
DEPARTMENT H - AEROSPACE

Premiums: Purple - \$4, Blue - \$3,
Red - \$2, White - \$1

DIVISION 850 AEROSPACE/ROCKETS

Rocketry projects will be interview judged on Wednesday, **August 1**. Contact the Extension Office for a schedule of times for rocketry judging. This is the 4-Hers responsibility.

Rockets must be supported substantially to protect the rocket from breakage. Rockets are to be mounted on a base that has dimensions equal or less than 12" x 12" and the base should be 3/4" thick. No metal bases. If the rocket fins extend beyond the edges of the required base (12" x 12"), 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 displays. 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 (include original or photo of manufacture packaging stating rocket skill level), 2) a flight record for each launching (weather, distance, flight height), 3) number of launchings, 4) flight pictures 5) Safety (how did you choose your launch site? Document safe launch, preparations, and precautions) 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 at the State Fair. 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 maximum launch points given on the score sheets. For scoring for the State Fair, only actual launches count, misfires will not count towards 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.

Skill level of project is not determined by number of years in project. Skill level is determined by the level listed on the manufacturing packaging.

4-H Rocket project levels are not intended to correspond to National Association of Rocketry model rocket difficulty ratings or levels.

High power rockets (HPR) is similar to model rocketry with differences that include the propulsion power and weight increase of the model. They use motors in ranges over "G" power and/or weigh more than laws and regulations allow for unrestricted model rockets. These rockets are NOT appropriate for 4-H projects and will be disqualified.

910. Unlaunched Rocket.

920. Skill Level 1 Rocket.

LIFT OFF – UNIT 2

1. + Rocket: Any Skill Level 2 Rocket with wooden fins painted by hand or air brush.
2. + Display: Display exemplifying one of the principles learned in the Lift Off project. Examples include: display of rocket parts and purpose, interview of someone in the aerospace field, or kite terminology. Include notebook containing terminology (definition), and what was learned. Display can be any size up to 28" by 22".
3. + Rocket: Any Skill Level 2 Rocket with wooden fins painted using commercial application example commercial spray paint.

REACHING NEW HEIGHTS - UNIT 3

4. + Rocket: Any Skill Level 3 Rocket with wooden fins painted by hand or air brush.
5. + Display: Display exemplifying one of the principles learned in the Reaching New Heights Project. Examples include: airplane instrumentation, kite flying, or radio-controlled planes. Include notebook containing terminology (definition), and what was learned. Display can be any size up to 28" by 22".
6. + Rocket: Any Skill Level 3 Rocket with wooden fins painted using commercial application, example; commercial spray paint.

PILOT IN COMMAND - UNIT 4

7. + Rocket: Any Skill Level 4 Rocket with wooden fins or any self- designed rocket. Score sheet SF92.
8. + Display: Display exemplifying one of the principles learned in the Pilot in Command Project. Examples include: flying lessons, or careers in aerospace. Display can be any size up to 28" by 22".