

Dive-Bomber



INTRODUCTION:

Alien Spaceship comes to research our planet. Finds out that earth is feasible to live and survive. Starts contacting their own planet to reside on our planet earth which will destroy Earth forever.

Before the alien community contacts their own planet for establishing their base on our earth, we need to destroy the spaceship by building a rocket and demolish it from contacting.

PROBLEM STATEMENT:

Design and Build a water rocket which can be launched at any angle with respect to the horizontal. The teams will be participating in two rounds and the winners will be decided on the basis of rules given below.

ROCKET SPECIFICATION:

- Only plastic soft drink bottles are to be used for the rocket body.
- The nose cone and fins should not be made of metal or any sharp surface. The rocket should be launched using a string from a safe distance, not with the help of hands. If a team fails to meet this requirement it will be disqualified from the event.
- The water rocket must use only compressed ambient atmospheric air as its source of energy. Only tap water shall be used in the rocket, and the water shall be provided by the organizers. Water brought by the team shall not be allowed in the rockets.
- The amount of water to be filled in the rocket body is left to the choice of the team.
- The pressure inside the container (rocket body) before launch should not exceed 45 psi.



- The rules are subject to change.
- In case of disputes, the decision of ORGANISERS is final and binding.

TASK:

- The participants have to launch the rocket from the launching point and the rocket should land in the launch arena.
- The launch arena will be a sector of circle with sector angle 30degree and the launch will take place from the centre of the circle.
- The range of flight is the distance between the point of launch and the point of first impact with the ground after launch.
- In case of multi-stage water rocket range of flight will be calculated as the distance between the point of launch and impact of 2nd rocket with the ground.

JUDGING PARAMETERS (Round-1):

- Participants are scored primarily on the basis of their range of their flight. Greater the range, greater will be the points earned.
- Rocket going out of the sector of an angle 30 degrees will not be awarded any points.
- Rocket landing inside a sector of angle 15 degrees will be given additional points .
- No additional points will be awarded if the rocket lands on the border of inner 15 degree sector.

JUDGING PARAMETERS (Round-2):

- Top 10 teams of round 1 will advance to round 2.
- The problem statement of round 2 of lift off will be disclosed on the day of the event.

Instructions for building a water rocket:

http://www.npl.co.uk/upload/pdf/wr_booklet_print.pdf

