

AEROSPACE: ROCKETRY

LEVEL/GRADE:

Level A (BU 6843 Lift Off) – Grades 3, 4, 5

Level B (BU 6844 Reaching New Heights) – Grades 6, 7, 8

Level C (BU 6845 Pilot in Command) – Grades 9, 10, 11, 12

RULES:

1. All NAR safety rules apply. Copies will be provided at the Extension Office.
2. Must tell the Extension Office a week prior to fair if you plan on participating at the launch during the fair.
3. All 4-Hers in the same level will use the same type of rocket model for launches and 4-H judging displays. Posters by free design and 4-H guidelines. Note: launch and display rocket need not be of the same design but all in the state group will be the same design.
4. In all Level A and B 4-H judging display will have balsa, wood, plywood, or composite fins (not plastic).
5. Level C may use high performance model designs that use plastic and composite fins if through body mounting is required because of in-flight stress. This is for E size motors and above.
6. Rockets may be exhibited with a base, but launch pads are not permitted. All rockets must weigh less than 3.3 pounds and considered an amateur rocket according to FAA regulations.
7. Remote control aircraft or drones may be constructed from a kit or purchased ready-to-fly.
8. Posters must be displayed horizontally, sized 22" X 28" mounted on a firm backing (foam core board or other), and covered in clear plastic or other transparent material.
9. All posters, notebooks, and display boards must include a reference list indicating where information was obtained, giving credit to the original author, to complete the 4-H member's exhibit. This reference list should/might include web site links, people and professionals interviewed, books, magazines, etc. It is recommended this reference list be attached to the back of a poster or display board, be the last page of a notebook, or included as part of the display visible to the public. A judge is not to discredit an exhibit for the manner in which references are listed.

EXHIBIT:

Level A – One rocket of your choice, Estes Skills Kit Level 1, 2, or comparable difficulty. Must be suitable for launching (No live fuel) OR a poster, display board on any topic in the manual (i.e. construct a paper airplane with a poster board explaining why you designed it the way you did). Cluster engine rockets and rockets that take an engine D or above are not permitted in this level.

Remote control aircraft or drone of your choice that is age/grade appropriate and compliant with FAA regulations, federal and state laws, and local ordinances. This exhibit choice is to include a notebook or poster including how the aircraft/drone was used and aerospace skills learned. Displaying the aircraft or drone is optional.

Level B – One rocket or other aerodynamic object of your choice, Estes Skills Kit Level 2, 3, or comparable difficulty. Must be suitable for launching (No live fuel) OR a poster, display board on any topic in the manual (i.e., glider plane (page 18) with poster explaining design). Cluster engine rockets and rockets that take an engine E or above are not permitted in this level.

Remote control aircraft or drone of your choice that is age/grade appropriate and compliant with FAA regulations, federal and state laws, and local ordinances. This exhibit choice is to include a notebook or poster including how the aircraft/drone was used and aerospace skills learned. Displaying the aircraft or drone is optional.

Level C – One rocket of your choice, Estes Skill Kit Level 3 or above, a box kite or other aerodynamic object of your choice which illustrates principles of flight. OR a poster, display board on any topic in the manual (i.e., box kite (page 20) with poster explanation). Rockets that take an engine G or above are not permitted.

Remote control aircraft or drone of your choice that is age/grade appropriate and compliant with FAA regulations, federal and state laws, and local ordinances. This exhibit choice is to include a notebook or poster including how the aircraft/drone was used and aerospace skills learned. Displaying the aircraft or drone is optional.

STATE FAIR ENTRY:

One rocket, remote control aircraft, or drone and one poster/display board in each level (A, B or C), for a maximum of six exhibits: 3 rockets, remote control aircraft or drone and 3 poster/display boards. No “Ready to Fly” or E2X rockets are acceptable in the 4-H Aerospace project.