



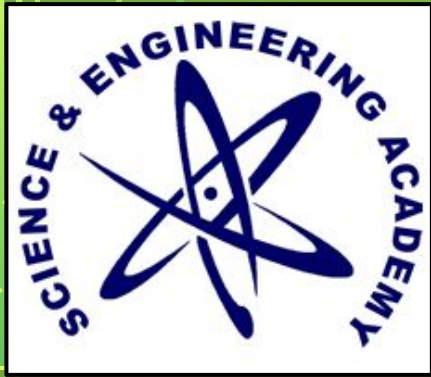
John Jay Science & Engineering Academy

SEA Family Meeting

Wednesday, Sept. 15, 2021



bit.ly/FamMeet091521



SEA Administration Team 2021-2022



Ms. Mitchell
SEA Principal



Ms. Luna
Associate Principal



Ms. Karst
Program Coordinator



SEA Counseling Team 2021-2022



DeeAnn Montanez
SEA Counselor
Alpha A-L



Rory Briggs
SEA Counselor
Alpha M-Z



This Year's Theme
for Jay Science &
Engineering
Academy

Jay Science & Engineering Academy Program Anchors

College-Going Culture

- 100% college acceptance rate
- College credit for Dual Credit, AP, and OnRamps courses
- College, Career, and Military readiness
- Industry certifications
- Career exploration



Jay Science & Engineering Academy Program Anchors

STEM Experiences

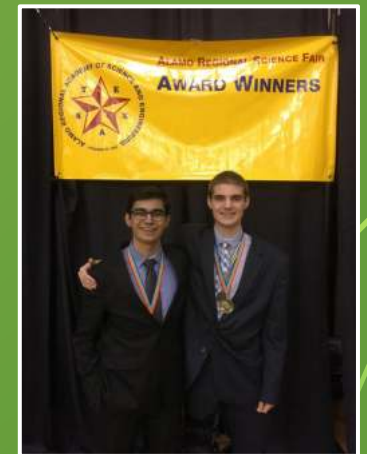
- Outreach events
- Industry field trips
- Job shadowing
- STEM leadership events
- Volunteering
- Mentoring
- Internships
- Networking
- Makerspace



Jay Science & Engineering Academy Program Anchors

Academic Research

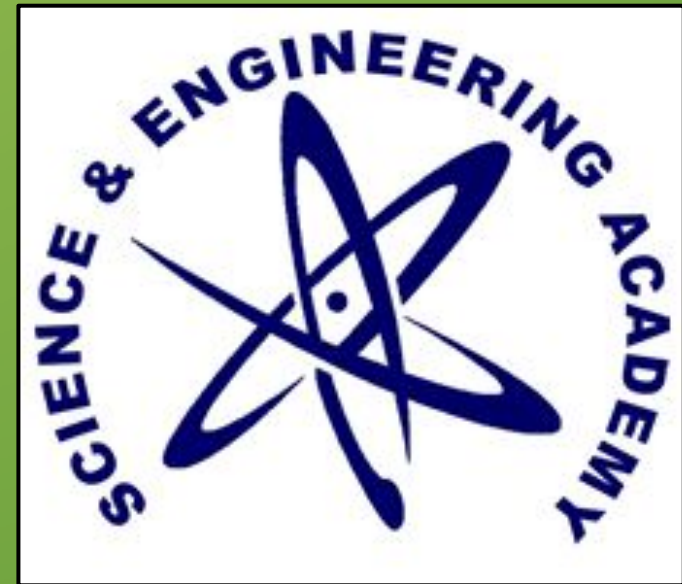
- Research skills
- Practical applications
- Presentation skills
- Innovation & Problem-solving
- Competition / Advancement
- Collaboration & Teamwork
- Networking
- Scholarships & Prizes
- Travel



Academic Research 2021-2022



Mrs. Marezki
Academic Research
Coordinator
penney.maretzki@nisd.net
Room: A220

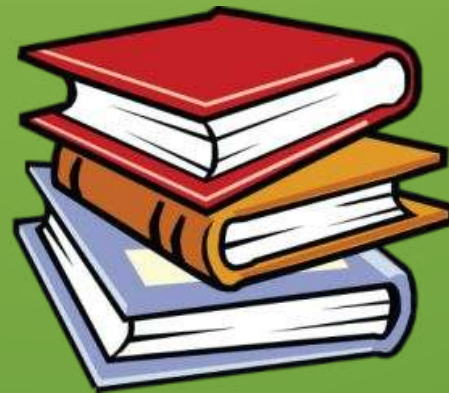


Academic Research

All SEA students participate in academic research every year.

