



Back to School with Discover Engineering

August 5, 2026



Presenter:

Sarah Summers, B. Ed.
Marketing Manager
Middle & High School Teacher

Who are you?

How do you support students?

What ages of students do you support?



Vision

DiscoverE believes a STEM experience with an engineer or technician, educator, and student can transform the world.



Mission

DiscoverE is a coalition providing every student with a STEM experience and the resources, programs, and connections to improve the understanding of engineering.

STRATEGIC FRAMEWORK



Based On

- 30+ Years of Experience and Experimentation
- Research
- Collaborations



**YOUR KNOWLEDGE.
THEIR FUTURE.**

5.5 Million

Students and parents

300,000

Volunteers and Educators



DiscoverE's Reach & Impact

- 67% of teachers (public schools) work in **Title One Schools**.
- 43% of teachers have 75% of their students on **Free & Reduced Lunch**.
- 49% of students are White, 22% are Hispanic, 21% are Black/African-American, 15% are Asian American, 2% are American Indian or Native Hawaiian.
- 51% of students identify as girls and 45% as boys.

**Across Engineers Week and Girl Day.*



What is Future City?

Middle and High School students work in teams to create cities that exist 100 years in the future based on an annual sustainability challenge.

26/27 Future City Theme



Design a resilient future city that can prevent, protect, and recover from **urban wildfires**.



Program Resources

- Program Handbook (Available Aug 1)
 - Deliverables
 - Rules & Rubrics
 - Leading Your Team
 - What is Engineering?
- 25+ Activities
- Past Essays, Models & Presentations
- Theme Webinar (September 30th)

Middle School Resources

- Monthly Educator Calls
- New Educator Info Session
- Mentor Support Call
- Regional Coordinators

High School Resources

- Monthly Coaches Calls
- Revit Tutorials & Webinar
- Mentor Panel Webinars
- Career Exploration

Future City Middle School Deliverables & Competition Timeline

Competition Deliverables

Imagine, research, design and build!



54
Points

City Essay

Teams describe the unique attributes of their city and their solution to the annual challenge (1,500-word max.)

[View samples »](#)



65
Points

City Model

Teams build a physical model of their city (in one piece or multiple segments) using recycled materials and include one moving part.

[View Photo Gallery >>](#)



72
Points

Presentation / Q&A

Teams have seven minutes to present their city's futuristic innovations. Teams then answer questions for a panel of STEM professionals.



10
Points

Project Plan

Teams develop and use a project plan to help them stay organized and focused.

Regional Competitions: January 8 – 23, 2027

Finals Competition: February 13 – 17, 2027 in Washington, D.C.

Future City High School - Deliverables & Competition Timeline

Competition Deliverables

Qualification Round

A virtual round where your essay and model are scored by judges from all over the world!

Finals Round

An in-person round for qualifying finalists held in Washington, DC. where teams present their city and answer questions in front of a panel of STEM professionals.



50
Points

City Essay

Teams describe the unique attributes of their city and their solution to the annual challenge (2,000-word max.)



60
Points

City Model

Teams build a digital model of their city using Revit.



65
Points

Presentation / Q&A

Teams have seven minutes to present their city's futuristic innovations. Teams then answer questions for a panel of STEM professionals.

Virtual Qualification Round

- Deliverable Due Date: January 6, 2027
- Judging Period: January 8 – 18, 2027

Finals Round: February 13 – 17, 2027 in Washington, D.C. *(Invite Only)*

- Top 20 teams from Virtual Qualification Round

Future City Middle School

Competition Track

- \$25.00 per organization*
- Middle School teams have
 - 1 Educator
 - 1 Mentor (*optional*)
 - 3+ students in grades 6-8*
- Competition teams complete 4 deliverables
 - Maximum \$100.00 **budget** on model
 - Encouraged to use recycled parts

Resource Only Track

- Free!
- Resources teams can use deliverable criteria/rubrics to round out their curricular goals
- Available to grades K-12+!

Register Now!



Future City High School

Teams

- 1 Coach
- 3-5 students in grades 9-12

Competition Access

- \$375
- Competition teams submit deliverables for feedback
- Revit (digital city model software) is *free*!

