2021 Executive Summary
Inspiring a New Generation of Innovators

About the program
A signature program of The Tech, The Tech Challenge is an annual engineering design challenge for students in Grades 4-12, with a particular focus on girls and other groups that are under-represented in STEM. Generally, about 45% of participants are girls and roughly 40% of students come from Title I schools. Now entering its 35th year, this program continues to embody The Tech’s mission by inspiring the next generation of innovators.

Developing problem-solvers and learning from failure
Beginning in October, participants spend months working with their team to solve a real-world problem. They become deeply engaged in the engineering design process by working to solve each year’s unique challenge. Teams document every step of their journey including testing, brainstorming and, most importantly, what they learn through experimentation and failure. The program culminates in an inspiring showcase in April where teams put their solutions to the test.

The Tech Challenge strives to meet students where they are, which was especially important as students faced some unique challenges this year. To meet these needs Tech Challenge offerings included:
- All virtual main program
- Exploring Engineering with The Tech Challenge — a multi-lesson program targeted at after-school programs
- Virtual labs
- Library workshops and bilingual activity handouts distributed with free food
- Bay Area Science Festival workshops
- Kits with engineering supplies for youth in communities impacted most by systemic inequities

Thank you volunteers!
In 2021, corporate and individual supporters joined us as judges and helped make the Virtual Showcase a big success. This year, we had judges from 23andMe, Accenture, Apple, Arista Networks, Arm, Bank of America, Bill.com, Cisco, eBay, Flex, Ford Motor Company, Google, Hitachi Vantara, IBM, Lawrence Berkeley Labs, Lockheed Martin, Marvell, Mass 4 Service, Inc., MHUSD, MORD Gallery, Northrop Grumman, Roku, Samsung, SAP, Seagate, See’s Candies, San Jose State University, Synaptics, Thermo Fisher Scientific, The Tech, Valley Water and Zoom Video Communications. We are grateful for the many corporate, foundation and individual supporters of The Tech Challenge that help us to inspire so many future innovators and problem-solvers. We could not do it without you.

Local, national and global expansion
We’re taking the expertise we’ve developed with The Tech Challenge over the last 34 years to bring Design Challenge Learning to students locally, nationally and globally. We’ve created multisession lessons that allow educators to implement Design Challenge Learning in classrooms around the world. We are also providing in-person and online courses to train educators to facilitate Design Challenge Learning. Our goal is that, by 2024, two million people each year will be using Tech-produced materials to develop their problem-solving skills.
Total participants served: 11,073

2021 participants came from

Alviso
Belmont
Campbell
Carmichael
Cupertino
Danville
Decatur, AL
Detroit, MI
Dublin
Franklin, MA
Fremont
Ft. Lauderdale, FL
Hayward
Hillsborough
Irvine
Lahore, Pakistan
Los Altos
Los Altos Hills
Los Gatos
Menlo Park
Mescalero, NM
Milpitas
Morgan Hill
Mountain View
Oakland
Palo Alto
Redwood City
Sacramento
San Francisco
San Ramon
Santa Clara
Santa Cruz
Saratoga
Seaside
Sunnyvale
Sunol
Tracy
Vallejo
Waimea, HI
Watsonville
Weed

*As of June 14
The Tech Challenge By the Numbers

51% of students who participated in Final Showcase were female.

38% of teams came from Title I low-income schools.

2021 participants said: The Tech Challenge helped me to...

94% Listen to and use other people’s ideas
90% Have fun with engineering
88% Work better with others

88% Come up with more creative solutions to problems
85% Respond better to setbacks
85% See that you can turn your ideas into a reality

85% Compare different solutions and choose the best one
83% See how you can solve real world problems with engineering
77% Be more interested in a job in STEM
Participant feedback: What did they learn?

“I learned that with determination, creativity, and teamwork, you can make your ideas a reality.”

“I learned the importance of getting perspectives from different people to achieve a greater result.”

“I learned a lot about how to improve designs, taking the best parts of the first design and improving the bad parts to create something new.”

“I learned how to work together with other people to solve problems.”

“This challenge definitely improved my people skills as well my engineering and thinking skills.”

“I learned that we should keep on trying no matter what setbacks we have.”

Supporter feedback

“I would put these students in front of my CEO.”

— Ken Washington Ph.D., Chief Technology Officer, Ford Motor Company

“The core mission of The Tech Challenge aligns perfectly with Seagate’s values of innovation, inclusion and integrity. We are proud to be a longtime supporter of The Tech Challenge.”

— Ravi Naik, CIO and EVP, Seagate Technology

“I am so inspired by the hard work and dedication of this year’s Tech Challenge teams. Zoom Video Communications is proud to support the next generation of STEM leaders with The Tech Challenge.”

— Janine Pelosi, Chief Marketing Officer, Zoom Video Communications

Educator feedback

“We live in a very diverse area and our tech industry is not very diverse. We need more people of color who are in the tech industry as engineers, as scientists, and I think The Tech Challenge is a great way to encourage and reach local children, especially those kids from Title I schools who are perhaps lower income who have parents who are not engineers who don’t actually have some of these opportunities in their schools or in their communities.”

— Rosemary Baez, Executive Director, Third Street Community Center
Media Summary

Highlights Video
Virtual Awards Ceremony

Awards Ceremony YouTube Livestream
This year’s awards live stream featured special guests like San Jose Mayor Sam Liccardo and helped celebrate the accomplishments of all the participants.
Views: 2,686*
Watch time: 240.6 hours*
*As of May 20, 2021

Medium Blog Post
Students gain STEM confidence and skills with engineering mentors during The Tech Challenge

Photos from showcase: Flickr album

Press release
April 26, 2021
Students innovate in unprecedented times with 34th annual The Tech Challenge

The Tech Challenge mentions in the media:

ABC7: STEM ‘Tech Challenge’ Survives Pandemic

KCBS: With a little cardboard—and a lot of creativity—you can create just about anything.

Authority Magazine: “Alan Dowdell of Wrightspeed: 5 Things We Must Do To Inspire The Next Generation About Sustainability And The Environment”

Social media

Month leading up to showcase (3/24-4/24):
The Tech Challenge Facebook
Impressions: 11,058
Engagements: 898

Weekend of showcase (4/25-4/26):
The Tech Challenge Facebook
Impressions: 3,899
Engagements: 355

What people are saying

Claudia Lehmann
@cllehmann22
I just completed my sixth year as a judge for #TheTechChallenge hosted by @TheTechInteract and I cannot praise the organizers and participants enough. Every single year, the challenge is professionally organized and the kids develop creative and innovative #engineering solutions.

5:23pm · 25 Apr 2021 · Twitter Web App

Zigazoo
We ran an experiment for mission-based Tech Challenge content on an educational learning app for kids, Zigazoo. In a short video, we posed the question, “What’s the tallest structure you can build with cardboard?” The prompt received 9,300 views and 17 video responses from young people who accepted the challenge.
Here’s a fun one!
Thank you 2021 supporters!

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