SKY HIGH

INTRODUCTION

Water rockets have long been a source of entertainment and education. They are usually made by filling an empty two-litre plastic soda bottle with water and pressuring it with air for launch.

PRIZE MONEY

1st Prize: Rs. 7500
2nd Prize: Rs. 5000
3rd Prize: Rs. 2500

PROBLEM STATEMENT

Teams have to fabricate a water rocket that uses the thrust of pressurized water to launch and travel the maximum distance.

ROUND 1

- This is an online video submission round.
- Teams must prepare a video demonstrating their water rocket and explaining their design.
- The video must be in mp4 format.
- There should not be more than 3 cuts in the submitted video.
- Duration should not exceed 3 minutes.
- The video file's name should be the team's name (eg. XYZ.mp4).
- The same rocket model has to be used in Round 2 if shortlisted.
- No special effects in the video allowed during the rocket explanation.

ROUND 2

- This round will be held offline in the college.
- Each team will get two chances to launch the rocket.
- The rocket should be launched at 45 degrees from ground level.
- The event coordinators will provide the launchpad.
- The launch angle will be kept same for all the rockets launched at the event.
- Coordinators will measure the flight time and horizontal range each time. The best flight out of the two will be considered.

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ROCKET SPECIFICATION

- Materials allowed are given below.
    - a) Body: PET/ Plastic
    - b) Fins: Cardboard
    - c) Nose: Any material
- Only cardboard can be used as the building material for the fins.
- Usage of any ready-made kits is not allowed. The rocket must be made of plastic and have a maximum capacity of 2 liters.
- The rocket must only have water propulsion; no other propellant can be used.
- Metal, glass, hard plastic, rocks, Styrofoam, or nails cannot be used to construct the rocket. Using these restricted materials will automatically disqualify the team from the competition.
- The rocket must be clear of any coverings to approximately 10 cm from the throat of the rocket.
- The maximum allowed total height of the rocket is 60.0 cm.
- The width/diameter, including the rocket's fins, must be at most 30 cm.
- The mouth of the pressurized bottle must have a dia. of 15 mm.
- The release mechanism could be made of any material.
- The rocket should be built as per the given specifications.

LAUNCH SPECIFICATION

- The launchpad will have a ramp inclined 45 degrees from the ground level.

FIELD SPECIFICATION

- The field area of the water rocket event would be 100 meters X 100 meters (approx.).
- A fixed spot for the launching pad will be marked on the event field.
- White lines mark the penalty area.
- Rocket is considered to have made a penalty if it falls outside the defined area. The penalty lines would be on the left and right side of the field area.

JUDGING CRITERIA
ROUND 1
- The teams would be evaluated on the following criteria:
  - ➔ The aesthetics of their water rocket
  - ➔ The originality of their work.

ROUND 2
- The rocket with the maximum airtime and distance traveled will be nominated as the winner.
- Horizontal distance covered will have more weightage than flight time as deciding factor. If two teams have covered equal horizontal distance, the team with more airtime will be the winner.
- The team will be penalized if the water rocket lands outside the defined area.

EVENT RULES
- Only the team leader will be allowed to handle the rocket launcher during the competition.
- The event coordinators will provide the launchpad.
- To ensure the safety of bystanders, the rockets will be inspected first by the event coordinators.
- Each team will get two chances to launch the rocket and achieve the maximum air time and range.
- Coordinators will record the air time of the rocket for each attempt; the maximum air time will be considered from all the attempts and will be declared as the official air time of the rocket. Simultaneously distance will be calculated for each attempt, and the longest range will be considered.
- The decision of judges would be final in any case of conflict.

TEAM SPECIFICATIONS
- The team should have 2 to 4 members.
- Team members can be from different colleges/schools as well (K12/UG/PG).
- Any number of teams can participate from one college/school.
- Professionals are not allowed. Only students can participate.
- Participants are required to bring their school/college ID cards.
- Once registered, the same team cannot register with another name or for another rocket other than the previously registered one.
- Team name should not be offensive, conflicting, or inappropriate.
- Organizers have the right to reject entries for any inappropriate team name.

- Organizers must be notified if a team's name has been changed.
- Each team must specify their Team Leader at registration on the website. All critical communications between the organizer and the registered team will be done through their Team Leader. The Team Leader must submit valid contact details (mobile number, email id, etc.) at the time of registration.
- If teams don't show up in the allotted slot, they will be disqualified.

GENERAL RULES

- Any misbehavior will lead you to disqualification from the competition.
- Decision taken by Judges will be final and binding for all.
- All decisions taken by the organizing team will be deemed final, and no more changes will be encouraged.
- Plagiarism in any form is strictly prohibited and can even result in the disqualification of contestants involved.
- The idea presented by the teams should be original (not protected by patent/copyright/technical publication by anyone else).
- If less than 5 teams will be registered, then only first prize will be awarded. And incase less than 10 but more than 5 teams register, prizes will be awarded to the teams achieving 1st and 2nd position only.
- Any of the above-mentioned rules, if found violated, teams would not be allowed to participate in the competition.

REGISTRATION DETAILS
Fees : Rs. 80
Registration window will open soon!