SciOly Bridges

Annual NM State Competition

Basics of Bridges

Build bridges to hold a bucket of sand

Number of Team Members- 2

Impound- None

Eye Protection- B

Event Time- 6 minutes

Necessary To Bring To The Event

Structure (bridge)

Eye Protection of Category B (must provide protection from high inertia particle hazard and bear “Z87+” marking)

Design log of Event Bridge and bridges built for testing prior

Construction of the Bridge

Single structure, one piece, no separable pieces

Made of wood and adhesive

Cross-sectional size of individual pieces of wood has no limit

Wood can be laminated without restriction

Before loading, no portion of the bridge may hang below the top of the test supports

Participants must be able to answer questions relating to the design, construction, and operation of the bridge

Design Log of Test Bridge and Prior Bridges Must Include (cont.)

If a machine was used as a tool to build the team's device (bridge) or any component of said device is must be noted in the design log

Information about the tool hardware, software, materials, and supplies used

Details of the source of any digital files utilized by the tool: including at least where the file was obtained including web address if downloaded from the internet

Descriptions of how the team constructed the final device from the tool created components

All logs submitted will be returned to teams

Check-in

Present structure (bridge) for inspection and measurement

Place structure on the scale to measure mass

Submit estimated load in the event of a tie

No alterations may be made to the bridge after check-in process has been started

Before testing: the combined load of the loading assembly P ך° di ‘ ‘ ‘

Scoring

Score of a team= (Load score in grams)/(Mass of the structure in grams)

Load score= Mass of load in grams + Bonus points in grams

If a structure supports a load of 15000 grams the bonus will be 5000 grams

Tiers separate teams by any infractions of the rules and the severity of the infractions

Ties are broken by:

Closest estimation of supported load mass

Lowest structure mass