ROPEWAY DESIGN

Our friends have finally found the final element they needed to fuel their spaceship. But how will they to and fro between the rocky mountainous terrain?

Problem Statement:
Our aim is to prepare a ropeway system. We have to design and construct two self-supporting vertical structures of different heights so as to support the string of the ropeway.

Event Details:
Each team may consist of two to three students.
It is a two round event, the first one being an aptitude test.
In the second round two vertical structures with different heights have to be designed, analysed and constructed within **four hours**.
Each model is then tested according to judging criteria.
Two rounds have a time gap for the model for enough drying of glue used and structure to get strengthen.

Material Provided:

- Popsicle sticks
- Glue
- Threads
- Cutters
- Pencils
- Nails
- Nylon rope
- Scale
- Hook

Note: Use of other material is not allowed.

Rules and Regulations:

- The structure should be constructed with Popsicle (ice cream) sticks.
- The structure may be truss structure, hallow columns etc. depending on participants innovativeness.
- The minimum height of the smaller tower should be **30cms**.
- The maximum height of the larger tower should be **80cms**.
- The ratio between the **heights of the structure to the length of base** should not be more than 1.
- **Width** of the structure should not be more than **12 cm.**
- The structure should sustain stress by moving load.
- Load should move between higher to lower tower.
- The hook and load assembly should be able to slide on the string which is supported by the two structures.
- Only one participant is allowed to perform the loading (teammates can also assist him).
- Holding the load carrier during loading is not allowed.
- Anchoring should be done to bases for stabilizing; distance between them should not be more than twice that of horizontal distance between towers.

Judging Criteria:

- The structure should support moving load without any external support.
- Failure of a single member is considered as failure of whole structure.
- Weight should move from one end to another.
- The structure should be strong enough to support a moving load without sway or deformation.
- Judgment is decided with least slope of rope, high load carrying capacity, less self weight.

Event Managers' Contact Details:

Nimish 8769629367
Aakhya 6393222078