Students will receive guidance through:

- Research Methods classes (9th)
- Emails from Mrs. Maretzki
- Reminders from your science teacher
- SEA newsletter
- Schoology



1. RESEARCH
2. PRODUCT
3. PRESENTATION,
with feedback
from an expert

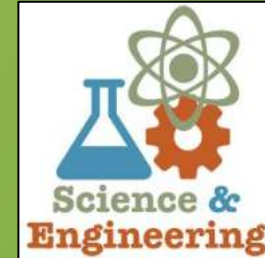
Benefits of Academic Research

- Builds Skills
- Scholarships
- Builds Resume
- Communication
- Leadership Skills
- Personal Growth
- Internships
- Confidence
- Collaboration
- Critical Thinking
- Problem Solving
- Careers
- Creativity
- Travel
- Cash Prizes
- Opportunity

For these reasons, it's important that YOU complete your own project. There is no benefit to having someone else (parent, sibling, friend) do it for you.

Types of Academic Research at JSEA

1. Science & Engineering Projects (9-12)
2. NASA VOLARE Program (10-12)
3. Art in STEM (10-12)
4. Destination Imagination (10-12)
5. Robotics Team (10-12)
6. ACE Mentorship Program (11-12)
7. Independent Study Mentorship (11-12)



Science OR Engineering Project



9th – 12th

Sponsor: Mrs. Maretzki (A220)

Over 500 students participate each year and are judged by professionals from the community.

Students with the highest-ranking projects (SEA & JHS) will be invited to be part of the **Academic Research Team**, with opportunities to compete at local, state, national, and international competitions.

Individual projects only; no teams allowed.

Display Board & Research Paper

Projects will be showcased at the SEA Research Symposium, on December 4th.

Academic Research Team Member



Jessica Romero
SEA Class of 2021

**3 years on the
Academic Research
Team**

AWARDS

- Multiple Grand Prizes
- Meteorological Society Award
- Association for Women Geoscientists Award
- NASA Earth System Science Award
- Ricoh Sustainable Development Award
- Society for In Vitro Biology Award
- Stockholm Junior Water Award

CASH PRIZES

- \$390

UNIVERSITY SCHOLARSHIPS

- \$26,000

The NASA VOLARE Program



Sponsor: Mr. Jordan (A218)

Teams of students will work with NASA mentors and UTSA peer mentors to create solutions to problems in the following areas:

- Acoustic damping
- Hydrology
- Power management & distribution
- Remote sensing
- Simulated lunar operations

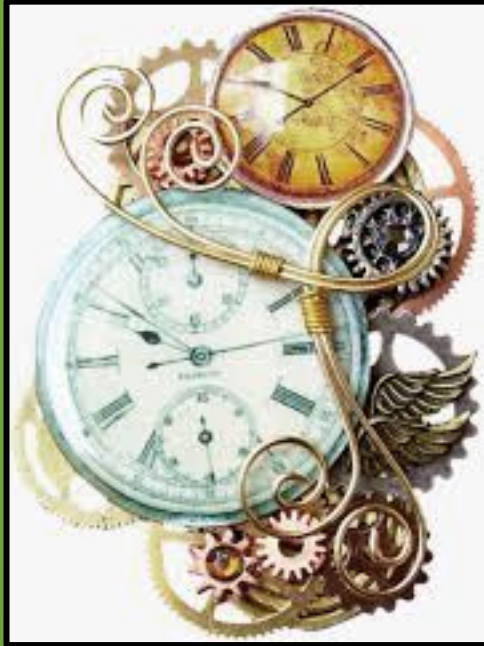
Application is required

This option will be capped at 25 - 30 students.

