from around the world.

“We ask students what they’re interested in learning about. We’re looking for a question that is universally appealing across the sciences,” said Nancee Moes, Flame Challenge coordinator and an improvisation instructor at the Alda Center. “Scientists from grad school and beyond can submit entries in one of three categories: text, video or graphics. Each entry is screened for scientific accuracy so nothing inaccurate goes to the schools. Then each school gets at least five entries to review and vote on.”

The field is narrowed to no more than three top finalists for each category: written, video or graphic submissions. The final entries are returned to interested classrooms for judging.

The winner receives a $1,000 cash prize and a trip to the World Science Festival in New York, where they get to meet Alda.

“We are used to communicating with our peers for the sake of our careers — to get published, present, get jobs,” said Mukherjee. “The Flame Challenge gives scientists incentives to communicate with the public.”

Mukherjee, a first-time Flame Challenge participant, was selected as one of three finalists in the writing category. You can learn more about Mukherjee and read his answer to “What is climate?” at the Flame Challenge website.

“The Flame Challenge forced me to move out of my comfort zone when I was attempting to write and rewrite my entry. With every attempt, my entry became less technical and more conversational,” Mukherjee said. “Ultimately, the aim of science is to make our lives better. Therefore, our society has a stake in the work that we are doing, and everyone deserves to
Kids Pick Finalists in Alan Alda’s Flame Challenge, Including SBU Researcher

Alan Alda congratulates 2017 Flame Challenge winner Hannah Holt.

understand the broader scope of our work and what we aim to achieve.”

The student judges are also grateful for the experience, which gives them a hands-on role in their education and the chance to provide direct feedback to the scientists.

“The more we started talking to the kids, the more into it they got,” Moes said. “I remember one student saying, ‘Thank you for listening to us,’ and that’s really what it’s about — allowing them to make the decisions and not just being taught. They let [the Flame Challengers] know when they’re being effective and when they’re not. It’s not a one-way transaction.”

–Melissa Arnold

ABOUT

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