



General Rules

- All questions regarding the problem statement should be asked during the briefing session. Questions regarding the problem must be submitted in writing in the buy zone using the provided forms. Answers to questions submitted after the briefing will be distributed to all teams at the same time by a competition director.
- Teams may only use materials purchased in the buy zone in their final prototype.
- Final prototypes must be submitted to the designated area at the end of the build stage of the competition. Only submitted prototypes will be allowed into the presentation. No submissions will be allowed after the designated time.
- All workspaces should remain clean. Teams will be required to immediately clean up any workspace which could pose a safety risk.
- Visitors are not allowed during the design and build stages. Violation of this rule may result in immediate disqualification.
- Teams are not allowed to leave the competition area until they have submitted their final prototype.
- **No electronic communication devices will be allowed for the duration of the competition. Violation of this rule will result in immediate disqualification.**

General Information

Only materials purchased in the buy zone can be used in the construction of the prototype. The total cost of the prototype cannot exceed \$6000.

Each team will be provided with a tool box containing a set of basic tools. These tools can be used for any purpose during the design/build stage. Tools cannot be incorporated into the prototype in any way. All tools must be returned at the end of the design/build stage along with the required deliverables. For more information see the ‘Tools’ section below.

Each team will be responsible for keeping track of the time remaining during the design/build stage. Warnings will be given, however they should not be relied upon.

Competitors must act in a professional manner at all times. Unprofessional behavior towards volunteers or other competitors may result in points being deducted from the team’s final score and will have a significant impact on judging. Unprofessional behavior may also result in a competitor or team being disqualified from the competition.

The testing area will open 20 minutes after the design/build stage begins. The first 20 minutes are to be used for inspecting and measuring the course. Teams will have access to the scenario table for testing purposes by reservation only. Each testing “slot” is a maximum of 10 minutes. The testing schedule will be determined on a first-come first-serve basis.

Reservations



Junior Design Competition – Rules

Reservations may be made at any time. Only one team member is needed to make a reservation. Teams may only have one reservation at any time. Teams will be given the next available slot, and may not request a specific time.

Cancellations

Teams may cancel a testing reservation at any time. There is no penalty for cancellations. The reserved time slot will be marked free, and the next team to make a reservation will be given the emptied slot. Time slots following the cancellation will not be bumped up.

Consumable Items

Teams will be required to purchase all materials for their prototype from the buy zone. This includes all consumable power sources such as batteries and elastic bands for both testing and demonstration purposes.

Tools

A selection of tools is available on a first come first serve basis. Holding or reserving of tools is not allowed for any reason. Removing tools from the shop is strictly prohibited. A maximum of two people from each team will be allowed in the shop. A maximum of four teams will be allowed in the shop at any time. Additional teams wanting to use the shop will be required to wait until a team leaves. Anyone using tools in an unsafe manner will be banned from the shop for the duration of the competition at the supervisor's discretion. Safety equipment (i.e. goggles) must be worn while using tools.

The following tools will be available:

- Electric Drill (x2)
- Set of Wood Drill Bits
- Wire Strippers (x4)
- Hammer (x2)
- Measuring Tape (x2)
- Wood Saw (x2)
- Hacksaw (x2)

Each Team's Tool Kit will include:

- Permanent Marker (x1)
- Poster Board (x1)
- Hot Glue Gun (x1)
- Hot Glue Sticks (x2)
- Cue Cards (x4)
- Ruler (x1)
- Pliers (x1)
- Scissors (x1)



Buy zone Rules

- A maximum of one person from each team may be present within the buy zone at any time.
- All sales are final. Teams should check that all purchased items have been received in good working order before leaving the buy zone.
- Trading of materials between teams is strictly prohibited. Violation of this will result in disqualification.
- In the event of a discrepancy between the price of an item listed on a team's Purchase Requisition Form and the buy zone's listed price, the buy zone's listed price shall be taken as the item's price.
- The buy zone will close twenty minutes before the end of the design/build stage. At this point, the doors will be closed and only the teams already in the store will be served. No exceptions will be made.
- Teams should keep track of material purchases for their own records. The buy zone volunteers will not be able to calculate total money spent for teams.

Deliverables

At the end of the design / build stage, each team is required to submit the following to the submission desk:

1. A working prototype.
2. A poster to be used for visual aid during the presentation.

Note: Both the prototype and accompanying poster board **must** have the team number clearly written on the back/underside in black permanent marker. Any posters or prototypes not clearly labeled will be rejected.

Presentation Rules

Each team will be required to deliver an oral presentation to a panel of judges which outlines the team's design process and explains their final design. The order of presentations will be decided randomly. Each team will have a 5 minute set-up time, followed by 10 minutes for their presentation and prototype demonstration. The room official will give warning when there are 5 minutes and 1 minute remaining in the presentation. Presentation dress code is business casual. If judges ask questions during a presentation, time is stopped until the presentation resumes.

Visual aids are restricted to the poster submitted at the end of the design / build stage. No other materials will be allowed during the presentation. It should be noted that the majority of the presentation points will be for the explanation of the design process rather than supporting aids.



Marking Scheme

Time penalties will be rounded up to the closest minute. In the case of a penalty for ending too soon, the time will be rounded down. Any time over the allowed time will be rounded up.

i.e. 1 seconds over is a one minute penalty, 3 minutes 1 second under is a one minute penalty.

Unprofessional behavior deductions will be made at the discretion of the competition director. Deductions as a result of unprofessional behavior may be made at any point during the competition. Teams will be informed of the deduction, but will **not** have an opportunity to dispute it. Repeat offenses will result in disqualification.

The lowest possible mark in any one category is 0.

In the event of a tie, teams shall be ranked based on their scores in the Design and Performance category.

The judge’s marking sheets will not be disclosed to the competitors.

Design & Performance..... /40

Does the design work?

How well does the design meet the requirements of the project?

Note: The Design and Performance score of 40 percent may be broken down further as appropriate for the actual project. The breakdown of the Design and Performance marks will be revealed at the time that the project is revealed.

Penalties

Misuse of time – late handing in prototype..... -5/minute, up to -40

Team Work /25

Did the members of the team appear to work well as a team?

Did all members contribute to the problem solving process?

Presentation /20

Were the benefits and principles of the design clearly explained?

Was time used appropriately?

Did all team members participate equally in the presentation?

Penalties

Misuse of time – under-use by more than 3 minutes -5/minute

Misuse of time – over-use..... -10/minute

Originality /15

Does the design differ substantially from other designs?

Was the solution clearly the work of the competitors?