

AIRPORT DESIGN CHALLENGE



Airport Design Challenge External Collaborator Toolkit

Welcome to the STEM AVSED Airport Design Challenge Toolkit, a collection of helpful materials and resources you may use to promote the Challenge and encourage students in your area to participate. Have questions or comments? Please contact the National STEM AVSED Airport Design Challenge Team at avsed.challenge@faa.gov.

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Federal Aviation
Administration

ABOUT AIRPORT DESIGN CHALLENGE

The Airport Design Challenge (ADC) is a dynamic educational initiative and collaborative opportunity designed for students in grades K-12. Organized and sponsored by the FAA Science, Technology, Engineering, and Math Aviation and Space Education (STEM AVSED) Program, this challenge aligns with the program's mission to inspire students to pursue careers in aerospace, fostering a continuous pipeline of professionals for a thriving workforce in the future. The overarching vision of the STEM AVSED Program is to empower today's youth to explore and connect with the aerospace careers of tomorrow.



The challenge utilizes the learning management platform Blackboard and is structured as an interactive learning and collaboration opportunity for students in grades K-12. Throughout the Airport Design Challenge, students select a local airport and design it virtually within the Minecraft platform, guided by insights from FAA aerospace and engineering experts. Engaging in this challenge allows students to interact with aviation professionals, collaborate with fellow designers, and acquire valuable knowledge about the aerospace industry. This hands-on experience offers a practical application of STEM concepts in an aviation context, enabling students to apply their academic knowledge and skills to professional simulations. The Airport Design Challenge can be done as a whole class assignment; however, each student must sign up and complete knowledge checks.

While participants are encouraged to form teams of up to five members, individual participation is also welcome. The instructional modules cover a wide range of topics, including airport layout, pavement and lighting, structures, and innovative growth. Progress assessments and feedback are provided through module knowledge checks and the submission of screenshots showcasing students' designs.

The Airport Design Challenge is flexible and can be integrated into various educational settings, such as individual passion projects, homeschool curricula, school-based STEM programs, community organizations, and aviation-focused groups. Students can work on the challenge up until the submission deadline, including over the summer. The program is designed to be accessible to students worldwide, regardless of geographic location or educational background.

As a resource, we have developed Parent & Educator Toolkits, with helpful resources for parents, educators, or advisors to support students in completing the challenge. These toolkits are available under the Quick Links section of the [Airport Design Challenge webpage](#). Please feel free to share these resources with people in your network.

Within the toolkits are information regarding:

Quick Start Guide:

- How to Get Minecraft
- Create an Account
- Program Schedule
- Blackboard Overview

HOW TO SUPPORT AIRPORT DESIGN CHALLENGE

SHARE INFORMATION WITH OTHERS

The Airport Design Challenge (ADC) is an innovative educational initiative fostering aerospace interest among students in grades K-12. The challenge welcomes all participants, including underserved and underrepresented populations. As an external collaborator, your support is crucial in amplifying the program's impact. By sharing information, you contribute to the STEM AVSED Program's mission to inspire students to pursue aerospace careers.

How You Can Help

Spread the Word: Utilize your communication channels to disseminate information about the ADC. Share program details, registration instructions, and key dates to encourage participation.

Connect with Schools and Organizations: Reach out to local schools, homeschooling groups, and community organizations to promote ADC. Emphasize the flexibility of the challenge, making it adaptable to various educational settings.

Social Media Promotion: Leverage your social media platforms to create buzz around the ADC. Use relevant hashtags, share success stories, and engage with the audience to generate interest and participation.

ADVERTISE AIRPORT DESIGN CHALLENGE

Airport environments provide a unique opportunity to reach a wide audience, making them ideal spaces for advertising the Airport Design Challenge. By collaborating with airports, you contribute to creating awareness among students, families, and educators about the exciting world of aerospace and STEM education.

How You Can Help

Collaborate with Local Airport Authorities: Establish relationships with airport authorities to display promotional materials about the ADC in high-traffic areas, such as terminals and waiting areas.

Digital Screens and Announcements: Explore opportunities for digital screen advertising and announcements within airports. Engage passengers, parents, and educators through visually appealing content highlighting the ADC's educational value.

Share Resources: Seek opportunities within airports to display promotional materials, such as posters, brochures, and displays, ensuring widespread visibility.

ENCOURAGE TOURS OF AIRPORTS FOR CHALLENGE PARTICIPANTS

Immersive experiences can significantly enhance students' understanding of aviation and airport design. Encouraging tours of airports provides participants with real-world insights, enriching their Airport Design Challenge journey.

How You Can Help

Facilitate Airport Tours: Collaborate with airport authorities to organize guided tours for challenge participants. These tours offer a behind-the-scenes look at airport operations, fostering a deeper connection with the subject matter.

Expert Q&A Sessions: Arrange Q&A sessions with airport professionals during the tours. Participants can gain firsthand knowledge, ask questions, and further enrich their understanding of the aviation industry.

Promote Learning Opportunities: Emphasize the educational value of airport tours in your promotional efforts. Highlight how these experiences complement the ADC by providing practical insights into airport design and operations.

By actively participating in these areas, external collaborators play a pivotal role in expanding the reach and impact of the Airport Design Challenge, contributing to the STEM AVSED Program's vision of empowering today's youth for aerospace careers.

MATERIALS & SUPPLIES FOR ADVERTISING

Take a look at the Airport Design Challenge Digital Toolkit. In the toolkit, you can find a variety of resources for you to adapt and share, including videos, sample social media posts, email templates, ADC graphics, and official FAA channels to stay up to date with the agency.

The Airport Design Challenge Digital Toolkit is available at www.faa.gov/adc/toolkit

CONNECT WITH US

Don't forget to tag the FAA's social media accounts so we can amplify your posts!

- Twitter: [@FAANews](#)
- Facebook: [@FAA](#)
- LinkedIn: [@FAA](#)
- Instagram: [@faa](#)

Feel free to connect with use via email for any Airport Design Challenge questions at avsed.challenge@faa.gov.

To stay connected with FAA STEM AVSED check out www.faa.gov/education/contact-us