



2023 CREDECA Team Challenge

Unlimited Imagination & Creativity !
Team Work ! Problem Solving !

Team Challenge I.

Structures : Transferable Structure



World Association of Creativity

Team Challenge I . Structures : Transferable Structure

A. Understanding the Problem

Traditional structures have strong foundation work on the floor and structures are placed on the foundation. After the structure is built, it stays in the same place until it is worn out and torn down. However, these days, we often hear that completed structures such as houses have been moved entirely by changing their locations.

The development of technology often breaks our stereotypes, and the team should think about what else they thought could not be transferred and create interesting stories that could occur when they moved them and show them through performances.

The team should also produce structures that are safe to move from place to place and be tested on site.

B. Problem Overview

The team has to build a structure out of launch wood.

The structure will test the load by moving the tester to see how much weight it will bear. At the same time as the load test is conducted, the team should present a performance based on the story that may occur when things that were thought to be immovable are moved.

* (Limited time of 8 minutes, Limited cost: 150 USD)

- a. Structures that withstand loads
- b. Weight to be carried out the load test
- c. Move tester position during load test.
- d. A funny story that happens when something you think you can't move is moved.
- e. stage background or props that express the fact that they thought they couldn't be moved but were being moved
- f. A character who tries to undo what has been moved.
- g. Two Talent Show

C. Structure

a. Scale

- 1) Build structures made of launch wood.
- 2) The structure shall be not less than 20 cm in height but not more than 21 cm in weight and not more than 15 g in weight.
- 3) The structure shall be able to fit into a cylinder 10 cm in diameter.
- 4) The structural structure shall be capable of placing a weight on the safety plate after installing the safety plate on it. [See Figure 1.]
- 5) Structures must be manufactured in advance and brought to the concert hall.

b. Materials : It shall be manufactured using only firing wood and glue.

- 1) Only 3 mm cross section of the projectile tree is allowed (allowed error +0.3 mm).
- 2) The adhesive should be used as it was when it was purchased. Do not add or mix any ingredients to the adhesive.
- 3) The words "adhesive", "epoxy", "cement", "pool" and "adhesive" shall be the brands marked by the manufacturer.
- 4) You can't use anything but firing wood, paper cups, and glue. However, tools necessary for manufacturing may be used, but may not be part of the structure.

c. A weight

- 1) The team shall bring the appropriate weights directly for the load tester provided by the organizer.
- 2) You can make it yourself or use existing products that can be used as weights. (e.g., fill a plastic bottle with sand and use it as a weight)
- 3) The weight shall be within a cylinder of 10 cm in diameter.
- 4) When standing on a safety plate, you must stand on your own without outside help.
- 5) The height of one weight is 30cm or less, and there is no limit to the weight and number. However, the height of the load tester (120 cm) shall not be exceeded.
- 6) Teams should mark their respective weights.

