Welcome to FIST

!!!!!!!!!!!

What is FAST?

Future
Advancers in
Science and
Technology

STANFORD
FAST

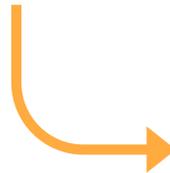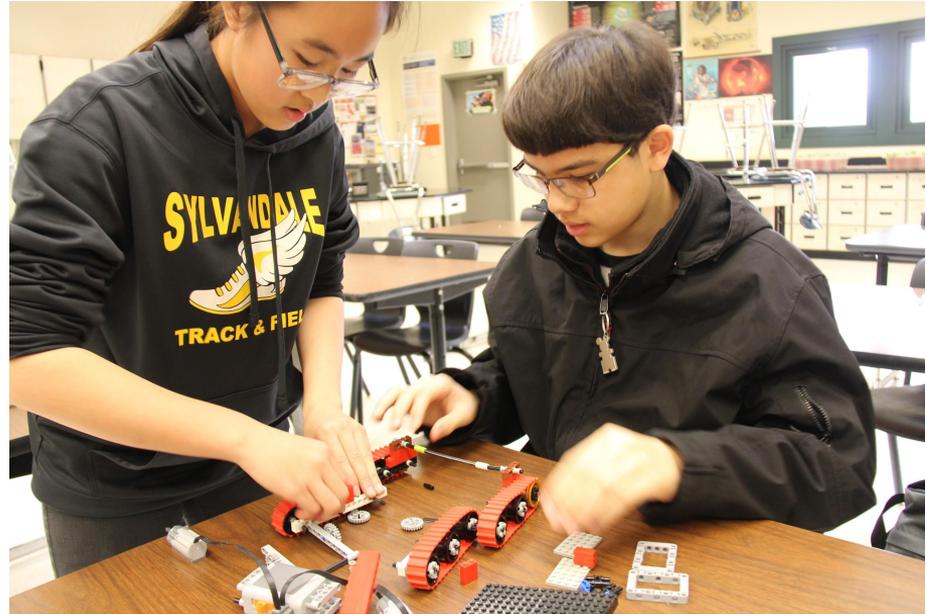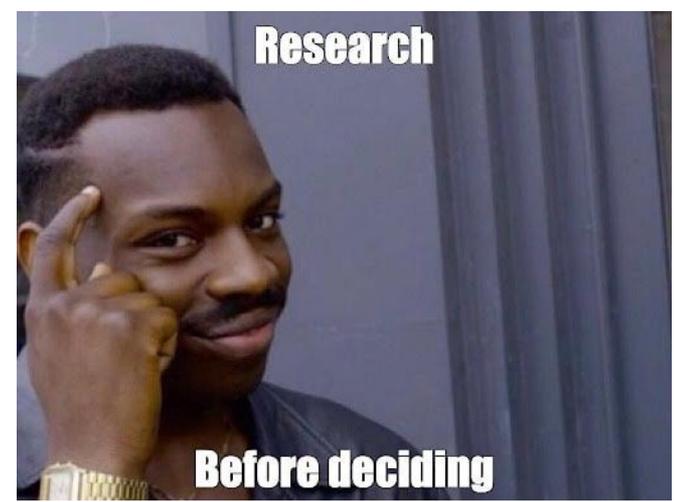| 1	2	3
Ask Exciting Questions	Design Experiments	Get guidance from Mentors

What are the goals of FAST?

- Ask questions

- Design projects

- Yearlong science project

- Science Fair(s)

- Stanford Symposium

- Have fun!

- Meet new friends :)

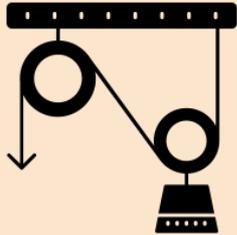You can work on a FAST project solo, or in a team of 2 or 3!

