



EM-notes

presented
on 1/10/12

Hot Air Balloons An Impound Event

Description: This event requires a team of three students to build and to fly a paper hot air balloon. The balloon must be pre-build and brought to the competition. Protective gloves for launching will be provided, but teams may bring their own if they wish. The balloon must be impounded between 8:00 and 8:45 am at the event site on competition day. Impounding must be done a member of the team.

Number of Participants:

3 must be 3

Approximate Time: 6 minutes

The Competition:

1. Each team is required to build a balloon using tissue paper and glue. This year teams are also required to use wire in the air intake part of the balloon to keep the opening from collapsing. The use of aluminum foil to line the air intake is optional but not recommended. No other types of materials (including Mylar) are allowed.
2. Three team members are required to participate in the launch.
3. Each team member is required to wear protective gloves. — should bring your own.
4. Each team will be given up to five three minutes to inflate their balloon and get it airborne.
5. No additional launch-assist devices may be used such as poles, hooks, chairs, parents, etc.
6. No device may be used to close the mouth of the balloon (e.g. aluminum foil) before or during launch. Such an attempt will disqualify the balloon.
7. Each balloon will be heated by the team from a source provided by the event manager. The heating device is designed for safety, but caution is required. No horseplay will be tolerated in the launch area.
8. The heating device has a 6 inch wide metal tube to deliver hot air to the balloon from a propane tank. The opening of the balloon (mouth) needs to be at least 6 inches wide.
9. The competition will be evaluated by the time of flight.
10. If the balloon is deemed a safety hazard either to spectators once launched or the students filling it, the balloon will not be launched and will be ranked below all other balloons. The decision of the event manager is final.
11. It is ~~recommended~~ required that the balloons be brought to the event location in a bag or box labeled with the school name and team color.

Scoring:

Balloons will be ranked by the longest time in flight. Each balloon will be timed by a stopwatch to the nearest hundredth of a second and the time recorded. Three (3) timers will be used with the middle time being recorded. The longest light time wins. No tiebreaker.

Additional Notes:

1. Students are requested to tell the event managers if they wish to release before the end of their 3-minute fill time.
2. Should a balloon get caught in ceiling or wall equipment, 20 seconds will be given before the balloon flight is deemed over.
3. Because of fumes from the propane tanks, the outside doors to the gym will be open but sealed with caution tape to prevent foot traffic.
4. No repair kits will be impounded or allowed and no time will be given for repairs.

can use foil, but not needed
bigger mouth → easier for younger kids