

AEROSPACE

(State Fair Exhibit)

State Fair Entries: 3 rockets, drones (UAV), remote control aircraft, posters, notebooks, or display boards per county; one per level.

General Exhibit Guidelines & References: See page 47 for more information

Manual Information: See page 11 for more information.

Overall Exhibit Guidelines:

“Ready to Fly” and E2X rockets are not permitted. 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. Remote control aircraft or drones may be constructed from a kit or purchased ready-to-fly. The power source (rocket engine, battery pack, etc.) is to be removed before being placed in public exhibition.

Rockets will not be launched and remote control aircraft or drones will not be flown at state fair. Launching rockets and flying aircraft or drones at the county level is optional based on adult supervision experience.

BEGINNER (Grades 3-5 suggested):

Construct a rocket of your choice designed for a new model rocket enthusiast with a difficulty level that is appropriate for the suggested grade level, or a poster or display board on any topic in the manual. Similar topics not included in the manual are permissible. Rockets cannot be ready-to-fly (RTF) or have plastic fins. Cluster engine rockets and rockets that take an engine D or above are not permitted in this level.

Learn to fly a 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. Other topics could include how a quadcopter operates, controls used to fly a quadcopter, UAV regulations administered by Federal Aviation Administration, commercial and emergency uses of UAVs, and more.

INTERMEDIATE (Grades 6-8 suggested):

Construct a rocket of your choice designed for a model rocket enthusiast with some experience and with a difficulty level that is appropriate for the suggested grade level, or a poster or display board on any topic in the manual. Similar topics not included in the manual are permissible. Rockets cannot be ready-to-fly (RTF) or have plastic fins. Cluster engine rockets and rockets that take an engine E or above are not permitted in this level.

Construct or learn to fly a 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. Other topics could include interviewing a certified UAV pilot who works in law enforcement, EMS, fire, Purdue Extension, commercial or other application. Other options could include creating a flight plan or interfacing with other computer software.

ADVANCED (Grade 9-12 suggested):

Construct a rocket of your choice designed for an experienced model rocket enthusiast and with a difficulty level that is appropriate for the suggested grade level, or a poster or display board on any topic in the manual. Similar topics not included in the manual are permissible. Rockets cannot be ready-to-fly (RTF) or have plastic fins. Cluster engine rockets and rockets that take an engine G or above are not permitted in this level.

Construct or learn to fly a 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. Other topics could include using “stitching” software to produce an orthomosaic map for a research purpose, identifying Department of Transportation Aeronautical Chart features and explain how these are important to a drone pilot, how to obtain a drone pilot license, or more. If 16 years of age or older the member could obtain a license by completing and passing the official FAA Part 107 UAV licensing test.