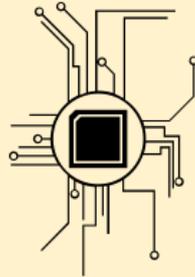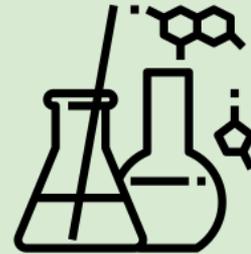# Explore any subject area you want!

Research
Before deciding

DATA SCIENCE

PHYSICS

ENGINEERING

CHEMISTRY

BIOLOGY

But like, how do I decide?

What have you wondered about the world around you?

What questions keep you up at night?

What big problem would you like to help solve?

What cool thing would you like to build?
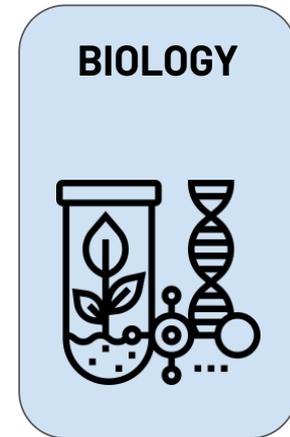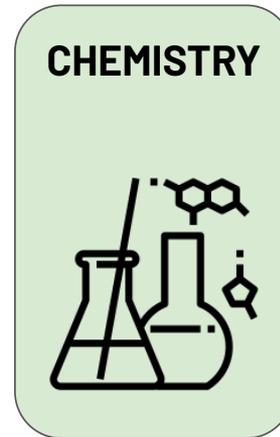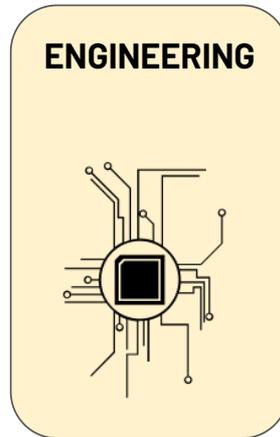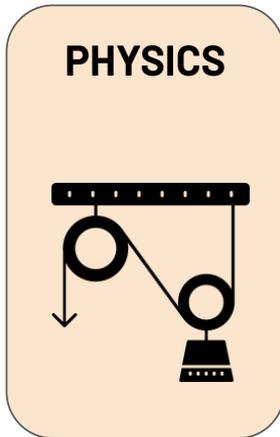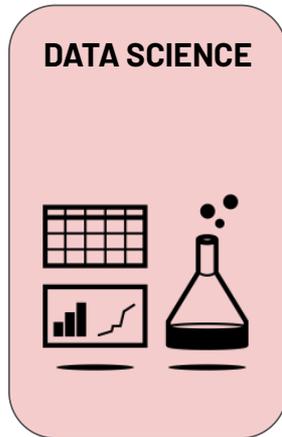
Strawberries

What's that fuzzy stuff on the strawberries?

BIOLOGY

Could I spray something on my strawberries to keep them from going bad?

CHEMISTRY

Could I design better packaging for strawberries?

ENGINEERING

What kinds of mechanical stresses lead to mushy and browning strawberries?
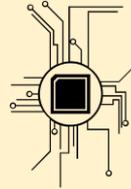
PHYSICS

Could I predict whether someone will end up having to throw away strawberries before they even buy them?

DATA SCIENCE

Wildfires

What impacts do fires have on ecosystems?

BIOLOGY

How does wind carry and spread wildfire embers?

PHYSICS
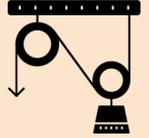
What chemicals are released into the air during fires?

CHEMISTRY

Could we build structures that more flame resistant?

ENGINEERING
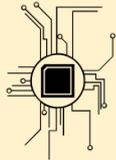
How do we calculate the level of wildfire risk some communities have, and how does that change over time?

DATA SCIENCE

Mentors share research projects

Students share previous FAST projects

Expectations for Students

- Design a project that excites YOU!
  - Mentors are just here to help :)
- Attend at least 80% of FAST sessions
  - Let your mentor know if you can't make it!
- Suggested: work between sessions
  - Eg. background reading, water plants, 3D printing
- Prepare a poster for Stanford Symposium!
  - Optional: compete in regional science fairs!

