OUR FUTURE IS SCIENCE

aspen institute

YOUTH IN AMERICA CONNECTING SCIENCE & SOCIAL JUSTICE

www.ourfutureisscience.org

PROGRAM PROSPECTUS

August 2023
Many of society’s most pressing matters are scientific: the unequal impacts of COVID-19, climate change, agricultural sustainability, and water management. Youth activists around the world have been at the forefront of these issues and have brought to light the connection between urgent global matters and the experiences of marginalized populations.

In response to this extraordinary cultural inflection point, the Aspen Institute Science & Society Program launched a nonprofit initiative called Our Future Is Science (OFIS) to expose talented and passionate high-school students who identify as Black Indigenous People of Color (BIPOC), reside in rural communities, and/or are of low income, to STEM education and careers. OFIS is unique with its goal to ignite a movement where youth and adults draw connections between STEM fields and social justice. The four-pillar initiative launched in the fall 2021 and features: 1) a national mentorship forum for high-schoolers and STEM graduate students (with stipends for their participation), and 2) a national educational campaign.

Our vision is to dismantle historic barriers to science and leverage the richness of BIPOC’s insights to develop the field of science in innovative ways, illuminate how science can solve community challenges, and position our students—and BIPOC youth more broadly—as the next generation of the scientific workforce. OFIS has three primary goals:

- Awaken students’ interest in science by linking STEM fields to activist initiatives;
- Accelerate underrepresented high-school and graduate students’ participation in science through intra-generational mentorship and guided learning; and
- Create an educational and vocational pipeline.

**Founding, past, and current supporters**

[Logos of supporters]
489K+
TOTAL APPLICANTS, IMPRESSIONS, ENGAGEMENTS, EMAILS, ATTENDEE INTERACTIONS, WEBSITE VISITS & VIEWS, POST LIKES AND REACH SINCE 2021
Our Future Is Science (OFIS) was conceptualized in response to tremendous societal forces: 1) youth activism around the world on behalf of issues rooted in science, such as climate change and water management, and 2) the resurgence of the Black Lives Matter movement raising necessary calls for equity across fields, especially in science and public health, based on vast disparities in outcomes from the COVID pandemic.

The co-founders of OFIS authored an essay, “Democratize the White Coat by Honoring Black, Indigenous, and People of Color in Science,” introducing the ethos and societal dynamics inspiring this endeavor.

In 2021, an outstanding team of education, science, and media specialists launched this national initiative.

**Aaron Mertz** is a biophysicist and educator and has been recognized internationally for his laboratory research and advocacy for underrepresented groups in science. He joined the Aspen Institute in 2019 as founding Director of the Science & Society Program.

**Hassan Farah** is an OFIS alumnus mentor and the Science & Social Justice Postdoc for the Aspen Institute. While completing a BS and PhD in Biomedical Sciences, Hassan has developed and directed leadership training and peer mentorship programs. He has also organized large-scale demonstrations and negotiations as a student activist.

**Sejal Goud** is a rising junior at Princeton University, where she is pursuing studies in public policy and international affairs. She is committed to leveraging her backgrounds in advocacy and journalism to promote the link between civic engagement and science communication, as well as to support underrepresented youth in the sciences.

**Jylana Sheats** is an applied behavior scientist and has leveraged her education, training, and experience to lead, shape, and innovate across public, private and non-profit sectors. Her individual and collaborative efforts have focused on understanding and designing solutions to address factors that impact health behaviors and health outcomes.

**Ebony Tyler** has 20 years of experience in public education and is the founder and Executive Director of Liberated Success Inc., a youth career development nonprofit. Ebony is passionate about youth career development and parenting, which led her to create two podcasts, Career Exploration Saturday and The New Normal in Parenting.

**Caroline Gelb** is a science producer, program manager, and educator who loves to share her excitement about the promises science can bring to future generations.
To ensure that the program stays true to its mission, the OFIS Advisory Group offers expertise, experience, and counsel.

