

# Flying – Simple Rubber Powered Models

## Overview

Participants build, fly, and adjust (trim) a rubber-band powered model aircraft to make long endurance flights outdoors. Models must be of fixed-wing design and comply with all event specifications.

## Eligibility

All students attending Virginia TSA's Leadership Academy are eligible to participate.

## Time Limits

Thirty (30) minutes is allowed for trim flights.

## Procedure

Students will report to the flying location at the time designated in the event schedule. They will check in:

1. The completed aircraft
2. rubber motors

Participants will attend a pilots' meeting to review the official flight procedures.

Students will make trim flights for no less than 30 minutes.

Official flights will be conducted using a mass launch – all models will be wound and hand-launched simultaneously on command by the event coordinator. Models will not take off from the ground (no ROG).

The number of rounds will be determined by the number of entries. The first plane(s) down will be eliminated and the remaining planes will wind and fly again until only three (3) remain. The final three will make a final official flight and 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place will be determined by the reverse order of landing – the last plane down wins!

## Model Specifications

1. Any kit, plan, or self-designed aircraft may be entered. Models do not require landing gear.
2. Models may be constructed of any material, except boron fibers, typically found in model construction.
3. Models may use any fixed-pitch propeller up to 7 inches in diameter.
  - a. Propeller may be trimmed, shaped, lightened, balanced, or re-pitched.
  - b. variable pitch mechanisms are not allowed, but blades may flex or flare under load.
  - c. folding-blade props are not allowed.
4. Rotary wing and lighter-than-air aircraft are not allowed.
5. Maximum wingspan is 18 inches; maximum wing chord is 4 inches.
6. Maximum stabilizer span is 9 inches; maximum stabilizer chord is 4 inches
7. Minimum weight of the aircraft without the rubber motor is 14.0 grams. Weights, clay, or poster tack may be used for ballast.
8. Maximum weight of rubber with O-rings is 4 grams. No length or width measurements will be made.
9. A winding stoope may be used or a helper may hold the model while it is being wound.
10. Mechanical or battery-powered winders may be used, but no A/C-powered winders will be allowed – there will be no on-site electricity.