National Aeronautics and Space Administration

AERONAUTICS DIVISION

2026-2027 Dream with Us Design Challenge











Information Session

October 27, 2026

Contents

- Intro to the Team
- Topic Introduction
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- Registration
- Scoring and Awards
- Q & A
- Wrap-Up





Introducing the Dream with Us Team

Fueling Flight Design Challenge: New Energy Systems

- Integrating new fuel types into our airspace system
- This year's focus: Liquefied Natural Gas (LNG)



Topic Background and Details



- **Aircraft Fuels**
- **As more aircraft take to the skies, more fuels need to be identified and utilized**
- **One fuel option: Liquefied Natural Gas (LNG)**



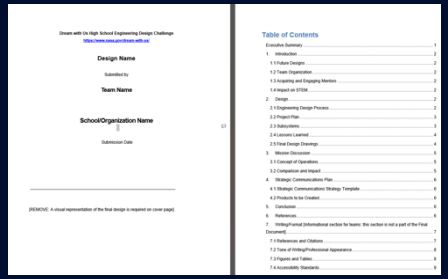
- **High School Challenge: Aircraft**
- New aircraft designs are needed to fly with a new fuel source

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- **Middle School Challenge: Airport**
- Airports are currently designed to accommodate one type of fuel
- Airport modifications are going to need to be made to allow the use of multiple fuels, new aircraft types

High School Requirements


Dream with Us High School Engineering Design Challenge
https://www.nasa.gov/dream-with-us/

Design Name

Submitted by

Team Name

School/Organization Name

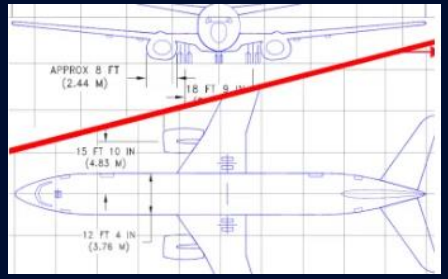
Submission Date

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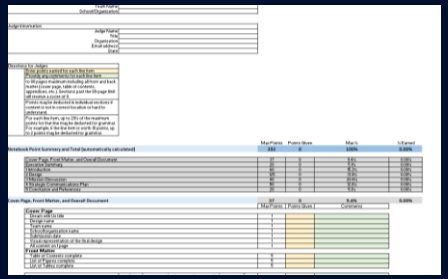
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- **Engineering Design Notebook**
- **As more aircraft take to the skies, more fuels need to be identified and utilized**
- **One fuel option: Liquefied Natural Gas (LNG)**



- **Vehicle Sketch Pad (VSP)**
- https://software.nasa.gov/software/LAR-17491-1
- Optional Credly Badge



- **Scoring Rubric**
- Categories and scores for each section are clearly spelled out
- Categories include: Executive Summary, Introduction, Design, Mission Discussion, Strategic Communications Plan, Conclusion and References

