



DAY OF STEM CHALLENGES



www.stemforher.org



info@stemforher.org



CALLING ALL PARTNERS

STEM for Her invites you to join our Day of STEM Challenges, a **hands-on event** that brings together 80–120 high school girls for a day of **problem-solving, creativity, and collaboration**. Students compete in team-based challenges designed and led by industry volunteers, who guide them through **interactive activities** while encouraging confidence and curiosity. The day is high-energy and engaging, with students rotating through stations, building real-world skills, and connecting with women in STEM through mentorship.

Over lunch, participants join **“Lunch with a STEMInist”**—a small-group mentoring session offering personal insights and inspiration from STEM professionals. The event wraps up with an awards ceremony celebrating **teamwork, innovation, and creativity**.

STEM for Her hosts a series of themed “Day of” Challenges throughout the year, including Day of Tech, Day of Engineering, Day of Health Sciences, and a general Day of STEM that highlights a range of fields.



“

It was a very interactive and immersive experience that allows you to learn about real world experiences.

Nivedita R., 2025 Participant



SAMPLE SCHEDULE

- **9am:** Volunteer Arrival
- **10am:** School Bus Arrival and Student Registration
- **10:15am:** Introductory Remarks
- **10:30am - 12:30pm:** Rotation of Challenges
- **12:35 - 1:35pm:** Lunch with a STEMInist
- **1:40 - 2pm:** Award Ceremony
- **2pm:** Student Departure

CHALLENGES

Students will compete in teams through 3-4 rotations of challenges that introduce them to a new field of STEM that they might not have engaged with before. Below are guidelines for successful challenges:

- **Time:** each challenge will be 25-30 minutes long, repeating several times throughout the day
- **Activity:** Activities should be highly interactive to foster teamwork and creative problem-solving. Students will work collaboratively with their teammates to tackle a challenge in a dynamic, competition-style setting
- **Scoring:** The activity should culminate in some measurable and scored outcome, with enough differentiation to rank 20 teams
- **Bring it all together:** Wrap up the challenge with materials on potential education and career paths that involve this type of thinking/activity



“

I thought it was really fun! The activities were diverse, challenging, and educated us about the many options that STEM offers.

Sreelasya P., 2025 Participant

EXAMPLE CHALLENGES



Gridlocked: The Sphero Challenge

A grid is created on the floor, with several items in different squares each worth different point values. Students use block programming to design a path around the grid that “collects” the highest number of points. In the case of a tie, the program with the fewest “roll” blocks wins.

Escape the HER-AI Vault: The Ultimate Cyber Codebreaker Challenge!

Students are humanity’s last hope to outsmart an advanced AI system, HER-AI, which has locked them inside a digital vault! Students work together to decipher a series of cryptographic riddles using ancient and modern ciphers, each one revealing more information to escape the vault.



Bio-Tech Research Challenge: Solving the Spaceborne Mystery

Students analyze fictional lab results from an astronaut returning from space with unexplained symptoms. Teams will examine microbial data and experimental treatments to identify the cause.

Data Analytics Challenge: Trends in Motion

Interpret real-world-inspired datasets—ranging from patient readmissions to satellite-tracked migration patterns—to uncover hidden trends and make recommendations. Teams will learn how data drives better decisions in areas like public health, global mobility, climate effects, and more.



VOLUNTEER ROLE

As a Day of STEM Challenge Volunteer, you'll play a key role in inspiring the next generation of STEM leaders. Volunteers design and lead team-based, competition-style activities for high school students, guiding small groups through real-world STEM challenges in a fun, fast-paced setting.

Volunteer-student interaction is central to the day—volunteers lead activities, answer questions, encourage problem-solving, and help students build confidence in their STEM skills.

At lunchtime, you'll join “Lunch with a STEMInist”, a small-group mentoring session where you can share your STEM journey, offer advice, and connect personally with students.

This is a rewarding and energizing volunteer experience where your presence, perspective, and encouragement help students see a future for themselves in STEM.



INTERESTED IN HOSTING A DAY OF STEM CHALLENGE?

Are you interested in hosting a Day of STEM Challenge at your workplace?

Venue Requirements Include:

- **A large main room with seating for 120–150 people and space for lunch tables**
- **3–4 breakout rooms or classrooms that can each accommodate 20–40 participants for small-group activities**
- **Challenges can be hosted by one partner, or several partners who want to work together to contribute to this inspiring day!**



www.stemforher.org



info@stemforher.org