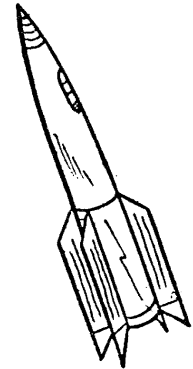


# AEROSPACE

**STATE FAIR ENTRY:** One rocket and one poster per division.

**EXHIBIT BY:** All \* items must come to project judging.

Division	Project Book	Record Sheet
Beginner (grades 3-5)	BU-06843*	BU-06843*
Intermediate (grades 6 -8)	BU-06844*	BU-06844*
Advanced (grades 9 - 12)	BU-06845*	BU-06845*
Complete 3 activities each year.		



**JUDGING TIME:** Thursday, **July 15** at 9:00 a.m. Check in your project on Thursday, **July 15** between 7:30 and 8:45 a.m.

**PROJECT DESCRIPTION:**

The purpose of this project is to teach the basic concepts of model rockets, flight and thrust.

**EXHIBIT:**

Read the manual and complete at least 3 activities. **Proof of skill level** (i.e.: box or package with verification of skill level) is required at project registration. 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. 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.

**Beginners (grades 3 - 5):** Exhibit one of the following:

- 1) A rocket of your choice from Estes Skills Level 1, 2 or comparable difficulty. Cluster engine rockets and rockets that take an engine D or above are not permitted in this level. OR remote control aircraft or drone (as described under Exhibit). Or
- 2) Poster on any topic in the manual.

**Intermediate (grades 6 - 8):** Exhibit one of the following:

- 1) A rocket or other aerodynamic object of your choice from Estes Skills Level 2, 3, or comparable difficulty; Cluster engine rockets and rockets that take an engine E or above are not permitted in this level. OR remote control aircraft or drone (as described under Exhibit). Or
- 2) Poster on any topic in the manual.

**Advanced (grades 9 - 12):** Exhibit one of the following:

- 1) A rocket of your choice, Estes Skills Level 3 or above, Box kite or other aerodynamic object of your choice which illustrates principles of flight. Rockets that take an engine G or above are not permitted. OR remote control aircraft or drone (as described under Exhibit). Or
- 2) Poster on any topic in the manual.

Rockets may be exhibited with a base, but launch pads are only used at county fair. All rockets must weigh less than 3.3 pounds and considered an amateur rocket according to FAA regulations.

**Poster Requirements:**

1. Poster exhibits should have the standardized exhibit card in the lower right hand corner with the 4-H member's name, project and club. You should allow room on your poster for the exhibit card (Height - 3½" x Width – 4¼"). The exhibit card will be available at check-in time at the fair. **NOTE: Add your name, club and the date poster was completed in the bottom right corner in permanent ink under the plastic, where the exhibitor card will cover.**
2. Posters must be 22" x 28" and DISPLAYED HORIZONTALLY ■ and not vertically ▮.
3. POSTER MUST BE SELF-SUPPORTING (remain standing when leaned at a slight angle). Use heavy cardboard, foam board, or pegboard for stiffness. For sources of heavy cardboard, contact the Extension Office.
4. All posters must be covered with clear plastic.

5. 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.

**Rocket Requirements:**

One model rocket ONLY in good flying condition. DO NOT INCLUDE ENGINE AND/OR IGNITOR; launch pad is optional. Each exhibit will be judged on the basis of the following criteria: 1. Aerodynamics; 2. Construction; 3. Recovery System; 4. Finish; 5. Thrust System. Rocket should have an engine clip if supplied in kit. Plastic fins are acceptable if supplied with the kit. The exhibit will be a non-moving display. Member is to complete and exhibit a different type of rocket each year.