d. Load Test

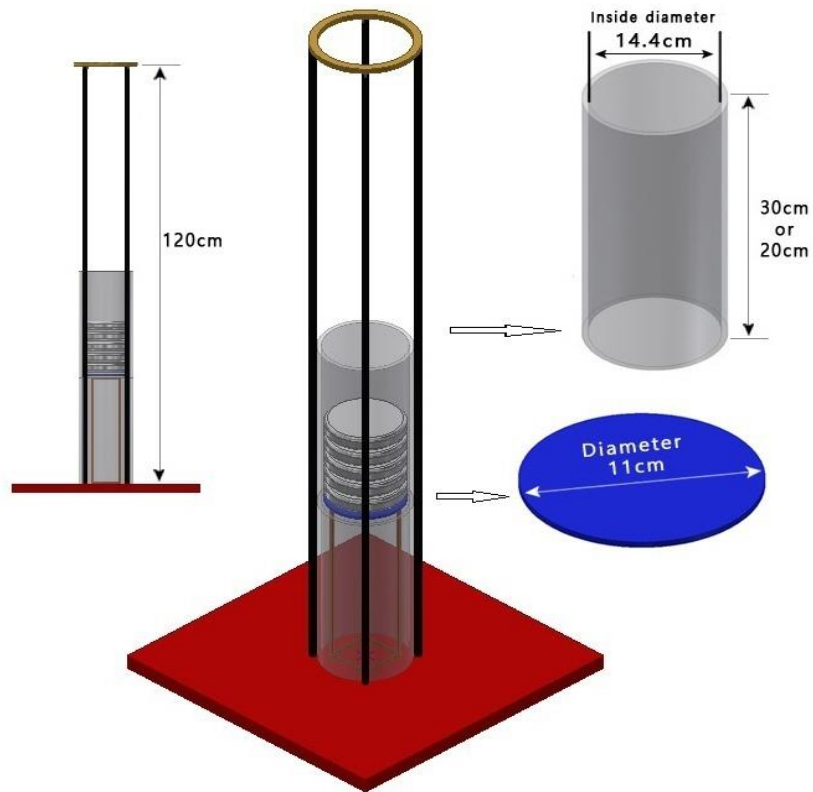
<Preparation for Testing>

- 1) The team has to check in 30 minutes before the performance starts. During the check-in process, we will ensure that the structures and weights created by the team meet the regulations. If you don't pass the check-in, you can't do the (load) test.

2) Where a correction is requested by the examiner during the check-in process, the correction shall be completed by 10 minutes before the start of the performance, and the load test shall not be conducted if the correction is not made within time.

3) Once the check-in is completed, the structure is stored at the designated venue of the competition. At this time, the team cannot touch or modify the structure until the performance begins.

4) The specifications of the structure tester are as follows.



< Figure 1 : A picture of a load tester, safety plate, and structure. >

<Order of test run>

- 1) Run the test with the start of the performance.
- 2) The structure is located inside the tester.
- 3) Place the safety plate on the structure.
- 4) Place the weight on the safety plate.
- 5) Move the tester on the cart once at the time the team wants.
- 6) When the judge shouts 'STOP', it ends

<End of structural load test>

- 1) When the 8-minute time limit for the performance is over
- 2) When the structure, weight, or safety plate touches the area except the bottom of the tester.
- 3) When all the prepared weights have been used
- 4) The height of the accumulated weight rises to the top of the tester.
- 5) where the assessor finds it dangerous to conduct a weight test

<Precautions>

- 1) The tester shall be used as it is placed and shall not be held or attached using any part of the body.
- 2) The team with the most weight will be awarded 110 points, while the other team will be given a score based on this basis.
- 3) In order to be recognized as a weight score, one weight must be raised and then the structure must withstand the load for three seconds before the other weight can be raised. This process will be repeated and the time and success will be determined by the judges.
- 4) Tools can be made and used to safely position structures or weights inside the tester, or purchased and sold.
However, it must be stated in the expense report.
- 5) During the movement of the tester, only the cart on which the tester is raised can be contacted.
- 6) Bonus weight can be received only if it does not fall under <End of Structural Load Test> above until the next weight is raised after moving the tester.

D.
Performance

a. Contents of Performance

- 1) The team must produce everything necessary for the performance in advance and bring it to the competition.
- 2) The content of the performance should be that the foundation (basics) should be properly established.
- 3) A character who plays an unnoticed but important role should appear (visual).
A person does not have to be a person.
- 4) One small prop that shows solid foundation and one small prop that shows poor foundation should appear.

b. Format of Performance

- 1) The story created by the team should be presented in the form of a play.
- 2) The team should be able to clearly communicate the story in the way they want.
- 3) The performance shall include a load test of the structure and present it.
Within the area marked by the competition, some team members present structural tests and others present performances.
- 4) No additional time is given for weight testing.

c. Time of Performance

- 1) The team's presentation must be completed within the 8-minute time limit.
It includes the time the team needs to set up its props in the competition area.
- 2) The time provided will begin when the judge signals the team to start.
- 3) The team cannot ask for the time to be stopped.
- 4) When the time is up, the judge will stop the team's presentation.
(Zero points will be given to any solutions that are not presented.)

d. Cost

- 1) The combined value of all the materials used during the team's presentation cannot exceed \$150 USD.
- 2) All materials used in the presentation must be listed in the expense report and included in the total cost.
- 3) Cost-designated items: The value of items that are worth more than \$5 USD, such as musical instruments, laptops, audio equipment, beam projectors, and cell phones, shall be designated as \$5 USD.
- 4) Banned items: Fire (or flame), gunpowder, live animals, chemicals, sprays,

weapons, dry ice, items that may pollute or damage the competition site, items that the judge considers dangerous

5) Value of a used item: One-fifth the market price of a new product

6) Value of a recycled item: \$0 (Must be specified in the Expense Report)

7) Cost-related penalties may be imposed if:

- Items are missing from the list.
- The judge decides that the team has exceeded the cost limit.
- Banned items are used. The judge may prohibit the team from using props that include any of the banned items at any time; in the event the banned items have already been used in the team's presentation, zero points may be given for all scoring categories that are related to such items.