What mentors are here for

- Support student projects
  - STUDENTS get to choose what the project is!
- Help order materials
- Respond to questions on Remind or Email
- Coordinate with an alternate mentor if they ever need to miss a session

Important Note:

FAST mentors are **mandated reporters**: we're required to follow the same rules as teachers and report/connect you with resources if we learn about abuse or neglect

Resources Available for Your FAST project

$100 per person for project supplies!

🐝 seen by the FAST high speed camera!
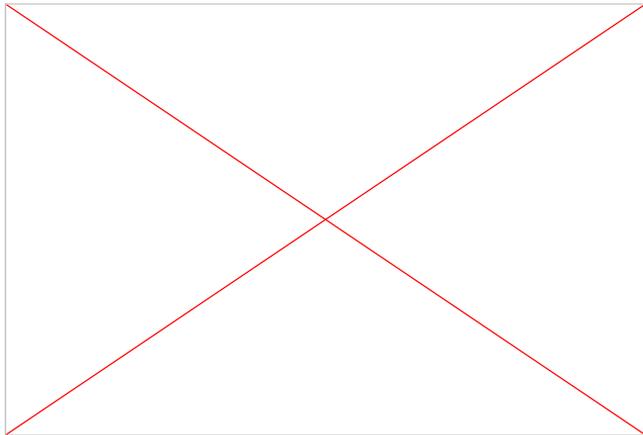
Design parts for a robot on a laser cutter or 3D printer
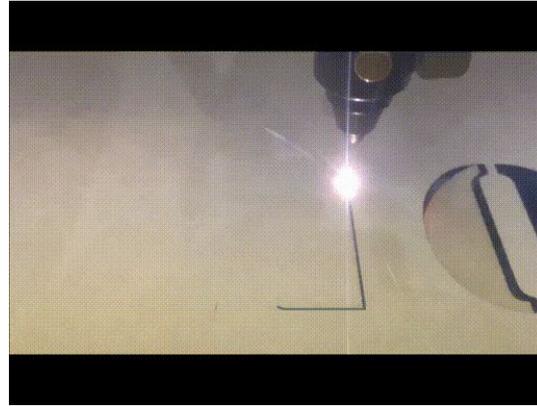
Plus lots more!
- Microscopes 🔬
- UV+Visible Spectrometer
- Laptops with computational software 💻
- High frequency electronics + oscilloscope 📡
- Drones 🚁

Fall 2025 Sessions (Always a Saturday)

Mentor Pairing (3)

Brainstorming (0-2)

Working with Mentors (4-6)

September	October	November	December
06 September **(0)**	25 October **(3)**	01 November **(4)**	06 December **(6)**
13 September **(1)**		15 November **(5)**	13 December **(7)**
27 September **(2)**			

At Stanford campus! (7)

Spring 2026 Sessions (Always a Saturday)

Science Fairs (Feb - Mar)		

Working with Mentors (8-13)		

January	February	March
10 January **(8)**	14 February **(10)**	14 March **(12)**
24 January **(9)**	28 February **(11)**	21 March **(13)**
		23-27 March

Present your poster at Stanford!
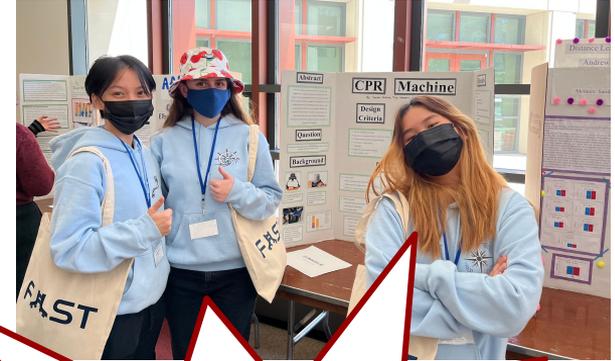
Symposium! !!