Program Access

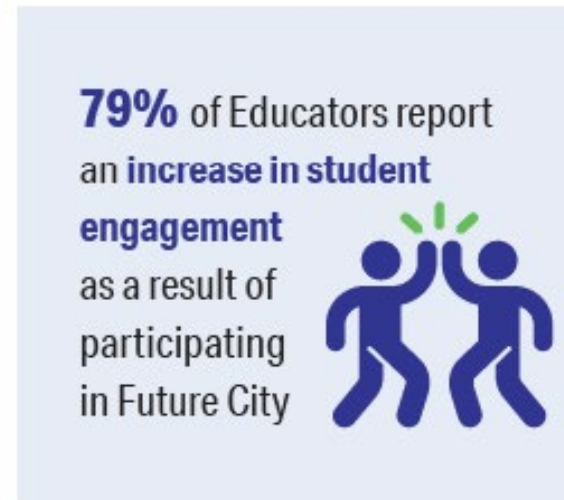
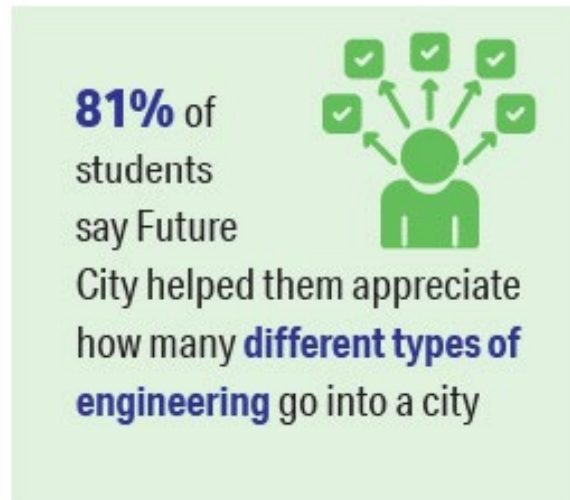
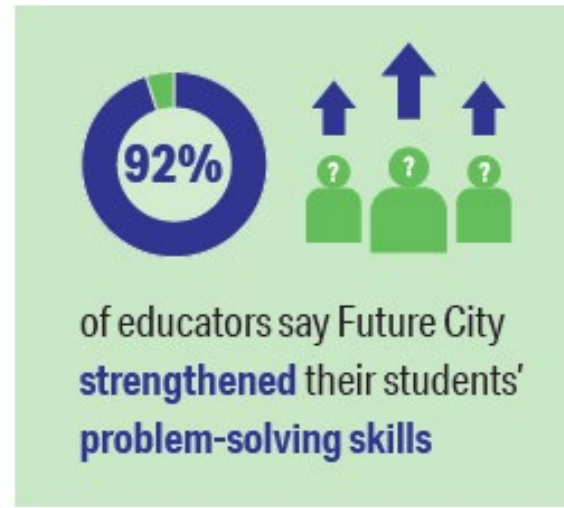
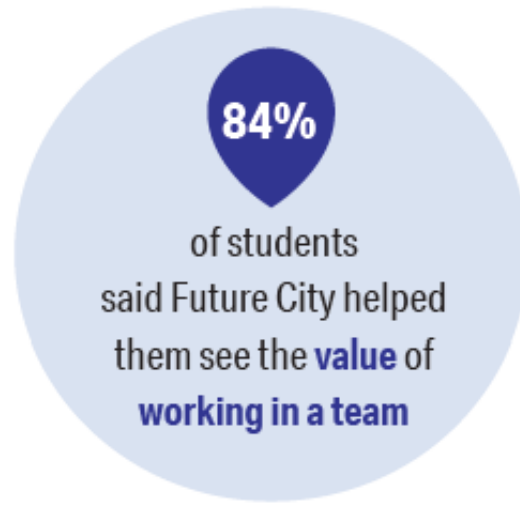
- \$300
- Program Access teams can use deliverable criteria/rubrics to round out their curricular goals
- **Upgrade to Competition Access any time for an additional \$150*



Register Here



Student Learnings



“ *This program changes the trajectory of kids' lives. This program has given my students real opportunity and helped them see how they can use engineering to solve community problems.”*

Middle School Educator

Future city is a must try for sure, it helped me in ways I never knew I needed. I've always been independent when it comes to working so this was such a good experience for team building and group problem solving.”

