

## AEROSPACE-County & State Fair Project

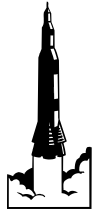
Each county would be permitted to send one rocket, remote control aircraft, or drone and one poster/display board in each grade category (3-5, 6-8, and 9-12). Thus each county could send a maximum of six exhibits to the state fair, 3 rockets, remote control aircrafts, or drones and 3 poster/display boards. No "Ready to Fly" or E2X rockets are acceptable in the 4-H Aerospace project.

Remote control aircraft or drones may be constructed from a kit or purchased ready-to-fly.

A completed record sheet signed by your 4-H leader **must** be presented, along with your exhibit, at project check-in at the fair.

This project is divided into three levels according to the following breakdown:

<b>Level 1</b>	Grades 3, 4, & 5
<b>Level 2</b>	Grades 6, 7, & 8
<b>Level 3</b>	Grades 9 and above



### General Rules

1. No "Ready to Fly" or E2X rockets are acceptable in the 4-H Aerospace project.
2. Flight data sheets of previous flights and picture and instructions from package must be included with rocket exhibit.
3. All rockets will be judged on both construction and flight performance.
4. All rockets **must be test fired** prior to the judging, using an engine of the same power as will be used at the judging.
5. Flight performance judging criteria include: launch, flight, recovery device, and condition after recovery.
6. If windy conditions prevail, a chance of losing a rocket is possible.
7. All judging is open to the public.
8. If a poster option is selected, refer to *How to Prepare a Poster Project* for details.
9. All posters, notebooks, and display boards must include a reference list indicated 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 the 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. 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.
10. Remote control aircraft or drones may be constructed from a kit or purchased ready-to-fly.

### Exhibit Requirements

**Level 1:** Exhibit one of the following:

1. Rocket of your choice, Estes Skill Levels 1, 2, or comparable difficulty or a poster, display board on any topic in the manual
2. 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.
3. 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.

**Level 2:** Exhibit one of the following:

1. Rocket or other aerodynamic object of your choice, Estes Skill Level 2, 3, 4, or comparable difficulty.
2. 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

3. 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.

**Level 3:** Exhibit one of the following:

1. Rocket of your choice, Estes Skills Level 3 or above, a Box kite or other aerodynamic object of your choice which illustrates principles of flight.
2. 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
3. Poster or 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.

**Manuals:**

Level 1: Stage 2 "Lift Off" BU-6843

Level 3: Stage 4 "Pilot in command" BU-

6845

Level 4: Flight Data Sheet BU-6846

Record Sheet:

C4-H684

(Rev 11/18)

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