

CANTILEVER STRUCTURE DESIGN:

ABOUT:

An event that tests the capability of cantilevered structure over its longitudinal length and stability made with plastic straws.

DESCRIPTION:

A cantilever is a rigid structural element, such as a beam or a plate, anchored at one end to a (usually vertical) support from which it protrudes; this connection could also be perpendicular to a flat, vertical surface such as a wall. Cantilevers can also be constructed with trusses or slabs. When subjected to a structural load, the cantilever carries the load to the support where it is forced against by a moment and shear stress.

Cantilever construction allows overhanging structures without external bracing, in contrast to constructions supported at both ends with loads applied between the supports, such as a simply supported beam found in a post and lintel system.

RULES:

Compete as teams with 2 members in each team.

Time constrained event (30 minutes).

Only straws to be used.

Supported at base by sticky tape only.

Final structure must be stable along its length.

