



Sanofi STEM Challenge: The Air We Share

Request for Proposals

How can we improve the air we share? Communities around the world are grappling with this question as environmental challenges like wildfires and extreme heat intensify, bringing air quality and its health effects to the fore. While there are things we can all do to protect ourselves and contribute to cleaner air, **Sanofi and the Association of Science and Technology Centers (ASTC) are launching the Sanofi STEM Challenge to invite high school students to design solutions to the air quality challenges that are most important to their communities.**

Sanofi and ASTC invite applications from science centers and museums (SCMs) to host the Sanofi STEM Challenge: a design competition challenging high school students to research, design, and pitch innovative solutions to local air quality issues. This project is part of [The Air We Share](#), a partnership between ASTC and Sanofi, a global healthcare leader at the forefront of respiratory science and immunology.

The Sanofi STEM Challenge will provide an opportunity for organizations to host a two-day “hackathon” event in spring or summer of 2027 for students to design solutions to real local air quality and health challenges.

During the local hackathons, high school students will learn about the ways that air quality affects health, especially in their community, and will conceptualize and pitch their solutions to local judges. The winning team from each participating SCM earns an all-expenses-paid trip to Boston to compete on a national stage as part of the ASTC Annual Conference in 2027.

Participating organizations will receive up to \$32,750, supplies, curriculum, template materials, tailored support, and the opportunity to coordinate and learn from other organizations hosting the challenge.

Apply by August 21, 2026.

Please note that organizations must be (or plan to become) ASTC members and must be in the United States.

About the Sanofi STEM Challenge: The Air We Share

Goals: The goals of the challenge are:



- Increase community awareness of the prevalence and factors that contribute to respiratory health challenges, including the disparities in respiratory health impacts in different communities.
- Increase community awareness of the kinds of actions and solutions that can improve respiratory health locally, and an understanding of how all community members can contribute.
- Support SCMs to host a youth program in coordination with a network of other organizations, and to support a youth team to represent the museum at the national level.

Audience: The challenge is open to all students in 9–12th grades as of January 2027, especially those from historically undersupported communities. No specific STEM background is needed. Students must be able to attend the hackathon at one of the participating science centers/museums.

Challenge Structure: The six organizations selected will each host a two-day hackathon, which can be held on consecutive or non-consecutive days. Selected organizations may also host multiple hackathons that are identical in format and duration, which may be ideal, for example, if the space is too small to fit all participating students at once or if the SCM would like to host one event in the school year and one in the summer.

During the hackathons, participating youth will:

- Learn about and research the scale, scope, and sources of respiratory health issues in their communities
- Conceptualize a solution that addresses the local context
- Determine what would need to happen for their solution to be used or implemented in their community
- Communicate their work, including background research, proposed solution, evidence of the potential for impact, and recommendations for scaling their solution's use and impact

Students will be encouraged to work collaboratively in teams. They will be provided with a range of resources to aid their research, solution development, and presentations. Solutions may take a number of forms, including products (e.g., wearable sensors), media (e.g., public data visualizations), and policies (i.e., for a school or school district). Solutions are not expected to be fully operational by the end of the local hackathon, but the concept should be described clearly and the students must demonstrate that the solution is feasible.

After each hackathon, the host SCM will provide additional guidance and supplies to the winning team so they can iterate on their solution ahead of the national pitch competition.



The winning team from each SCM will be funded to travel to Boston with chaperones in November 2027 to pitch their solution at the ASTC Annual Conference, one of the largest gatherings of science engagement professionals in the world. Students will compete for up to \$5,000 per team member while presenting their ideas to an audience that can help them realize their solutions.

Prizes: For local hackathons hosted at SCMs, prize funds will be awarded to the first-place team. Each team member on a first-place team will receive \$500.

For the national competition, prizes are as follows:

- First place: \$5,000 per team member (\$20,000 for a 4-person team)
- Second place: \$2,500 per team member (\$10,000 for a 4-person team)
- Third place: \$1,000 per team member (\$1,000 for a 4-person team)

ASTC and Sanofi will provide comprehensive resources for SCMs to implement a coordinated, rigorous, and high-energy hackathon. This includes:

Funding

- Up to \$30,000 to cover event costs, marketing, transportation, staff costs, and other expenses associated with the hackathon event and subsequent support for the local winning team to iterate on their solution
- An additional \$750 for honoraria for judges
- Up to \$2,000 for local hackathon prize funds (ASTC will directly pay national winners' prize funds)

Curriculum and Program Materials

- Training session(s) for hackathon facilitators on scientific content and hackathon implementation. Content will include the science of air and respiratory health/solutions, health disparities, AQI data collection/interpretation, levers for change (i.e., how change happens, including how policies are developed, passed, and implemented), science and technical communication, and more
- Agenda and facilitator guide for the two-day hackathon
- Rules and parameters (e.g., acceptable use of AI, acceptable team sizes, criteria for solutions)
- Adaptable slide deck and/or handouts for use during the hackathon (TBD based on selected organizations' input)
- Annotated resource lists for SCM facilitators and/or student competitors
- Examples of potential student projects
- Templates for recruiting students



- Templates and guidance for recruiting judges
- Rubric and guidelines for judging
- Access to relevant data sets, as needed, such as air quality data (e.g., real-time and historical AQI readings for their community, pollutant breakdowns), health/epidemiological data (e.g., local asthma/COPD prevalence by zip code/race/income, ER visit data related to respiratory illness, mortality rates tied to respiratory conditions), socioeconomic data (e.g., income/poverty rates, healthcare provider access by neighborhood), historical and forecasted weather/climate data (e.g., temperature, humidity, wind patterns, wildfire smoke)
- Evaluation tools and guidance for their implementation

Supplies

- Materials and resources for students to use for ideation. The final list of supplies will be determined with input from participating SCMs after their review of the curriculum and program materials. Examples may include portable air quality sensors, thermometers/humidity sensors, fabrication supplies, basic electronics kits, and 3D printing filament.