Middle School Student



fuTuRe City COMPETITION MIDDLE SCHOOL

INFORMATION SESSION

August 20th
6 PM ET



Ashley Wirtz

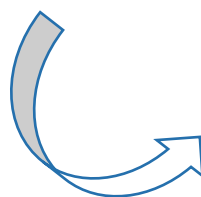
Program Manager

Future City Middle School

Ashley@DiscoverE.org

FutureCity.org

Register Now!



**Refer a Colleague
and win a \$75
Amazon Gift Card!**



future City

COMPETITION

HIGH SCHOOL

INFORMATION SESSION

August 5
6PM ET



**Register
Now!**

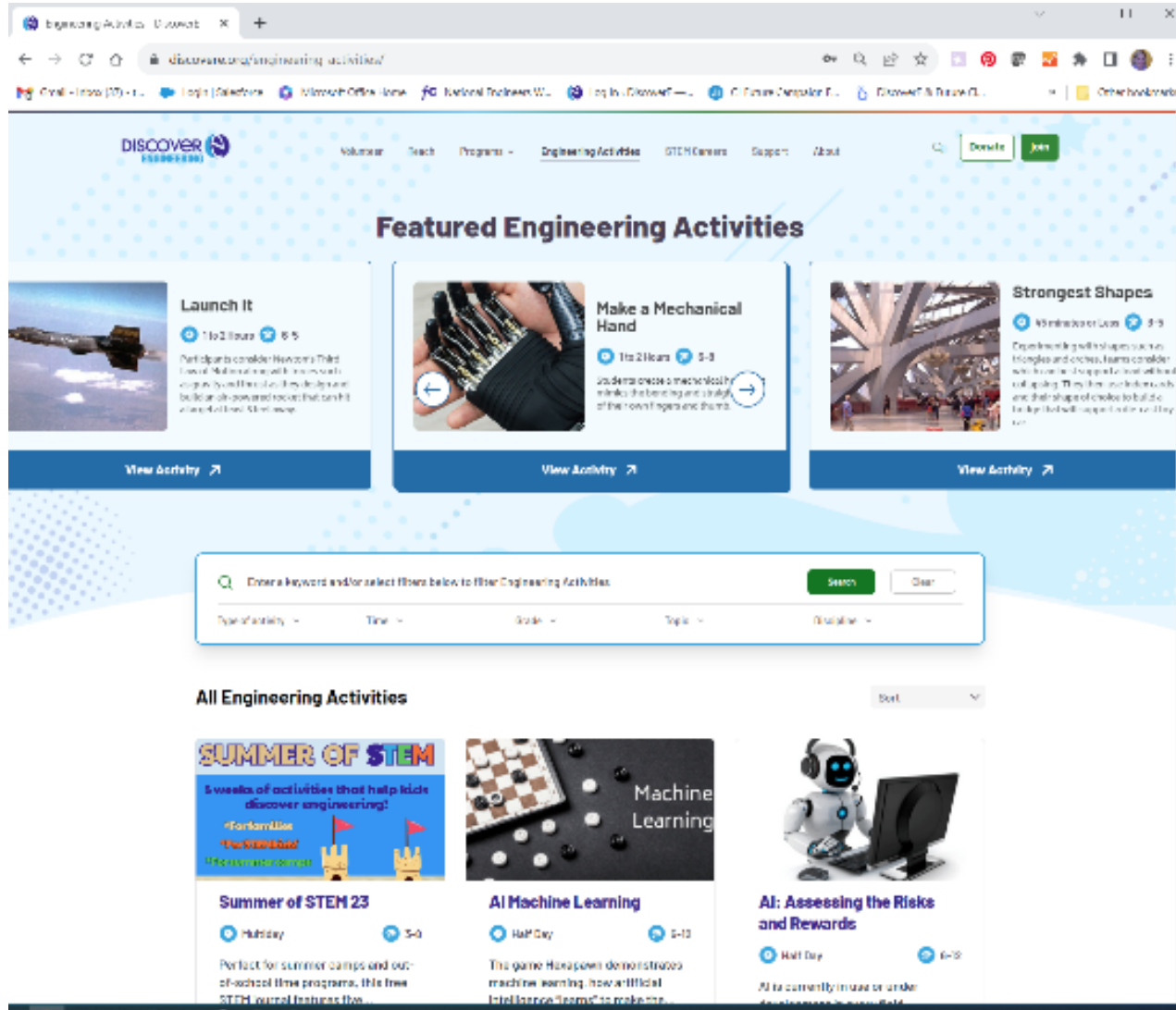
Maddy Faraco

Program Manager Future
City High School

Maddy@DiscoverE.org

HighSchool.FutureCity.org

Hands-on Activities



170+ Engineering Activities

Filter:

- Time
- Grade
- Subject
- Discipline
- Type:
 - Leader Notes
 - Student Instructions
 - Videos

Engineering Design Process



Spotlight: Challenge Videos



DiscoverE.org/challenge-videos

DISCOVER ENGINEERING

Volunteer Teach Programs Engineering Activities Engineering Careers Support Us Store

← View More Activities

Puff Mobiles

Renewable energy sources are in focus as participants build a wind-powered car using straws, Lifesavers candies, paper, and tape, and get their car to the finish line using as few puffs of air as possible.

TIME
45 minutes or Less

CAREERS
Environmental

GRADE
3-5
6-8

TOPIC
Design Challenge
Dream Big
Forces, Motion & Energy

Leader Notes Student Instruction **Challenge Video**

Materials +

Introduce +

Instructions +

Relevant Terminology +

Print Downloads

Share this activity with your network!
Enjoy this activity? Please let your friends know!
Share Activity

← Back to STEM Activities

Puff Mobiles (Student Instruction)

