

CHOPPER CHALLENGE

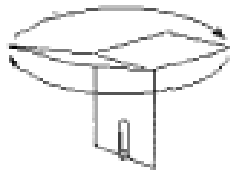
Description: Contestants will build and test 3 choppers (rotary flying devices) using only the materials provided at the competition.

Number Of Participants: 2

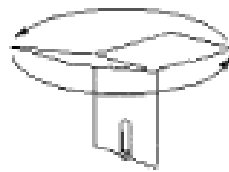
Approximate Time: 45 Minutes

Construction:

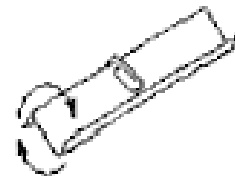
1. Each team may bring pencils, a ruler, straight edge and scissors. No other equipment/supplies are allowed.
2. Each team will be given one sheet of 8½ x 11 inch **construction paper** and 3 **large** paper clips to construct 3 choppers that use rotation to slow their descent.
3. Each chopper must be made using a single piece cut from **one** sheet of **construction paper** provided and one **large** paper clip. The pieces for the 3 choppers need not be the same size and shape.
4. Each chopper must rotate in a different direction, as shown below, and they must be labeled with the direction they are intended to rotate. The drawings only illustrate the direction of rotation. The choppers may be any design. **Rotation must occur with each doing the following: Clockwise Rotation Counter-Clockwise Rotation Vertical Rotation**
5. Contestants may test their devices in the building area but will not be allowed to test them from the official drop location.



Clockwise Rotation



Counter-Clockwise Rotation



Vertical Rotation

The Competition:

1. When it is their turn, contestants will release their choppers, one at a time, from the height specified by the judges. All teams will release their choppers from the same height.
2. The judges will measure and record the time required for each chopper to reach the ground/floor. Time will continue if the chopper bounces off an object, but will stop if the chopper gets stuck and stops.
3. A chopper's flight time will be divided by 2 if it does not rotate in the direction labeled.

Scoring: The team's score will be the sum of the flight times for all three choppers. Longest total time wins. Ties will be broken by comparing each team's single longest flight times.