Jayshree Seth, Ph.D.:
Chief Science Advocate and Corporate Scientist at 3M

Jay Flores:
Global STEM ambassador and founder of Invent the Change

Omar Gowayed, Ph.D.:
NYU Chemical Engineering Graduate and NYC March for Science Leader

Mandë Holford: Ph.D.:
Associate Professor in Chemistry at CUNY Hunter College and The CUNY Graduate Center

Dao-Yi Chow:
Co-founder of the fashion brand Public School

Advisory Group Alumni

Adnaan Wasey:
Emmy Award-winning producer and writer. 2021–2023

Dietram Scheufele, Ph.D.:
Vilas Distinguished Achievement Professor of Life Sciences Communication, University of Wisconsin-Madison 2021–2023
# ACCOMPLISHMENTS AND FUTURE GOALS

**OFIS conceptualized** by the nonprofit Aspen Institute Science & Society Program in collaboration with the citizen-centered-design firm Coda Societies

**Received seed funding** from Genentech and Manitou Fund

**Published essay** "Democratize the White Coat" introducing ethos and societal dynamics that inspired OFIS

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### 2019–2020

- **Hired full-time team** members and expert consultants
- **Designed unique curriculum** about science and social justice
- **Disseminated call for applications** for mentorship forum
- **Onboarded first cohort** of 50 students selected from 260+ applicants
- **Received additional funding** from Rita Allen Foundation, 3M, and Lyda Hill Philanthropies

### 2021

### 2022

- **National educational media campaign** ignites science-based solutions to societal issues
- **Partnering with cross-sector organizations** to expand reach and activate youth engagement
- **Community Talk Series** creates public forum for scientists and activists to share experiences with youth
- **Community capstone projects** enacted by first cohort of mentees
- **Received additional support** from Columbia University’s NSF Science and Technology Center for climate, LEAP

### 2023 & Beyond

- **Amplified 2022 successes** including curriculum design, programming, and fundraising
- **Expanded size** of mentorship forum
- **Launched Ambassador Program** for OFIS alumni
- **Enacting recurring media campaigns** on the pulse of current events
- **Creating alumni activities** for past participants to advise new students
- **Ultimately working to establish a long-lasting educational program** that sets the standard for youth mentorship in science and social justice
## FOUR PRINCIPAL PILLARS OF OFIS

| **Mentorship Forum** | This annual, national, virtual Forum connects high-schoolers with STEAM graduate students to explore science and social justice intersections through our continually evolving curriculum composed of:  
| |  
| | - OFIS social justice e-library;  
| | - Module-based learning on topics such as AI, climate science, genomics and epigenetics, and big data; and  
| | - Professional development workshops.  
| | Weekly Mentorship Team meetings help facilitate this academic year-long journey of near-peer mentorship, scientific learning, community engagement, and career exploration. Mentees and mentors receive honoraria for their active participation in OFIS to honor that their time and commitment to the program. |
| **Educational Campaigns for the Public** | OFIS’s periodic Educational Campaigns on social media ask youth to share their visions, in the form of short videos submitted via social media, for how science could be used to solve an issue in their community. Submissions are adjudicated based on innovation, creativity, and feasibility with awards given to the top entrants. |
| **Ambassador Program** | The OFIS Ambassador Program consists of outstanding alumni mentors and mentees who work together on a range of topics in which they connect science with social justice and develop new capstone projects. OFIS ambassadors also give back to our network of mentors and mentees by attending feedback sessions for capstones, hosting workshops, and collaborating with external partners as representatives of OFIS. |
| **Scholars Program** | The Scholars Program is designed for qualified applicants to the Mentorship Forum but whom we could not admit due to administrative capacity (e.g., staffing and financial constraints). These Scholars receive special invitations to OFIS activities such as our Community Talks and a selection of workshops for professional development including public speaking and scientific storytelling. Scholars are also encouraged to participate in our educational campaigns on social media. |
## Mentorship Program Overview

| Mentees and Mentors | To date, 500+ youth and young adults from across the U.S. have applied to Our Future is Science.  
- **2021–2022 Cohort:** 50 students (25 mentees; 25 mentors)  
- **2022–2023 Cohort:** 60 students (30 mentees; 30 mentors)  
- **2023–2024 Cohort:** 70 students (40 mentees; 30 mentors) |
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<tr>
<td>Mentorship Teams</td>
<td>Mentorship teams (3 mentors and 2–3 mentees) meet a minimum of 2 times per month from December to June annually.</td>
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<td>Community Talk Series</td>
<td>To complement our curriculum, we have hosted monthly community talks and workshops with leading professionals whose work is at the intersection of social justice and STEAM. Speakers hailed from 3M, Columbia University, Procter &amp; Gamble, LinkedIn, the University of Maryland School of Dentistry, University of California - San Francisco, Gilead, and other entities.</td>
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| Capstone Projects   | Students work to identify a problem in their community and apply the scientific process coupled with learnings from the OFIS Social Justice e-Library and insights from the OFIS Community Talk speakers, to design a science-based solution. Exemplary 2021–2022 and 2022–2023 capstone topics include:  
- Impacts of Poor-quality Housing in the NYC (South Bronx) on Low-Income Families  
- Cancer Clusters Coldwater Creek (North St. Louis)  
- "Redlining" in Tacoma, Washington  
- African Americans and the Criminal Justice System in Nashville, Tennessee  
- Black Maternal and Child Health Pregnancy in Oakland, California |
2021–2023 MENTEE DEMOGRAPHICS

To date, 516 youth and young adults from across the U.S. have applied to Our Future is Science.