Relationships and Guidance

- Periodic Zoom meetings for participating SCMs to receive support from ASTC staff and other organizations implementing the challenge throughout the program
- Connections to local Sanofi staff or partners who may serve as mentors or judges for local hackathons, as appropriate
- One-on-one meetings with ASTC staff, as desired

Selected SCMs will:

- Designate two team members to participate in virtual meetings with program partners, including other SCMs hosting the challenge and staff from ASTC and Sanofi. We anticipate hosting approximately one 60-minute meeting per month from October 2026-July 2027).
- Contribute to virtual meetings with program partners, for example by sharing updates, insights, and challenges emerging during hackathon planning and implementation and participating in trainings. Modest advanced preparation (e.g., reviewing a document, gathering information to share) may be appropriate for some meetings.
- Provide feedback on curriculum and program materials and supplies.
- Recruit students for the local hackathon, with the intention of recruiting at least 50 students, especially those from historically undersupported communities.
- Recruit 3 local judges for the local hackathon. ASTC will support by providing guidance on potential judge profiles (e.g., expertise, personal experiences, affiliations) and strategies for inviting people to serve as a judge. If desired, ASTC will offer 1:1 consultation with SCMs to brainstorm possible judges and strategize on outreach. When possible, ASTC will also



facilitate introductions to candidate judges. Once judges are selected, SCMs will provide ASTC with judges' contact information so they can receive training and guidance.

- Implement at least one 2-day hackathon sometime between April 1, 2027 and August 31, 2027, adhering to guidelines provided by ASTC, to ensure consistency across participating organizations.
- Provide additional support to the winning team to help iterate on their solution ahead of the national competition. ASTC will provide guidance to SCMs to facilitate this process, which may include SCM staff meeting with the team, helping to make connections to external experts, offering the team space and time to work together to iterate, and helping the team rehearse and refine their pitch.
- Contribute to project evaluation data collection. This includes, but is not limited to, participating in surveys, interviews, and focus groups, and collecting data from participating students with support from the project evaluator.
- Contribute to project dissemination efforts. This can include developing or collaborating on blog posts, articles, or social media posts, or contributing to sessions at an ASTC conference or other professional events. If appropriate, we encourage you to work with participants and other local community members to share your work.
- Attend ASTC 2027 in Boston in November 2027 (Note: You may include conference registration, travel, and/or hotel costs in your application)
- Share regular updates with ASTC and Sanofi by completing a quarterly update form.
- Submit a final report by November 1, 2027. A template and guidelines for the final report will be provided by ASTC.
- Adhere to compliance requirements from Sanofi (e.g., follow guidelines related to logo use and funding attribution).

Funding Structure and Payment Schedule

Participating organizations can request up to \$30,000 to cover staff time and event costs (e.g., catering, space) for the hackathon and the subsequent support for the winning team. All participating organizations will receive \$2,750 for prize funds and judge honoraria. In total, participating organizations can receive up to \$32,750. Funds will be paid in the following installments:

- 20% upon signing the MOA agreement with ASTC.
- 60% on April 15, 2027.
- 20% upon successful completion of the project and submission of the final report due November 1, 2027.

Application, Decision, and Program Timelines



Milestone	Date
Application Deadline	August 21, 2026
Award Notification	September 11, 2026
Award Start Date	October 1, 2026
Partner Meetings and Trainings	Monthly, beginning in October 2026
Local Hackathon Planning	October 2026-April 2027
Local Hackathon Events	April 2027-August 2027 Dates determined by participating SCM
Support for Local Winning Teams' Iteration	May-October 2027 Dates determined by participating SCM
ASTC 2027 Conference Participation	November 9-13, 2027
Final Report Due	November 30, 2027

Eligibility Requirements

- Applicants must be members of ASTC or intend to apply for ASTC membership if selected.
- Applicants must be in the United States.
- Applicants are eligible to submit an application regardless of whether they have received past support from ASTC for their work.
- Applicants are eligible to submit an application regardless of whether they are part of *The Air We Share* cohort.
- Applicants are eligible to submit an application regardless of whether they have a prior relationship with Sanofi.

Application Instructions and Questions

Please submit your application [here](#).

You can find a pdf with the application questions [here](#).



Allowable expenses include, but are not limited to, indirect charges/administrative overhead (not to exceed 20% of the overall budget), venue costs, food/beverages, materials, transportation, and staff time. Stipend funds may not be used for capital expenditures or alcohol.

Your budget should reflect your project's expected total costs for the hackathon event and subsequent support of the winning team. Do not include prize funds or judges' honoraria in your budget (funding for those expenses will be added to the budgets provided). Budgeted expenses should not exceed \$30,000. Your organization may offer in-kind support beyond your budget, but we ask that you *not* supplement with additional sources of funding, to ensure a level of consistency across all events.

For questions about the application, email Naomi Wallace at nwallace@astc.org.