

2024 MIDDLEBROOK SCIENCE & ENGINEERING FAIR

CALLING ALL SCIENTISTS AND INVENTORS!

- The Middlebrook Science & Engineering Fair is held every January
- Over 100 students have participated each year
- You can invent something new, test a hypothesis and solve real-world problems
- A chance to win prizes, trophies and compete at the state level in March



Are you ready to take your first step?

PROJECT CATEGORIES

Life Sciences	Physical Sciences	Engineering
Behavioral and Social Sciences	Chemistry	Engineering
Biochemistry	Computer Science	
Botany	Earth and Space	
Environmental Sciences	Mathematics	
Medicine and Health	Physics	
Microbiology		
Zoology		



PROJECT EXAMPLES

Life Sciences

- The Effect of Different Drinks on Teeth
- A Novel Method For Oil Spill Cleanup Using Biomass
- Does Vanilla Ice Cream Taste Better if it Costs More Money?

Physical Sciences

- Home Automation Multi-Purpose Motion Sensor
- Sink or Swim: Calculating Density of Fruits and Vegetables
- Explosions with a Hint of Mint

Engineering

- Launching a Rocket with a Linear Induction Motor
- Lego-sorting vacuum
- School bus location smartphone app
- 3-D printed footwear





SELECTING YOUR PROJECT

Pick something that interests you:

- Do different golf balls go farther?
- Can a sports helmet detect a concussion?
- Does playing different types of music help you study better?
- How do different flours impact the texture of cookies?

Test out claims made in TV advertisements:

- Does Miracle Grow really work?
- Does Paul Newman's microwave popcorn leave less un-popped kernels?

Look on the internet for Science and Engineering Fair ideas.





IMPORTANT GUIDELINES

- Projects may be individual or teams of 2
 - State requirements do not allow teams of 3 or more
 - 7th and 8th graders can work together as partners.
 - 6th graders can <u>only</u> pair with other 6th graders.
- Animal studies are NOT permitted
- After you have completed your project, you will present a poster on the day of the fair.



IMPORTANT DEADLINES

- Work with your teachers to discuss and refine your project idea. Start early!
- You must submit a Registration Form
- The link is located on the PTA website under "programs" or you may click below
 - https://cumc.col.qualtrics.com/jfe/form/SV_bfSaqb0VsEyzAdo
- Your teacher must approve your project before registering.
 - The sections on the registration form including your title, project description and parent's electronic signature due **November 17**th.
- ** Please note **

Even if you are working on a team, each individual student must complete the registration form including parent signature.

STATE COMPETITION: CONNECTICUT SCIENCE & ENGINEERING FAIR

- Top winning entries from the 7th and 8th Grades will be chosen to represent Middlebrook at the CT Science & Engineering Fair (CSEF) at Quinnipiac University in Hamden, mid-March, 2023.
- You must have a completed log book written in ink associated with your Science & Engineering Fair project, so start one at the very beginning of your project!



POSTER PRESENTATION

- You will present your project to judges and attendees at the fair.
- Your presentation should be about 5-7 minutes.
- You may use your poster as a guide.
- Practice before the fair in front of friends and family.
- Be confident and proud of the work you have done!

FAIR POSTERS

Life and Physical Sciences

Abu			
Abstract	Project Title	Conclusion	
Question	Materials		
Hypothesis Background Research	Procedure Results	Future Directions	

FAIR POSTERS

Engineering

Abstract	Project Title	Results
Engineering Goal Design Criteria	Design and Prototype	Conclusion Conclusion Future Improvements

SPECIAL CONSIDERATIONS (7TH/8TH GRADE ONLY)

- Projects with the following classifications will not be allowed without prior approval from CSEF.
 - Human subjects (including surveys and questionnaires)
 - Nonhuman vertebrate animals
 - Human or animal tissue
 - Pathogenic agents / controlled substances / hazardous materials
- This approval has to be received BEFORE you begin your project, no later than December 1st, 2023.
- The Fair Committee will identify these projects and reach out to you with instructions to complete the online documentation.

KEY DATES

All dates are final. No extensions or exceptions will be made. Middlebrook Science & Engineering Fair

- Teacher approval due by **Friday**, **November 10**th, **2023**
- Register online by **Friday**, **November 17**th, **2023**

CT Science & Engineering Fair

• Pre-approval for Human Subjects Deadline: Sunday, December 1st, 2023

(The fair committee will reach out to students if this deadline applies to your project).

Science & Engineering Fair (after school) January 23rd, 2024 (Snow Date: Thursday January 25th, 2024)

• CT Statewide Science & Engineering Fair: mid-March, 2022



HAVE QUESTIONS?

- PTA website: <u>www.middlebrookPTA.org/science-fair</u> under "Programs"
- Email: middlebrooksciencefair@gmail.com
- Following registration, the fair committee will be sending emails to all participants with important reminders and updates.