(week of 23 Mar)

Our role as CPOs

- Give YOU resources to make AWESOME projects
  - Ask us if you want to buy capital equipment! ($1K-5K)
  - We buy the food 😋 Let us know what you want!

- Keep FAST running safely and smoothly 🪖
  - Bring us any suggestions/concerns (e.g. if you'd like to change mentors partway through the year)
  - Loop us in if you want to do anything dangerous!

When you use too much reagent in your FAST project....

Using just the right amount :)

What will a FAST Session typically look like?

12:00 – 12:30 pm	Lunch (Provided by FAST)
12:30 – 1:30 pm	Workshop
1:30 – 4:00 pm	Project Work (+ snacks!)
4:00 – 4:30 pm	Fun Team Challenge/Activity
4:30 – 5:00 pm	Clean Up

What will today (Session 1) look like?

12:00 – 12:30 pm	Lunch (Provided by FAST)
12:30 – 1:00 pm	Intro to FAST & Workshop
1:00 – 1:30 pm	Introducing our Student Leaders/Mentors!
1:30 – 4:00 pm	Rotations (3)
4:00 – 4:30 pm	Jeopardy + Raffle
4:30 – 4:45 pm	Clean up

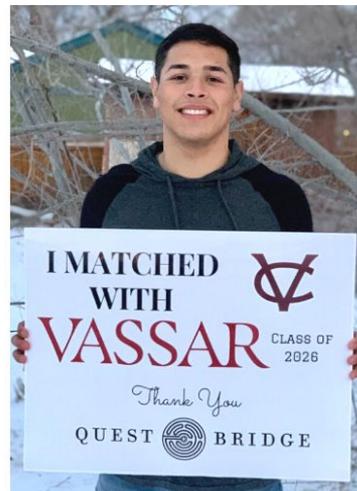# For Seniors: QuestBridge

Full scholarship to top colleges
- e.g. Stanford, MIT, USC, Pomona College

Eligibility:
- Family Income < ~$65,000
- "Primarily A's in the most challenging courses available"
- Any citizenship/immigration status ok

Application Deadline: September 30th

We can help you with the application, talk to a mentor!

Applying to Questbridge

- Information on your academics, activities, household, and financial background
- Writing section
- Two teacher recommendations from core academic subjects
- Current high school transcript and additional transcripts (unofficial transcripts are accepted)
- School Report from your current high school counselor
- School Profile (optional, but recommended)
- Any standardized test score reports to-date (if taken). We accept SAT, ACT, IB, AP, and English language proficiency exam test scores (unofficial test score reports are accepted).

We can help you with the application, talk to a mentor!

https://www.questbridge.org/high-school-students/national-college-match
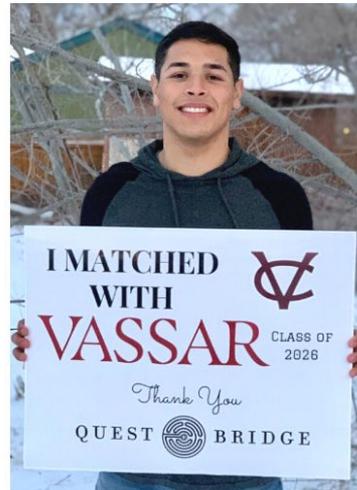
MATRICULATE

FREE COLLEGE ADVISING
matriculate.org/college

"FREE virtual college advising program that connects high-achieving low-income students with a near-peer college mentor who works one-on-one with students throughout the college and financial aid processes."

