

NEXT ENGINEERS

Building a world that works

Engineers build worlds. All kinds of worlds.

Engineers build jet engines that ensure safe and sustainable travel, design portable medical equipment to reach more patients around the world, and create wind turbines that generate cleaner energy.

And we need a more diverse engineering profession to bring new perspectives, experiences, insights, solutions, and greater innovation to today's challenges. And tomorrow's.

That's why we created *Next Engineers*, a global program to increase the diversity of the next generation of engineers. *Next Engineers* offers inspiring programs to engage diverse students aged 13-18 to spark their interest in becoming engineers.



Let's build the world we want, together.



Learn more at
www.NextEngineers.org.

Building the Future

Youth tinker, explore, and imagine. By introducing them to engineering concepts and career opportunities early, *Next Engineers* will unlock their potential as the next generation of problem solvers.

Around the world, *Next Engineers* seeks to engage **14,000 youth in 4 cities** by the end of 2026, which will:



In the U.S., **20%** of engineers are from underrepresented populations.

- US Bureau of Labor Statistics

In the U.K., women **earn 17%** of undergraduate degrees in engineering.

- National Science Board

In South Africa, **11 %** of registered engineers are women.

- Engineering Council of South Africa



Address Global Challenges.

Engineers are creating blueprints for a world that works, and engineers from diverse backgrounds can bring the varied perspectives we need to address the world's most pressing challenges – from sustainable flight to quality healthcare and clean energy.



Light Pathways.

Anyone who wants to be an engineer and shows aptitude for engineering should be able to become an engineer. *Next Engineers* provides opportunities and support for all participants.



Change the Narrative About Engineering.

Many youth have preconceived notions about who can become an engineer, or what engineers do. By introducing students to engineering role models from diverse backgrounds, we are inspiring more students to pursue engineering careers and building a more diverse engineering workforce.

Engaging the Next Generation

Through three core programs, *Next Engineers* guides students along the path to engineering careers.

Students' participation will be supported and monitored by professionals, using a balance of technology-enabled and hands-on learning resources.

- ▶ Students completing the Engineering Academy and who are accepted to a post-secondary education engineering degree program will be awarded partial **scholarships**.

Engineering Design Thinking is a process of design that includes defining problems in terms of criteria and constraints; researching and generating ideas; selecting among alternatives; making drawings, models, and prototypes; optimizing, testing, and evaluating the design, and redesigning if needed; and, eventually, communicating the results.



NEXT ENGINEERS PROGRAMS

Engineering Discovery (Ages 13-14)

Youth build awareness about what engineers do through a variety of short, exploratory sessions. Volunteers deliver creative, hands-on activities in the classroom or community to inspire youth and expand their understanding of what engineering is all about.



Engineering Camp (Ages 14-15)

Students are immersed in the engineering process through a week-long camp experience. Students interact with experienced engineering faculty, staff, and business leaders as they complete design challenges inspired by real-world scenarios, building an identity as aspiring engineers.



Engineering Academy (Ages 15-18)

Over three years, future engineers learn to think and act like engineers and prepare to advance to post-secondary education through the Academy. With over 80 hours per year outside of school, the Academy includes a series of immersive design challenges, career coaching, and college-readiness workshops to equip diverse groups of youth with the skills they need to build an engineering identity and career.

- **Engineering Design Thinking** – to follow a structured process for creating solutions centered on users' needs.
- **Creativity** – to imagine and innovate to meet product goals.
- **Problem-solving** – to investigate and develop solutions.
- **Making and Building** – to design and build a product or system.
- **Teamwork and Collaboration** – to learn from and listen to each other.
- **Communication** – to clearly defend and explain proposed solutions.

Thinking Globally, Working Locally

With full funding from the GE Foundation and technical support from FHI 360, we are working with community partners to plan and deliver *Next Engineers* in four cities around the world. Local GE employees will volunteer engineering expertise, career exposure, and structured learning activities.

Join the GE Foundation in our mission to inspire the next generation of engineers: youth from around the world who will be the innovators, problem-solvers, and leaders of tomorrow.

Learn more about *Next Engineers* at www.NextEngineers.org or NextEngineers@ge.com



NEXT ENGINEERS