



Gearloose

OBJECTIVE:-

To design a vehicle that moves using mechanical and wind power and travels along an arena and launches from a ramp.

VEHICLE SPECIFICATION:-

- I. The dimensions of vehicle must not exceed $15\text{cm} \times 15\text{cm} \times 15\text{cm}$.
- II. Only non-electrical sources can be used. The must not pose any kind of danger to the spectators, competitors and officials. NO EXPLOSIVES OR CHEMICAL REACTANTS OF ANY KIND WILL BE PERMITTED.
- III. The only power allowed for the vehicle to get passed the mark line will be KINETIC ENERGY.
- IV. All components used must be part of vehicle and must remain attached to the vehicle at all the time.
- V. The mechanical energy can be stored using rubber bands, springs.

MATERIAL REQUIRED:-

Stated in the separate list provided to the teams, materials specifications are as per the stated in the list.

TASK:-

- I. The vehicle has to start from the baseline of the arena using mechanical power.
- II. The vehicle then has to climb a ramp using wind power.
- III. The vehicle has to jump off the ramp using its acquired KINETIC ENERGY.

RULES:-

- I. The teams will be given a maximum of 3 chances to show their skills. The best of 3 performances will be considered for the final evaluation of winners.



- II. The ONLY source of energy allowed in getting the vehicle passed the line will be kinetic energy. The use of any other source will lead to immediate disqualification.
- III. The vehicle has to follow a pre-designed path. Deviating from the path will lead to negative points.
- IV. In case of some mechanical failure the team will be given a relaxation of 1 attempt with all parts working properly with deduction of some points.
- V. The minimum distance from ramp and the point of contact after takeoff of vehicle will be considered for evaluation.
- VI. In case of a tie, the team completing the task in minimum time will win.

JUDGEMENT CRITERIA:-

Maximum point for the event is 100.

- I. The maximum point awarded for completing the horizontal track will be 10 points.
- II. On completing the entire length of ramp, the maximum point awarded is 15.
- III. The point awarded on taking off and on landing, will be proportional to distance covered from the ramp.
- IV. On deviating from the track a negative of 3 points will be awarded.
- V. In case of relaxation of extra attempt a negative of 7 points will be awarded.
- VI. A bonus of 10 points will be awarded if vehicle lands on its feet.