Students meet Thursdays after school.

10th – 12th

Art in STEM



**Sponsors: Ms. Karina Garcia (L114)
& Ms. Saenz (A205)**

21-22 Theme: STEAMPUNK

- **Research** the history, culture, and innovations of the Steampunk movement
- Create a free-standing **sculpture** that reflects your research
- Include moving parts

Application & checkpoint meetings required.

Projects may be completed individually, or in teams of 2.

Showcase your sculpture and display board at the SEA Research Symposium, on December 4th.

10th – 12th



Destination Imagination

**Sponsors: Mrs. Maretzki (A220),
Shawn Lopez (A207) & Adriane Caga (B134)**

Teams of 5-7 will solve one of five challenges:

- Fine Arts
- Scientific
- Engineering
- Technical
- Project Outreach

Students will write a script, build a set, make costumes & design every element of the solution without outside help, while staying on budget.

Attendance at the Regional Tournament is required.

1st Place teams will advance to the State Tournament in Arlington, TX on March 25-27.

*** Teams will meet weekly**



10th – 12th

**Application
required**

Robotics



10th - 12th

Application required

Sponsor: Mr. Szarka (E112/F118)

The goal of the Robotics Team is to apply engineering principles to solve complex problems in a collaborative manner. Students are assigned a role by team captains & teams are assigned by the Robotics sponsor.

Robotics Academic Research Team will be capped at 30 students

Anyone may join the Robotics CLUB, however, to use Robotics as your Research Credit, you must be

- a Sophomore, Junior, or
- a Senior who competed in Robotics in their Junior year

For Academic Research Credit:

- Regular attendance at after school meetings
Poor participation will result in being reassigned to Science Fair for your research option

ACE Mentorship (Architecture, Construction, Engineering)



Sponsors: Mr. Rivera (A212) & Mr. Jordan (A218)

Team Project: Only accepts 30 students per year.
Meet after school with a mentor every other
Wednesday 4:30-6:30.

2-Step application process required
APPLICATIONS DUE Sept.17 by 4:00pm



In May, students will present their projects to a
panel of architects and engineers.

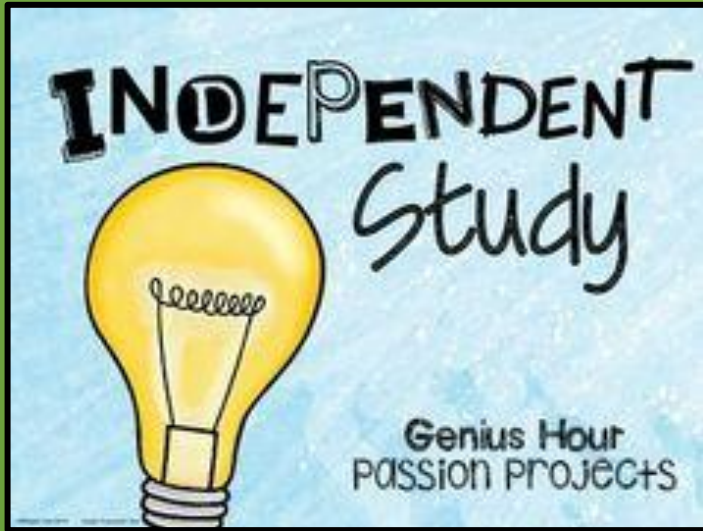
In previous years, seniors received over
\$27,000 in scholarships.

11th - 12th only



ISM

(Independent Study
Mentorship)



11th & 12th only

Sponsor: Ms. Asbell (B102)

Students choose their own topic of study, network to obtain a mentor, and develop a research-based product which is presented during the last week of April.

Students must already be enrolled in ISM or the GT Leadership class.

Contact Ms. Asbell with any questions.

Finding Information About Academic Research on Schoology

1.



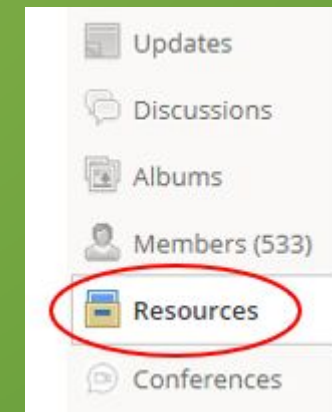
← Choose "GROUPS"

2.