How can you build a car that moves as far as possible on a single breath of air?

Favorite Print

Overview

STEM careers
Environmental

Grade level
3-5
6-8

Topic
Forces, Motion & Energy
Design Challenge
Dream Big

Time
45 minutes or less

Related Assets
Instructor Guide

Make a donation

Materials +

Instructions +

Student hosts 30-minute chats with engineers and technicians

- 50+ on-demand episodes
- 93.75% of respondents agree that their students are **more interested in engineering careers** after watching Chats with Change Makers!
- NEW episodes for 2026-27 school year launching in September 2026!

DISCOVER 
CHATS WITH
CHANGE MAKERS



MARCUS HAMPTON
LAND SURVEYOR



LUKE
STUDENT HOST

Chats with Change Makers

All Chats

Sort ▾



LUKE
STUDENT HOST

DENISE EVANS
ELECTRICAL ENGINEER

Denise Evans

Air Date: April 21, 2026

 Electrical

Denise Evans is an electrical engineer and technical lead at Northrop Grumman who builds chi...

[View Chat ↗](#)



LUKE
STUDENT HOST

SRIMOYEE BHATTACHARYA
AI EXPERT & ENGINEER

Srimoyee Bhattacharya

Air Date: February 23, 2026

 Nuclear & Petroleum

Meet Srimoyee Bhattacharya, an engineer and AI expert at Shell who leads a team of AI engineers and...

[View Chat ↗](#)



LUKE
STUDENT HOST

ROBERT SCHOMP
RIVER ENGINEER

Robert Schomp

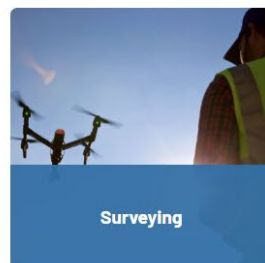
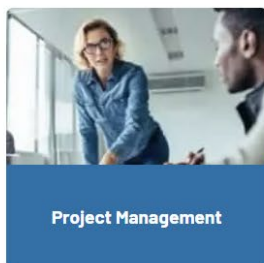
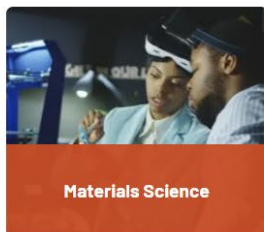
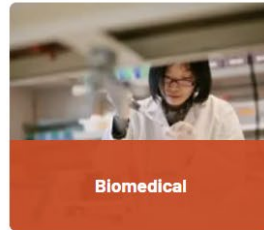
Air Date: January 23, 2026

 Civil

Meet Robert Schomp, a water resources engineer who designs river habitats for salmon and a...

