BOTTLE ROCKET

(TRUST IN THRUST)

INTRODUCTION:

Bottle rocket is a dynamic event in which the pressurized air-water mixture carried by the bottle will take it to sky. Pressurized air-water mixture, in which air provides the compression space and water provides the required thrust, makes pressurized air-water mixture one of the best green fluids. So, let's check out the difference in dimension of creativity, robustness and accuracy to reach the maximum distance.

TASK:

To design a rocket carrying a bottle, partially filled with water will act as a fuel tank. Air-water need to be pressurized in manner to provide thrust for the rocket to move maximum horizontal distance.

PROBLEM STATEMENT:

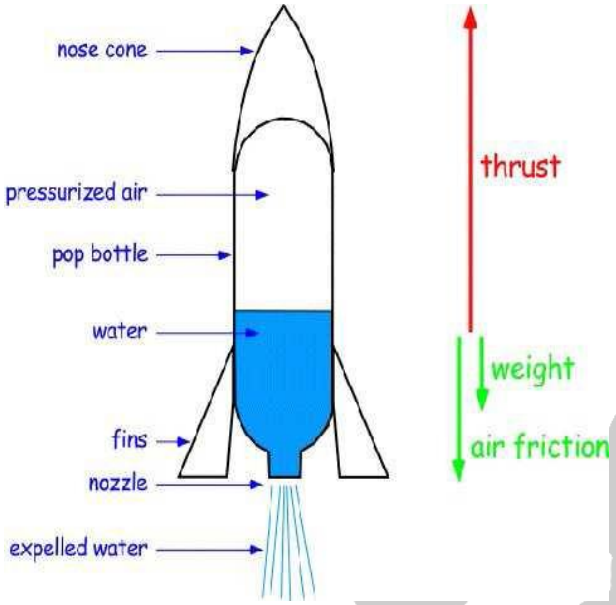
Your rocket will rest at zero level line, where you will feed the required amount of water in bottle and pressurize it to a certain level. A manually operated pressure pump will be provided so; bottle must carry the pressure valve nozzle. You need to pressurize the feed and launch your rocket to make it reach the maximum distance in designed angular field. Pump your rocket to reach the maximum distance.

SPECIFICATIONS:

1. The complete rocket should fit in a box of 45*45*45 cm at any point of time during event.
2. Rocket without water should not exceed 2kgs.
3. Each participating team will be provided with 1 litre of water to use it as a fuel. Proper proportion of air, water, pressure is to be maintained by team within 30 seconds to make their rocket win.
4. Launch time will be 30 seconds to fix the knob, pressurizing the fuel and launching. Water feeding
of bottle will not be counted in this 30 seconds. Only single chance will be given to teams to launch their rocket.
5. Manually operated hand or leg pressure pump will be provided by event co-ordinator
6. Dismantling of any part of the rocket during the run led to the disqualification.

RULES:

1. Fuels other than water and air are strictly prohibited.
2. Use of chemicals in any form is strictly prohibited.
3. Energy supplying or energy converting source like motors, batteries will lead to the disqualification.
4. Energy storing source is also restricted.
5. Use of volatile substance will not be entertained in any manner.



VICTORY CRITERIA:

The Rocket will have to fly maximum final horizontal distance to be the winner.

MARKING SCHEME:

Maximum horizontal distance will be measured which is travelled by rocket from its starting point, this distance will measured in a straight line and the deviation from straight line is substracted from total horizontal distance travel by it.

X – (0.3)* Y =final horizontal distance

X = horizontal distance travel from start point.

Y =deviation from straight path.

TEAM STRUCTURE:

1. A team can have maximum of 3 members.
2. Students from different semesters, branches and college may participate together as a team.

Note: In any case of disputes or offences, event coordinator holds the right to decide and judge the situation and his/her decision will be the final.

Registration fees 150/- per team

CONTACT:

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