

National Engineers' Week Student Competitions

UAA Engineering & Computation Building, Anchorage, AK

Saturday February 18, 2017; 10:00 am - 2:30 pm

Paper Airplane Distance Competition

Objective: To construct a paper airplane out of a single sheet of 8.1/2"x11" paper, a paper clip and 12 inches of tape that flies straight and far. The winning airplane will be the one that flies the furthest and lands closest to the measuring line. (Note: An "airplane" is an object that is designed to make use of aerodynamic lift. "Projectiles" (such as wadded up balls) are not "airplanes" since they rely solely on momentum.)

Registration: Register with the competition registration desk at the west end of the parking garage spine. You will be given a sheet of paper, one paper clip, 12 inches of tape, and a registration number. You may only enter the competition twice.

Construction: Scissors and crayons will be provided at a table in the construction area. You may decorate your airplane with crayons if you so desire. **YOU MUST CLEARLY DISPLAY YOUR REGISTRATION NUMBER SOMEWHERE ON YOUR AIRPLANE.** You may test fly your airplane anywhere except the test range. You will have until 2:15 PM to construct your entry.



Testing: When you have completed your airplane, present yourself to the launch area and follow the directions of the volunteer that is directing the testing. *You will get two opportunities to fly your airplane.* There are obstructions in the test space. These are considered to be "hazards of the course". Hitting one is part of the experience. You will not get a chance to retest your airplane if it hits an obstruction. All measurements will be made to wherever the airplane comes to rest. Note that the floor is carpeted so it is unlikely that the plane will slide on impact.

Scoring: A long measuring tape will be laid out down the center of the course. Two measurements will be taken. The distance measurement will be to that portion of the airplane that is furthest from the launch zone. The offset distance will be shortest distance from the distance measuring tape to the portion of the airplane that is closest to the distance measuring tape. The final score is computed as the distance minus two times the offset.

$$\text{Score} = \text{Distance} - (2 \times \text{Offset})$$

Your competition score will be the largest computed value for your two attempts.

