

## **AEROSPACE**

The name and county of each Science, Engineering and Technology exhibitor should appear separately on the back of each board, poster or article and on the front cover of the notebooks. One exhibit per class unless otherwise noted. Several classes require a display board which should be a height of 24" and not exceed 1/4" in thickness. A height of 23 7/8" is acceptable to allow for the saw kerf (width) if two 24" boards are cut from one end of a 4'x8' sheet of plywood. Nothing should be mounted within 3/4" of the top or bottom of the board. Fabricated board such as plywood, composition board, or particle-type lumber may be used for display boards. Display boards should be sanded and finished to improve their appearance. The finish on a display board will be judged as a woodworking exhibit. Display boards should include an overall title for the display, plus other necessary labeling. All reports should be computer generated, enclosed in a clear, plastic cover, and attached securely to the display. Reports should be written using the scientific method whenever possible (background, the question or hypothesis, what you plan to do and what you did, method used and observations, results, what you learned).

### **Division 850: Aerospace**

Rockets must be supported substantially to protect the rocket from breakage. Rockets are to be mounted on a 3/4" thick base that has dimensions equal to or less than 12"x12". No metal bases. If the rocket fins extend beyond the edges of the required base (12"x12"), then construct a base that is large enough to protect the fins. The base size is dictated by the size of the rocket fins. The rockets must be mounted vertically. Please do not attach sideboards or backdrops to the display. In addition a used engine or length of dowel pin is to be glued and/or screwed into the board and extended up into the rockets engine mount to give added stability. Rockets must be equipped as prepared for launching, with wadding and parachute or other recovery system. Rockets entered with live engines, wrong base size or sideboards will be disqualified. A report, protected in a clear plastic cover, must include: 1) rocket specification, 2) a flight record for each launching (weather, distance, flight height), 3) number of launchings, 4) flight pictures, 5) statistics, 6) objectives learned and 7) conclusions. The flight record should describe engine used, what the rocket did in flight and recovery success. Points will not be deducted for launching, flight or recovery failures described. This includes any damage that may show on the rocket. Complete factory assembled rockets will not be accepted. Judging is based upon display appearance, rocket appearance, workmanship, design or capabilities for flight, number of times launched and report. Three launches are required to earn the 9 launch points given on the score sheets. Counties are allowed a maximum of eight entries for all rocketry. Misfires will not count as one of the required three launches.

For self-designed rockets only, please include digital recorded copy of one flight. In the documentation please include a description of stability testing before the rocket was flown. 4-H Rocket project levels are not intended to correspond to National Association of Rocketry model rocket difficulty ratings or levels.

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