- **2021–2022 Cohort:** 50 students (25 mentees; 25 mentors).
- **2022–2023 Cohort:** 60 students (30 mentees; 30 mentors).

**RACE/ETHNICITY**

- Hispanic / Latino/a/x: 19.7%
- Asian / Asian-American: 28.8%
- Multi-racial: 6.1%
- Black / African, not of Hispanic origin: 42.4%

**GENDER**

- She/Her/Hers
- He/Him/His
- They/Them/Theirs
MENTEE DEMOGRAPHICS

2021-2023 Mentees

Year in high school
- 10th Grade (15)
- 11th Grade (24)
- 12th Grade (21)

Where they're located
- Washington 1.9%
- Ohio 1.9%
- Arkansas 5.7%
- Tennessee 3.6%
- New York 24.5%
- New Jersey 3.8%
- Maryland 5.7%
- North Carolina 3.8%
- Missouri 3.8%
- Georgia 7.5%
- Illinois 1.9%
- California 17%

MENTOR GRADUATE SUBJECTS OF STUDY

- Ecology and Evolutionary Biology
- Biomedical Engineering
- Industrial Hygiene and Environmental Sciences
- Psychology
- Indigenous Health
- Nursing
- Immunology
- Geography
- Engineering and Public Policy
- Biomedical Science
- Environmental Engineering
- Pharmacology & Toxicology
- Public Administration- Health Disparities
- Neuroscience
- Medicine
- Sociology & Human Services
- Epidemiology
- Translational Biosciences
- Biology/Molecular biology
- Applied Mathematics
- Public Health and Implementation Science
- Civil Engineering
- Clinical Psychology
- Molecular & Cellular Biology
- Geology
- Vascular Biology
- Cancer Biology
- Mechanical Engineering
- Environmental Science Hydrology
Bringing the Scientific Process to Life
Mentor Lab Tour Highlights
https://youtu.be/046niCiFSAc
MENTORSHIP CURRICULUM

The OFIS team of educational and scientific experts designed a nimble, bespoke, evidence-based curriculum to help shape tangible trajectories toward careers that will make communities and society better through science.

Participatory design and feedback processes in each module enable mentees and mentors to participate in their own learning, promote co-learning and co-teaching, and ensure that student needs are met with the ability to adapt in real time. Accompanying program components that bring the curriculum to life include:

- Weekly deep dives with reflections on relevance to students’ lived experiences;
- Curated Social Justice Library to support exploration of social justice issues; and
- Monthly Community Talk Series featuring outside experts in STEAM fields.

Curriculum Topics (2021–2023)

- SOCIAL JUSTICE
- SCIENCE & SOCIAL JUSTICE
- ENVIRONMENT & CLIMATE CHANGE
- BIG DATA & INNOVATION
- HEALTH & HEALTHCARE
- ENGINEERING & ARTIFICIAL INTELLIGENCE
- ASTROPHYSICS & SPACE EXPLORATION
- GENOMICS & EPIGENETICS
STUDENT CAPSTONE PROJECTS

A culminating, mentee-led, community-based capstone project enables students to demonstrate learning and highlight their unique place as leaders of science-based social justice.

Mentees will explore a social justice issue of interest or relevant to their lived experience. Through an in-depth review of the literature and informational interviews (with scientists, activists, and other stakeholders), and discussion with their Mentorship Team, mentees will:

- Define the problem to be solved;
- Connect it to a global U.N. Sustainable Development Goal and/or Healthy People 2030;
- Design a science-based solution— applying learnings from the OFIS curriculum;
- Create a communication/dissemination plan tailored to what is accessible and preferred by their audience/community; and
- Present or implement their solution (prototype or actual).

