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## **H2GO WATER ROCKET COMPETITION**

### **Problem Statement**

Design a single stage water rocket using a plastic container preferably a soft drink bottle that uses a combination of pressurized air and water for propulsion to complete a defined task. A launcher should also be constructed that could launch the water rocket safely.

### **Design Specification**

1. Only water should be used as a propellant. No other gas than air is allowed to be pressurized and provide thrust to the rocket.
2. Only pressurized air and water assembly should be used for launching. No other potential, kinetic, or any other form of energy will be permitted for the launch.
3. The launcher must remain stationary on the ground while and after the launching of the rocket.
4. No component or a body part of the rocket should get detached from the main frame during the flight of the rocket. If detached then the rocket will be disqualified.
5. The participants can bring a air compression device or a pump with them with a pressure gauge attached to it.

### **Competition Rules**

The competition will be carried out in two rounds:

#### **Round 1: Eliminations**

- The task is to cover the maximum horizontal distance.

- The place where the tip fall will be considered for scoring.
- Two trials will be given to the participants and the better of the two horizontal distances (in meters) will be considered as Round 1 score.
- Participants are allowed to use different rockets for this round.
- The teams who successfully crosses a specified distance will be eligible for the finals. Distance will be updated ON SPOT.

## **Round 2: Finals**

- The task is to make the rocket land on the defined zones to earn the maximum points.
- The specified zones will be decided on spot
- Two trials will be given to the participants and the better of the two will be considered as Round 2 score.
- The participants are allowed to use different rockets for both the trials.
- The team, with highest score according to the scoring formula as mentioned under "Scoring " will be declared as the winner.

## **Scoring**

**Total = Round 1 Score + Round 2 Score**

**Team Size:** A maximum of 3 members in a team is allowed.

## **Disqualification**

Any of the clause if satisfied may lead to disqualification of a team:

- If any rocket is found to be dangerous to launch by the organizers and judges

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- The rocket don't have a triggering mechanism to safely launch the rocket from a distance of 2m from launcher.
  - If a rocket blasts before the launch.
  - If a rocket launches before indicated by the organizers.
  - If any design rule not abided by the participant may lead to disqualification.
  - The organizers reserve all rights to change any of the above rules as they deem fit. Change in rules, if any will be highlighted on the website.
  - In case of any discrepancy decision of the judges shall be treated as final and binding on all.

**In case of any queries, please contact the event coordinators:**

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