

GLIDER / PAPER AIRPLANE DERBY

A glider or plane derby can be a very enjoyable pack event when the rules are kept simple and uncomplicated. In a glider or plane derby, the object is to keep the craft in the air as long as possible. The most important official is the timer, who must be equipped with a stopwatch. If the pack is large, you may wish to have two or three timers so that several planes can be in the air at the same time.

A simple derby involves only one type of glider or plane. Kits for balsa gliders and rubber-band-powered planes are available at any hobby or variety store. They are put together with the boy, with help from an adult, and flown without modification of parts, other than the shifting or bending of wings. The derby committee may wish to purchase all kits at the same time to save trouble and expense and distribute them to the boys before the derby.

Recommended Rules & Guidelines:

Here are some recommended rules and guidelines for running the glider or plane derby; adjust them to suit your event. Agree on the rules beforehand.

- Each glider should be identified by number or a name.
- Timing begins the instant the model is released for flight. Time ends when the model touches the ground, hits an obstruction, or passes from the sight of the timer. The timer may move in any direction (not more than 200 feet) from the take-off point to keep the model in sight, so long as he remains on the ground.
- All boys must launch their own models. The model shall not be launched from a height greater than the flier's normal reach from the ground.
- Specify the number of rubber bands permitted for each plane.
- Specify if lubrication of rubber bands is permitted.
- It is suggested, if time permits, that the flier's score be the total elapsed time of three best flights out of five, or the best two out of three.

Glider Flying Tips:

- A glider should be thrown as if it were a baseball, except the hand should be well over the head on release. The glider's fuselage is held firmly with thumb and forefinger. The glider should be held so that the wings are banked 45 degrees or more. This will put it into a right turn (if launched by a right-hander). The nose should be pointed up at a 45 to 60-degree angle. Rudder should be set for a left turn.
- After launching, the glider should start a right-climbing turn. The turn decreases as it climbs, until finally at the top it levels off. Then left-turn adjustments take over, and the model should glide down in a smooth left circle.
- Increasing the arch in the wings can increase lifting power. Hold the wing close to the mouth and exhale heavily upon the wood, bending it gently at the same time. This adds moisture to the balsa wood and keeps the arch in the wings.

- If the glider dives, slide the wing toward the nose.
- If the glider dips, slide the wing toward the tail.
- The rudder can be bent in the same way as the wings by moistening the wood with your breath.

Ring Glider

Materials: Paper, tape, straws, scissors, cardboard boxes (optional)

Directions:

1. Cut two strips of paper about an inch wide. One strip 7' long, the other 10" long.
2. Tape each strip into loops.
3. Tape the loops onto the straw, one in the front and the other in the back.
4. Hold the straw with the small loop in front and launch the glider.

The boys can have glider races, or try to hit designated targets. Create a tunnel out of large cardboard boxes, and try to fly the gliders through the openings. Other contests can be based on flight time, speed, height or aerobatics.