

Parachute Challenge

Credit to the EAA Air Academy

Concepts Illustrated:

- (1) Air Drag
- (2) Weight

(3) terminal velocity

(4) Force of Impact

Time Requirements: 60 Minutes

Grade Level of Audience: This activity is primarily suited for kids in grades 5-9.

Challenge: *To design and construct a model parachute that will successfully descend with a raw egg without breaking the shell.*

Background:

A parachute is a device used to retard the fall of a body or object through the air.

I. Materials and Equipment Utilized

- 1. Dry cleaner bags
- 2. Kite string
- 3. Straws
- 4. Nuts and bolts
- 5. Paper clips
- 6. Rubber bands
- 7. Masking tape
- 8. Paper
- 9. cups



II. Construction Details

1. A design and have your instructor approve it.
2. Wait until all designs are approved before beginning construction.
3. Use only the supplies provided.
4. Construction and testing is only allowed during the time specified by the instructor.
5. Parachutes may be tested as many times as needed within the allotted time.



III. Details of Student Implementation

1. Each group has five minutes to prepare their parachute for launching.
2. Only one member of the group may be responsible for the launch
3. Why did your parachute perform the way it did?
4. How could your group improve its design?
5. Would a larger or smaller parachute better?

* If you use real raw eggs, make sure the egg is encapsulated inside of a zip lock bag so there is no handling of contents.

