Construction Smart Rules

Introduction: Construction Smart is a event for preschool team members, which encourages them to imagine and innovate boldly. The competition takes imagination, creativity, teamwork, structure building and language expression as the direction of investigation, and carries out the defense assessment of the participating teams in line with the investigation topics of that year.

Group: Preschool

Rule Revision **v3-2022.1.5**

Revise 3.3 Referee Defense Requirement

Revise 4 to add a single award

Rule Revision **v2-2021.7.25**

Revise the requirements of 2.1, 2.2, 2.3 and 3.2, and explain the referee's scoring points.

Rule Revision **v1-2020.08.04**

Creation of Event Rules

1 Team member requirements

A. Team members should be of preschool age.

2 Robot requirements

2.1 Requirements for robot equipment

A. It is not limited to any building block or large particle components, including but not limited to Lego blocks, such as pipe sets, variable sets, simple mechanical sets, etc.

B. Manual transmission components can be used, but automatic transmission components, sensors and controllers can not be used to present works. If the building block used exceeds the rules, in the scoring table, the score point of item 6 is 0. C. It is allowed to bring computers, backboards, roll-ups, posters and other promotional items for the competition.

2.2 Robot specification requirements

A. The exhibition area of the entries is about 0.6m * 1.5m, and the robot works need to meet this space requirement. If the size of the entry exceeds the space of 0.6m * 1.5m in the exhibition area, in the scoring table, the score point of item 7 is less than 2.

2.3 Requirements for robot works

A. Entries must be in line with the theme of the ROBOBOOM season contest. If it does not conform to the theme, in the scoring table，the scores of item 1 (Thematic assessment) is 0, and the scores of item 2 (Concept and creativity of the project) is less than 3.

B. Entries must contain certain motion elements, such as linear motion, rotary motion, etc., which are limited to manual transmission, but must be manually coordinated motion. Automatic motors and controllers are not allowed.

C. Equipment other than non-large particles shall not be added to the main structure of the work, but frame display items not involving the compact structure of the work can be used.

3 Rules of the game

3.1 Entry Themes

A. The theme of the Smart Building Competition in the 2022-2023 season is "Science and Technology Help Agriculture". In the face of the global food crisis, I hope that the young players will open up their minds and give

full play to their imagination, and give you scientific and technological assistance programs from the aspects of agricultural products planting, agricultural products picking, agricultural products transportation and agricultural products processing. B. The entries should be closely related to the theme design.

3.2 Entry Requirements

A. In this competition, the parents of one team member will be invited to participate in the competition together. Before the

B. competition, the parents of the team will be given the certificate of "auxiliary construction". Note that the parents are only allowed to be responsible for physical work, order management and cooperation of the team members on the spot, and are not allowed to participate in the construction of the robot structure. If the referee finds that the parents are involved in the production of the robot, in the scoring table, the score point of item 8 is 0.

C. If the team's posters, brochures and other promotional materials are not prepared, in the scoring table, the score point of item 4.2 is 0.

D. If team members cannot clearly explain the division of labor and tasks, in the scoring table, the score point of item 5.1 is less than 3.

E. Each team will have 60 minutes to complete the robot structure before the presentation.

F. Team members are not allowed to leave the competition area during the competition.

3.3 Referee's reply

The total defense time of each team is 5 minutes. It is divided into two parts.

Part 1: Narration of team members' works (limited to 3 minutes)

a. Team introduction (introduction of each team member and division of labor)

b. The title of the work and the theme of the work are integrated into the introduction.

c. Introduction to the function, innovation and practicability of the work d. Team members introduce their respective division of labor.

d. Self-narration of works can take the form of speech, performance, singing, and express works in different forms.

Welcome the team members to show their works to the referees through rich forms of expression.

Part 2: Demonstration of works and answers to judges' questions (about 2 minutes)

a. At the request of the referee, the team members cooperate with the demonstration works and the demonstration instructions.

b. The referee can ask questions to the team members according to the temporary questions of the scoring points in the aspects of innovation, technology and practical function of the works, and get the team members'replies. For the defense of each team mentioned above, the team members' self-statement should be based on the timing requirements of the referee.

a. Each team is requested to prepare their own works and prepare for the demonstration of their works.

b. From the introduction of the defense, the referee understands the division of labor among team members, the introduction of works, the process of thinking about works, and the principle of movement of works.

c. Referees will assess their works in terms of theme investigation, work creativity, construction effect, sports structure and teamwork.

d. The referee builds the scene according to the work and judges the innovation and integrity of the scene.

e. The average score of the total score of a team assessed by several referees is the final score of the team and is ranked.

Construction Smart Scoreboard

Team ID:

Scoring rules: (*) Judgement scoring

5: Excellent-Excellent, Advanced, Exemplary, or Amazing 3: Average-Average, Intermediate, Acceptable

1: Not good-unfinished, needs a lot of help

4: Thumbs Up-Good, Accomplishable or Proficient

2: To be improved-tentative, but still need to continue to explore

Weight score of total evaluation item and detailed evaluation item is 0 ~ 5			
1. Thematic assessment	Does the entry stick to the theme of the season?	3	
2. Concept and creativity of the project	The project concept is very original and shows impressive creative thinking and problem solving skills.	2	
3. Project presentation	There was nothing wrong with the robot demo and it was impressive.	2	
4. Project introduction	The project presentation was clear, well organized and communicated effectively. He is very polite to the audience. When the machinePeople did not achieve the desired results, and the team members performed professionally.	2	
	Team posters, brochures, and information are clear, well designed, and able to make robot novices available.	2	
5. Team work	The roles of team members are clearly described. The division of labor is balanced and reasonable, and information sharing is smooth. Be endowed with the spirit of cooperation. Team members cooperate with each other and respect each other.	2	
	Teamwork and team spirit are obvious. Note: If the team has only one member, the score should be 1.	1	
6. Motion structure	After checking and testing the robot, the motion design of the robot is creative, effective and humanized. Solid and strong.	2	
7. Set up the scene	The scene is complete, compact and creative.	2	
8. Independence	Based on the judges' observations and discussions, it is believed that the program was primarily designed and developed by students, not by adult coaches, parents, or tutors. Students are able to explain their projects clearly and confidently.	2	
Total score			