

Trial/Pilot Event

Contact the organizers of your tournament to find out what trial/pilot events will be held.

“Glide Wright”

A Catapult Glider-Pilot Event

Description

Prior to the tournament, participants will construct and test up to three catapult-launch gliders (no on-board power system). The flight times for each team will be measured and recorded. The event should occur inside and the room dimensions (approximate length, width and ceiling height) should be made available to teams in advance of the competition. Supervisors are urged to minimize the effects of environmental factors such as air currents (e.g., doors, fans, etc.).

Number of Participants: 1 or 2

Time: 8 minutes

1) CONSTRUCTION:

- a) Gliders may be constructed from published plans, a commercial kit and/or students' designs as long as the following specifications are satisfied:
- b) Accepted materials for glider construction are: balsa and/or plastic foam sheet for flying surfaces (wings, fin and stabilizer), wood for fuselages and catapult hook, clay for nose ballast, adhesive, sandpaper to cover finger grips and carbon fiber for reinforcement (i.e. wing joints or to strengthen wood/foam structures). No metal is allowed.
- c) Total mass of the glider – 2.0 grams minimum with an 8.0 gram maximum.
- d) Maximum wingspan is 300.0 mm. Maximum wing chord is 75.0 mm (measured in parallel with fuselage).
- e) Wings may not fold in-line with the fuselage or utilize a hinge assembly. They may flex from flight loads only.
- f) Catapult: Handle must be made of dense wood and not exceed 150 mm in length. Any size rubber strip (loop) may be used but must remain affixed to the handle at all times during flights.

2) THE COMPETITION:

- a) At the event Supervisor's discretion, trim flights may be made during a period at the beginning of the event and/or throughout the contest but will yield to official flights. No trim flights will be made in the last half-hour of the event. Multiple airplanes may be trimmed at the same time. Inspection station(s) will be made available for students to check the gliders and catapults.
- b) Aircraft and catapults will be inspected for dimensions, mass and safe construction immediately before a team begins official flights.
- c) Only one student team member may launch any given flight using only hands for holding catapult and glider. Particle (direct vent) or chemical/splash (indirect vent) protective goggles must be worn in the flight area.
- d) All launches must utilize the stretched rubber for launch energy.
- e) Official flights will consist of 5 attempts to launch. All flights will be measured to 100ths of a second and the top 2 flights will be combined for the score.

Trial/Pilot Event

Contact the organizers of your tournament to find out what trial/pilot events will be held.

- f) If any part falls off the glider, time of flight will be (0) zero seconds.
- g) Time begins when glider is released and stops when any part of the glider touches the floor or when glider comes to rest in/on an obstruction.
- h) All flights will take place within the 8 minute window. Repairs and (2) two declared (in advance) test flights are allowed during this time period.
- i) At the Supervisor's discretion, up to (3) three teams may make official flights during the same period.
- j) Only competitors and judges are permitted in the event area identified by the judges. Once teams enter the area to compete, they may not leave the area or receive outside assistance, materials or communication, except as specified in the event rules, until they are finished competing. The event Supervisor will designate a separate area for parents, coaches and other spectators to watch this event. Any team violating this paragraph will be disqualified.
- k) Resource links may be found at www.soinc.org

Scoring: The winner is the team with the longest total of two flights. Ties will be broken by the third longest flight.