



【Supplementary Rules】

Construction requirements: There is no restriction on the materials used, but **ready-made device** is not allowed. The device should consist of two parts - “control unit” and “device”.

Functions: Use no more than two “control units” to control a wireless “device” to move and deliver objects.

Dimensions: The “device” should not exceed **25cm x 25cm x 20cm (Height)**; there is no restriction on the “control unit”.

Weight: There is no restriction on the weight of the “device” and the “control unit”

Power Supply Restriction: The device must use direct current of **24V** or below. The organizer will not provide any power supply.

Competition System: The whole competition will divide into competition stage and presentation stage.

1. **Competition stage:** Two different dates will be arranged for each team to join the competition in the museum. Participants are suggested to leave the venue as soon as possible after the competition. The whole process of the competition will be record and the best result will be select as the result of the competition stage. The top eight teams with the highest scores will proceed to the presentation stage.

Junior Secondary Group

Pitch: The dimension of the pitch is 3m in length and 4m in width. The area with jointed-mat is regard as “land”, while the remaining area is regard as “water”, the device cannot step on the water area. The starting point and finishing point are at the both sides of the water area. There will be six mats marked as “island” among the water area.

Competition process: The competing time is **6 minutes**. Within the time limit, the wireless device should be controlled to move from the starting point towards the finishing point, the fastest team whose device reaches the finishing point will be the winner. Each team will receive three pieces of jointed-mats (30 x 30 cm). Participants have to pave a path for their device to move forward using the device and the mats. The device has to stop over the mat marked as the finishing point in order to finish the competition.

Scoring method:

- When the device passes over an island, it can get the corresponding time deducted from the total time used.
- Participants must stop their device completely on the finishing point and notify the referee to complete the task.
- During the competition, when the referee states that the device has driven on the water area, the participants will be request to place the device back to the starting point and restart, and the deducted time would be recalculated.



Senior Secondary Group

Pitch: The dimension of the pitch is 2.5m in length and 4m in width. The area with jointed-mat is regard as “land”, while the remaining area is regard as “water”, the device cannot step on the water area. The starting point and finishing point are at the both sides of the water area. There will be two mats marked as “island” among the water area. At the starting point, there are will also be six animals, including two elephants, two lions and two rats, and one robot dog.

Competition process: The competing time is **10 minutes**. Within the time limit, the wireless device should be control to transport six animals and a robot dog from the starting point to the finishing point. Each team will receive three pieces of jointed-mats (30 x 30 cm). Participants have to pave a path for their device to move forward using the device and the mats. The device can only take two “passengers” (two animals or one animal with a robot dog) at each time.

There is a rule that when the device is not on the same mat with the animals or the robot dog, the elephants will hurt the lions, the lions will hurt the rats, and the rats will hurt the elephants unless all kinds of animals are on the same mat (the amount is not limited). Under this situation, the animals will not hurt each other even the device is not with them. As for the robot dog, as long as it is not on the same mat with the device, it will hurt all animals on the same mat.

Scoring method: The team that transports the most “passenger” to the finishing point within the time limit is the winner. If the amount of the “passengers” were the same, the result would be rank in descending order of time used. During the competition, please be noticed that:

- I. When the referee states that the device has driven into the water area, the participants are request to place the device back to the land, the finishing point or the islands and restart, depends on the last location of the device before driven on the water area.
- II. If the “passenger” touches or falls into the water area during the transportation, it is going to taking back to the starting point and to be wait for transportation again.
- III. If the device has left the land and there is any kind of animal injured by each other or the robot dog, whenever the device has reached another land, the referee will collect one injured animal randomly at each time until the hurting situation stops. Animals that taken away will not be return and will not be score.

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2. **Presentation stage:** The top eight teams that score the highest in the competition stage will proceed to the presentation stage. The time limit for the presentation is **6 minutes**. Following the presentation will be a Q&A session with the judges. The judges will evaluate and score the work of each team.
 3. **Final result:** When the competition is finished, the ranks of the "Competition" and "Presentation" are combined as the final rank.



Timeout and Maintenance:

There is no timeout during the game. If the “device” fails during the competition, the team can repair their “device” on spot or outside of the pitch area after the referee’s permission. The maintenance process will be record and the “device” should be place back on its original position after finish repairing, and continue the competition with the approval of referee.

Violation of rules:

Teams will be disqualify depending on the severity of violations, as regulated below-

1. Intentionally causing damage to the pitch or objects during the competition.
2. Touching the “device” or target during the competition without pre-approval.
3. Dimensions of the “device” do not meet the specifications listed in the rules and regulations.
4. Using “devices” that have not been inspected by the organizer.
5. Using a qualified battery that has not been inspected by the organizer.
6. Team members enter the restricted pitch area during competition without permission.
7. Disobeying the instruction of the staff, interfering or stalling the competition.
8. Violations, insulting or abusive words of participating teams.
9. Violation of the principles of fair play.

Others:

1. All teams should pay attention to electrical safety.
2. Maintenance tools shall be prepare by the participating teams. The organizer shall not provide them.
3. Participants are allowed to use the test pitch at the museum during opening hours before the competition.
4. Should any dispute arise, the decision of the organizer shall be final.
5. Final decisions shall be made by organizer should any unexpected situations happen during the competition.
6. In case of any discrepancy in the different language versions of the regulation, the Chinese version shall prevail.