← Choose this one

3. Choose "Resources"



Finding Information About Academic Research on Schoology

4.



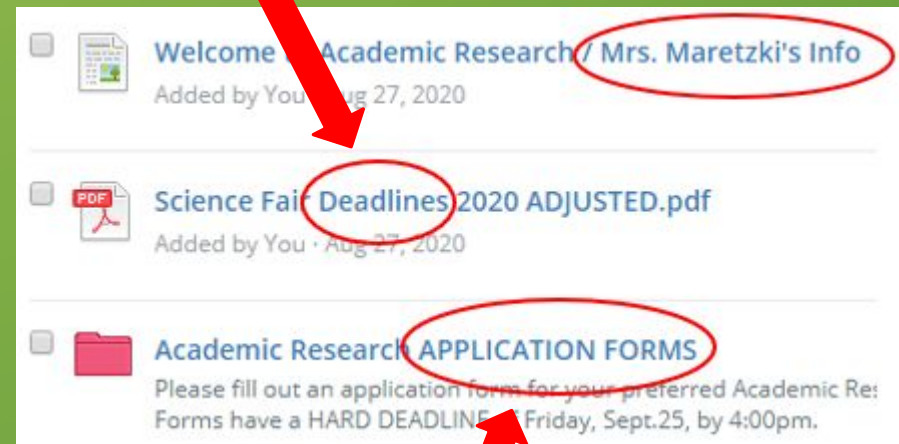
- Virtual Events (Tours, Presentations, Guest Speak
Added by CHRISTOPHER BURNETT · Aug 28, 2020
- Volunteering Opportunities (Outreach)
Added by CHRISTOPHER BURNETT · Aug 28, 2020
- Internships & Mentoring
Added by CHRISTOPHER BURNETT · Aug 28, 2020
- ACADEMIC RESEARCH**
Yearly requirement for all SEA students.
Information, options, and applications can be found here.

Icons: book, scale, checkmark, atom, flask, plant, gear, circuit, hexagon, shield.

List of deadlines
found here

Contact Info

5.



- Welcome to Academic Research / Mrs. Marezki's Info
Added by You · Aug 27, 2020
- Science Fair Deadlines 2020 ADJUSTED.pdf
Added by You · Aug 27, 2020
- Academic Research APPLICATION FORMS
Please fill out an application form for your preferred Academic Res:
Forms have a HARD DEADLINE Friday, Sept.25, by 4:00pm.

* Due Sept. 24th by 4:30pm

2021-22 SEA Information Station

- **Presentations**

- Jay/SEA 2021 Policies & Procedures
- SEA 2021-2022 Class Meetings

- **Academic Research Resources**

- **Advanced Placement/Dual Credit and Enrollment**

- **College Info**

- **Newsletters**

- SEA Weekly Newsletters
- Mustang Nation Monthly Newsletter



We Need Your Feedback!

Please go to...

PollEv.com/crystalmitch111



What are the best ways to get information to you?

What type of information do you want communicated from the SEA Leadership Team?



We Need You!

Parent Involvement Committees

- SEA Student Socials
- Science & Engineering Fair & Research Symposium (Dec.4)
- SEA Recruiting Events
- SEA Class Trips
- STEM Fest (March 5)



bit.ly/SEAPGIC



JOIN THE PTSA!



SUPPORT SCHOLARSHIPS | CONNECT WITH OTHER PARENTS | LEARN ABOUT JOHN JAY / SEA

THE MUSTANG HIGH SCHOOL CHALLENGE
MUSTANGS JOIN TODAY!

MEMBERSHIP FEE \$8



<https://squareup.com/store/john-jay-hs-ptsas/>

Free Shirt Pick Up Starting Monday, Sept 13



Academic Research Q and A

1. Science & Engineering Projects (9-12)
2. NASA VOLARE Program (10-12)
3. Art in STEM (10-12)
4. Destination Imagination (10-12)
5. Robotics Team (10-12)
6. ACE Mentorship Program (11-12)