Middle School Requirements

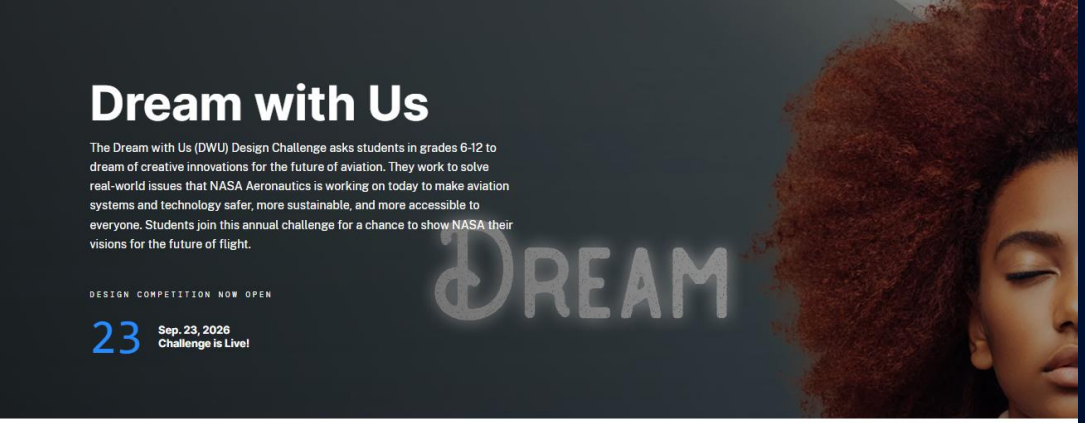


- **Presentation (Technical Category)**
- Includes: labeled layout of airport, explanation of changes, focus on safety, airport benefits, other considerations
- Can be narrated (but not required!)
- DO NOT INCLUDE LAST NAMES OF TEAM MEMBERS IN PRESENTATION!

- **Creative Product**
- Advertises the benefits of a new airport modification
- Audience: Your choice (city of state leadership, stores interested in investing, airlines—up to you!)
- Product: video, brochure, flyer, infographic, commercial, website, other

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- **Requirements**
- Signed permission form, presentation, artwork
- Any videos need to be uploaded onto YouTube and a link needs to be provided via STEM Gateway



2026-2027 DWU: High School Engineering Challenge | 2026-2027 DWU: Middle School Aviation Challenge

High School Engineering Challenge

Fueling Flight Design Challenge: New Energy Systems

The "Fueling Flight Design Challenge: New Energy Systems" challenge is open to middle and high school students, with a different task for middle school teams and high school teams. Teams for both categories will focus on the addition of an emerging aircraft fuel source, liquefied natural gas (LNG) into our aviation environment. This will require teams to learn more about LNG, how it might be used in aviation, the benefits of an additional fuel source, and what kind of changes would need to be made to aircraft and to airports to adapt to these new changes.



High School students will focus on designing aircraft fuselage fueled by liquefied natural gas, incorporate an engineering design notebook and utilizing open vehicle sketch pad.

Key Dates to Remember for the High School Engineering Challenge
Sep. 25, 2026 – Challenge Goes Live
Oct. 27, 2026 – Information Session (Virtual) 7pm ET, 4pm PT
Dec. 08, 2026 – Registration Deadline
Jan. 25, 2027 – Submission Deadline
Mar. 19, 2027 – Finalists Selected and Announced
Apr. 02, 2027 – Finalist Presentations (Virtual)
Apr. 09, 2027 – Winners Announced

We need judges! If you are interested in judging, go to the middle or high school sections to learn more and sign up.

Read More About the High School Engineering Challenge

Oct. 27: Information Session (Virtual) Teams Link

Resources

- Resources can be found in both the high school and middle school challenge sections.
- These are starting points: there are many more resources that can be found online

https://www.nasa.gov/dream-with-us/

Deadlines and Key Dates



Registration

- **December 8, 2026**

Submissions

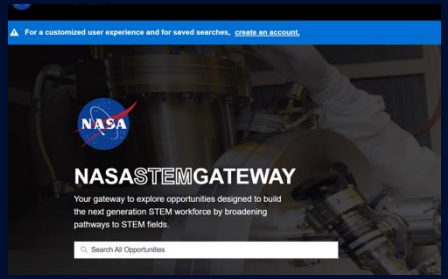
- **January 25, 2027**



Finalist Selection and Presentations

- **Winners announced (middle school): Feb. 26, 2027**
- **Finalists selected and announced (high school): March 19, 2027**
- **Finalist presentations—High School (Virtual), April 2, 2027**
- **Winners announced: April 9, 2027**

Registration Process



- All registrations are made within NASA STEM Gateway
- https://stemgateway.nasa.gov/s/
- **Step 1: Create an account**
- **Note: all participants must attend a US school to qualify**



- **Apply for Opportunity (reminder—register by Dec. 8th, 2027!!)**
- For students under the age of 13, a parent will need to register on your behalf
- Only one project per team needs to be submitted—select a team lead (or parent/guardian)



- **Upload content (deadline to upload materials: Jan. 25th, 2027)**

OPTIONAL TITLE GOES HERE

Q & A

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