OUTCOMES: Through this process, mentees will have increased awareness of social justice issues impacting their community while simultaneously developing science-based solutions. Invaluable skills they will gain include:

- Evidence review and information synthesis;
- Problem identification;
- Research question development and other elements of the scientific process;
- Collaboration skills;
- Presentation skills; and
- Inclusive science communication competencies to support engaging with diverse audiences.
COMMUNITY AND PUBLIC EVENTS

OFIS also features monthly Community Talks and Professional Development Workshops with those in science or science-adjacent careers to share their career trajectories and how their work intersects with social justice.

Eleanor Fleming, DDS, PhD, MPH
Assistant Dean, DEI
University of Maryland School of Dentistry

Joshua Omonuk
Ugandan Climate Activist
RiseUp Movement

Daisa Taylor
Inventor
Founder, CEO
VariegateHealth

Shanell McGoy, Ph.D., MPH
Director, Corporate & Social Responsibility
Gilead Sciences

Maria Flores, MA
Founder
Brenner Insights

Brittney N. Doyle
Founder
WISE Health SF

Michelle Woodard
Senior Manager
3M Office & Innovation Center

Adrian Land, Ph.D.
Senior Regulatory Affairs Manager
Procter & Gamble

Kramer Wimberly, MSDT
Master Scuba Diver
Diving with a Purpose

Danielle Ignace, Ph.D.
Assistant Professor
University of British Columbia

Courtney Cogburn, Ph.D.
Professor, Columbia University
Co-director, Justice Equity & Tech Lab

Pierre Gentine, Ph.D.
Professor, Columbia University
Director, LEAP Center

Kristopher Green
Relationship Manager
LinkedIn

Malik & Miles
MIT Doctoral Students
TikTok Twins

Daphne O. Martschenko, Ph.D.
Assistant Professor
Stanford University
Center for Biomedical Ethics

Mandeep (Muno) Sekhon
Associate Communications and Special Projects Officer
Burroughs Wellcome Fund

Marcus D. Walter
News Anchor & Meteorologist
WTVO/WQRF
Science Communicator & Storyteller

Ashley M. Taylor, Ph.D.
Senior Scientist, Products Research
Procter & Gamble

Mutale Nkonde
Founder & CEO
AI for the People

Chris Hemphill
Senior Director, Commercial Intelligence
Woebot Health
2-YEAR MENTEE/MENTOR IMPACTS

53% Reported that they did not know how to explain science-social justice linkages before participating in the program.

100% Reported that after participating in the program, they knew how to explain science-social justice linkages.
2-YEAR MENTEE/MENTOR IMPACTS

92%
Mentees rated the mentorship program as “good” or “very good”

91%
Mentees described their experience as “good” or “very good”
MENTEE AND MENTOR REACTIONS

“OFIS definitely made me want to be more involved in the intersection between science and social justice in the future, and I hope that I can continue this throughout my professional development.”
— OFIS Mentee, 11th Grade

“Through OFIS, I have developed a newfound interest in data science. This was something I could not do without my capstone project.”
— OFIS Mentee, 10th Grade

“Our Future Is Science is the love language between social justice and science. It captures the nuances in STEM.”
— OFIS Mentee, 12th grade

“OFIS supported me, and in my opinion, helped me get into college, as well as the combined BA/MD program. I seriously do not think I would be where I am if it weren't for my experience with OFIS.”
— OFIS Ambassador

“If I didn't have programs like this to make me dive deeper, then I wouldn't know about opportunities.”
— OFIS Mentee, 11th grade

“I was not sure about attending college due to financial difficulties, but after listening to my mentor’s story, I decided to continue on with this path. My mentors encouraged me to join programs so I could build up my experience and display it to colleges and future jobs.”
— OFIS Mentee, 12th grade

“I was able to land an internship for this summer, and I credit my experiences with OFIS for helping me. During the interview, I was able to talk about OFIS, which helped me stand out from other candidates.”
— OFIS Mentor, Graduate Student
OUR FUTURE IS SCIENCE

National Educational Campaign

www.ourfutureissscience.org/campaign

Campaign Welcome by
Dr. Marcia McNutt
President, National Academies of Sciences
https://youtu.be/R3SDEo-EaFw
Social media can serve as a forum for activism and a powerful channel of positive messaging and learning about science as a concrete path toward change, especially for BIPOC youth. Partnering schools, youth-serving organizations, scientists, and influencers are using Instagram and TikTok to create opportunities for young people across the U.S. to share their visions for “how science could be used to solve problems in their communities.”

Disseminating insights from the campaign will ensure that the voices of young people across the U.S. are heard widely.