E. Talent Show

- a. The team may showcase their 2 talents in any way they wish to during their original performance to further enrich it.(Example: Composing and writing a song that goes hand in hand with the overall atmosphere of the performance and is used as background music)
- b. However, in the event the team chooses talents that overlap with a scoring category, its Talent Show will receive zero points.
- c. The judges will evaluate the team's Talent Show based on how unique it is compared to those of the other teams, how outstanding the team's talents are, how much effort has been put in, and its harmony with the performance.

F. Evaluation Categories & Scoring

Area	Category	Description	Score
a. performance (100 pts)	Degree of Completion	Story organization & Creativity	0~25
		Acting(audible, motion, natural)	0~10
		Productions (stage backdrop, costumes, props, etc.)	0~15
	Story & Character	Appropriateness of the story that can occur when something that you think cannot be moved is moved.	0~10
		a stage background or prop that expresses something that you thought you couldn't move but was moved.	0~20
		the appearance of a character who tries to undo what has been moved.	0, 10
		The creativity of character settings that try to undo what has been moved.	0~10
b. Structure (110 pts))	Load Test	Bonus weight as much as the weight raised when moving the tester $\frac{\text{Final Weight} = \text{Actual Weight raised} + \text{Bonus Weight}}{\text{Final Weight}} \times 110$ The weight of the team with the most weight. * The team with the most weight is 110 points.	0~110
c. Talent Show (40 pts)		excellence of the team's unique talents and the effort that has been put in	0~20
		Harmony with the performance	0~20
Total Score			250

G. Penalties

Judges may impose penalties for "spirit of competition" violation, unsportsmanlike conduct, outside assistance, violation of safety regulations, exceeding the cost limit, and violation of other limitations (-1 to -100 points per offense). (Refer to the penalty regulations in the Program Guide.)

*Omission of scored problem requirements carries no penalty except loss of score (zero points).

H.

Competition Site

- a. A 2m x 3m competition area will be provided (larger, if possible).
- b. A three-prong electrical outlet will be available;
However, the team must bring any extension cords it needs.
- c. The team cannot adjust the lighting at the site.
- d. A penalty (-1 to -100 points) may be imposed for polluting or damaging the competition site. After its presentation is finished, the team must clean up the site and return it to its original state in a timely manner.
Any cleaning utensils used for cleanup will not count towards the total cost of the team's solution.
- e. The team cannot raise objections in relation to the floor surface of the competition site.

I. Documents to Submit

Document \ Competition	Preliminary Competition (No signing required)	Main Competition
a. Application Form for Participation	Submit Online	Submit 2 copies
b. Solution Description Form	Submit Online	Submit 4 copies
c. Expense Report (including receipts)	x	Submit 1 copy
d. Script	x	Submit 1 copy

**J. Matters to
Note**

- a. The team must read 1) the limitations that apply to this Problem, 2) additional announcements on the Problem limitations (made on the website), and 3) the Program Guide. The team is responsible for any disadvantage it may suffer due to its failure to check the above. Check for any new announcements on the Problem limitations by regularly accessing our website.
- b. Submit all problem clarifications using the provided form via e-mail.
- c. Set up the team's membership sign on the left or right side of the competition area so that it is visible to the judges throughout the performance.
 - 1) The sign should be at least 40cm x 40cm in size and free-standing, and must show the team's name, problem, and division.
 - 2) The judges may impose a penalty if the team's sign is not visible during the performance (or has been omitted completely) or information is missing from the sign.
 - 3) Materials used to make the team's sign must also count towards the team's total cost.
- d. All teams are required to compete in both a Team Challenge (worth 250 points) and a Self-activity (worth 100 points). The scores the team earns in these two problems will be added to calculate its final score.

Spontaneous Problems offer teams an interesting opportunity to showcase their on-the-spot creativity, problem-solving skills, and teamwork.

More information on these problems can be found in the Program Guide.

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