[View Chat ↗](#)

Types of Engineering Careers



DiscoverE.org/Engineering-Careers

Engineering Careers

- Career Overview
- Meet Change Makers
- Salary Info
- Job descriptions for Bachelor's and Associate degrees
- Related hands-on activities

Discover Civil Engineering



What Does a Civil Engineer Do?

Imagine knowing how to build a school that stays standing during an earthquake. Or designing roads that actually *end* traffic jams. Or working on the creation of a stadium where every fan has a great view of the action. That's the kind of real-world impact civil engineers make every day.

Civil engineers design, plan, and build the structures that shape our lives: bridges, highways, railways, skyscrapers, tunnels, and water systems. They work to turn big ideas into reality, bringing plans to life safely and efficiently. From famous landmarks like New York's Freedom Tower to eye-catching structures like Vietnam's Dragon Bridge, civil engineers are the problem-solvers who make bold designs stand strong.

Meet the Change Makers Who Are Civil Engineers!



Meet Robert Schomp

Robert is a water resources engineer who designs river habitats for salmon and a community college instructor.

Civil Engineering Career Overview¹



\$141,000

Median salary²



368,900

Number of jobs in 2024



5%

Job growth over next 10 years



Explore more

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS

[Future World Vision](#)

[Science Buddies](#)

Engineers Week Theme & New Resources



Calendar

- New Webinars!
- Outreach Grants Application Due: October 23
- Chats with Change Makers – September to May
- Future City Competition – September through February
- Engineers Week – February 21 - 27
- Girl Day – February 25
- World Engineering Day – March 4



2026-2027

Webinars

- AUG 5** Back to School Webinar
- SEP 30** Future City Theme Webinar
- OCT 14** Engineers Week Kickoff Webinar

- DEC 09** Planning Events for Engineers Week Webinar
- JAN 20** Being an Effective Volunteer Webinar
- JAN 27** Teaching Engineering Webinar

Events

- JAN 8-23** Future City Regional & Virtual Competitions
- FEB 13-17** Future City Finals

- FEB 21-27** Engineers Week
- FEB 25** Introduce a Girl to Engineering Day
- MAR 04** World Engineering Day

