

2024 Foam Airplane Contest Rules



Eastern Virginia
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ASM International is a professional organization dedicated to the dissemination of information about materials and education on the subject of materials. This includes their properties, uses, behavior, how they are manufactured, how new materials are created, surface treatments (to improve hardness, corrosion resistance or to reduce friction) and to a lesser extent how to design using specific materials. This contest is meant to engage students and get them to think about engineering and materials through in-person interaction with engineers and materials scientists in a way that is simple, interesting, and fun for the students.

This contest will be held at the annual Celebrating Engineering Ingenuity (CEI) Day event sponsored by the Richmond Joint Engineering Society (RJEC). It will be held at:

The Dewey Gottwald Center
Science Museum of Virginia
2500 West Broad Street
Richmond, VA 23220

Sunday, February 25, 2024
11:30 AM to 2:30 PM

Enter the parking lot from DMV Dr. or W. Leigh St. E. and use the entrance on the north end of the Dewey Gottwald Center behind the museum.

For the Student:

You will be building a glider (airplane) from simple supplies, a foam plate that you might use at a picnic, some tape, scissors, a marker, and a penny. You will find the instructions, including a 10-minute video, on this Academy of Model Aeronautics web page:

<https://www.amaflightschool.org/quickprojects-fpg9>

The PDF download on that page has instructions and plans for the plane, and the video at the bottom of the page shows a plane being built and flown. Feel free to explore the web site for other projects.

On the Day of the Contest (CEI Day):

1. You may build your plane in advance, either at school with your teacher's supervision, or at home. You may also build your plane from materials provided by ASM on the day of the contest. Be sure to write your name on your plane.
2. This will be an informal event, so you may arrive any time after 11:30 AM, but there will be award drawings at 1:00 PM and at 2:00 PM. Be sure to allow time to build your plane if you do not bring your own.
3. You will have open time to test your plane and make it fly correctly, called trimming. We will be there to help, so ask questions.

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4. Once you have your plane properly trimmed, then tell one of the officials that you would like to perform your official glide attempts. We will count the best of three tries at our flight line, a box 20 feet long and 8 feet wide with lines at 10 feet and 15 feet.
 - a. If your best glide is beyond the 20-foot line and in-bounds (between the side lines), then your prize will be two pieces of candy (your choice from the available selection, with sugar-free options), plus a chance to win a \$20 Amazon gift card in the next drawing. Your plane will be held until the next drawing, but you will be able to keep it afterwards.
 - b. If your best in-bounds glide is between 15 and 20 feet, then you will win two pieces of candy.
 - c. If your best in-bounds glide is between 10 and 15 feet, then you will win one piece of candy.
 - d. You may only participate in one drawing, either at 1:00 PM or 2:00 PM.
5. There will be two age groups, grade school (through 8th grade), and high school (9th grade or above). Drawings will be held for both age groups at 1:00 PM and 2:00 PM.

Let us know if you enjoy our contest, and tell us if you can think of any improvements. Good luck!