Requirements to apply for an advisor:

- GPA of 3.5 or higher
- Annual family income of less than $80,000
- Attends high school in the US
- Current junior, or rising senior
- Taking a rigorous course load

If you're a junior: QuestBridge College Prep Scholarship

● Full scholarships to summer programs at top colleges (application due March)

Yale Young Global Scholars

UPenn Management & Tech Summer Institute
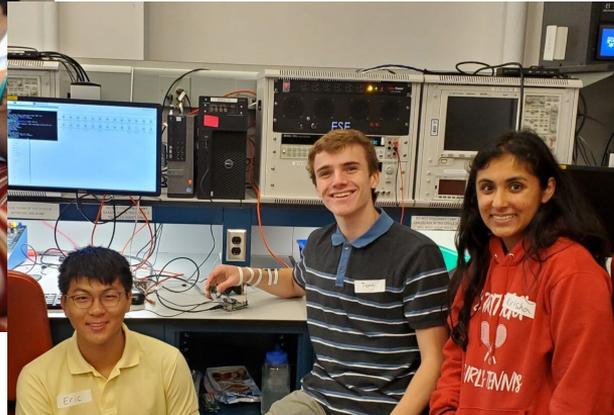
Stanford Intensive Law & Trial

James Lick Specific

Questions?

Reach out to:
- Mrs. Huynh: huynhg@esuhsd.org
- Student leaders
- Chief Program Officers (CPOs)
  - Cade Napier (cnapier@stanford.edu)
  - Daniel Howell (dkhowell@stanford.edu)
- Other FAST students + mentors!

Student Leader Introductions

(Student Leader)

Pronouns:

Hometown:

Previous FAST Project:

Hobbies:

Mentor Introductions

Cade Napier (CPO)

Pronouns: he/him/his

Hometown: San Antonio, TX

Research interests: How can we use electricity to make water treatment more energy efficient?

Hobbies: Running, swimming, watching football and reading

Daniel Howell (CPO)

Pronouns: he/him/his

Hometown: Madison County, Iowa

Research interests: Same as Cade, but like, different. Using electrochemistry to remove pollutants or turn them into valuable resources

Hobbies: board/tabletop games, watching science fiction, running

Andrew Hill Specific

Questions?

Reach out to:
- Mr. Castaños, Mr. Shih, and Mr. Sarringhaus
- Student leaders
    - My Dang, Catherine Nguyen, Ha Dinh, Nancy Martinez, Elizabeth Nguyen
- Chief Program Officers (CPOs)
- Deputy Program Officer (DPO)
- Other FAST students + mentors!

Student Leader Introductions

My Dang (President)

Pronouns: She/her

Hometown: San Jose

Previous FAST Project: The Effects of Different Chemicals in *C. elegans* Feeding Behavior

Catherine Nguyen (Vice President)

Pronouns: She/her

Hometown: San Jose

Previous FAST Project: Prosthesis Hand

Ha Dinh (Secretary)

Pronouns: she/her/hers

Hometown: San Jose, CA

Previous FAST Project: The Effects of Different Chemicals in *C. elegans* Feeding Behavior

Nancy Martinez (Treasurer)

Pronouns: she/hers

Hometown: San Jose

Previous FAST Project: Non-prescription pain medication and its impact on the gut microbiome

Elizabeth Nguyen (Publicist)

Pronouns: she/hers

Hometown: San Jose

Previous FAST Project: Orlistat Warriors

Mentor Introductions

Jessica Luu (CPO)

Pronouns: she/her

Hometown: Congers, NY

Research interests: Inorganic chemistry, Fe-based materials for batteries

Hobbies: Taking long walks, watching anime, reading webtoons, crocheting

Oliver Wu (CPO)

Pronouns: He/They

Hometown: Edmond, OK

Research interests: Chemical Biology, gut-vasculature barrier, mass spectrometry-based glycoproteomics

Hobbies: Cooking, crosswords, trivia, NBA, fighting games

Gautham Ravipati (DPO)

Pronouns: He/Him

Hometown: Hyderabad, India

Research interests: Programming Languages, Computer Hardware Design

Hobbies: Astrophotography, Running, Hiking, Travelling

To Do List:

- ❏ Fill out your paperwork!
- ❏ Join Remind
  - ❏ James Lick: @jlfast2526
  - ❏ Andrew Hill: @ahfast25
- ❏ Come to Session 2/3 on September 27th And October 25th!