Learn More at DiscoverE.org/Events

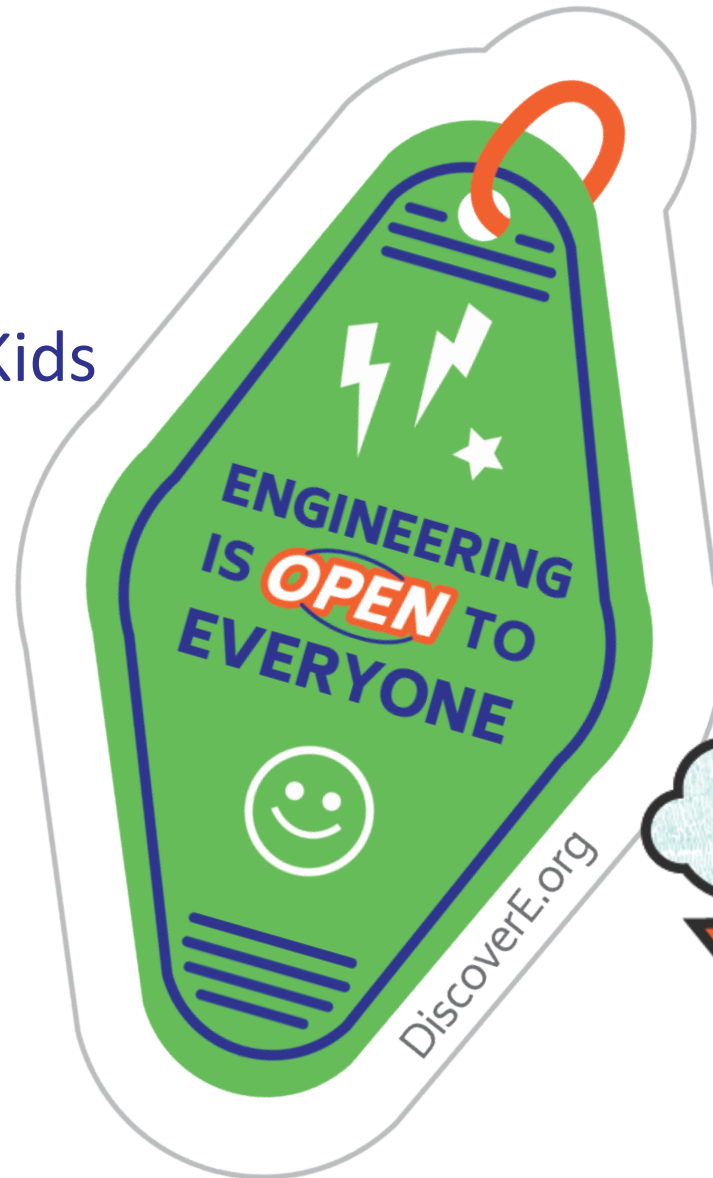
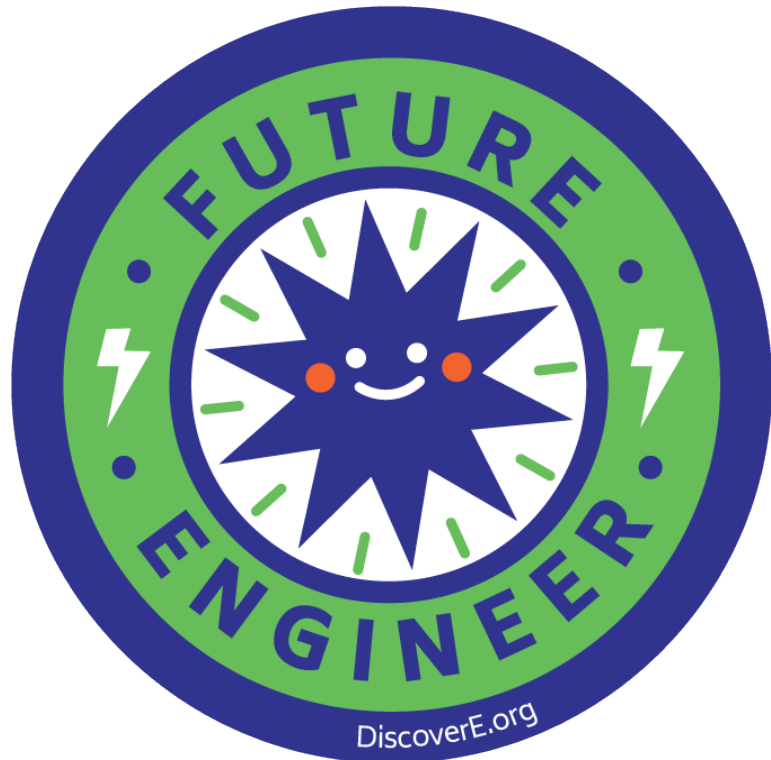
What resources do you need?

- Hands-on Activities
- Activity Video Demonstrations
- Cross-curricular Programs (Future City)
- Engineering Career Info for Students
- Physical Items (stickers, pencils, bookmarks)
- Professional Development (Webinars)
- Professional Development (Online at your own pace)

Stickers!

store.discovere.org

10% Off Coupon: StickersForKids



STAY IN TOUCH

Email

Info@DiscoverE.org

Website

DiscoverE.org

Social Media



facebook.com/DiscoverE.org



[@DiscoverEorg](https://www.instagram.com/DiscoverEorg)