

2021 World GreenMech Contest Regulations

GMJr.- Jr. Programmer



Hosts: National Chung Hsing University
World Forum For GreenMech
Promotion

Co-Organizers: Genius Toy Taiwan Co., Ltd

World GreenMech Official Website: www.worldgreenmech.com

Contact: Ms. Wu
conniewu@mail.gigo.com.tw

Contents

| | |
|---|----|
| 1. Contest Purpose..... | 3 |
| 1. 1. Notes on the Regulations: | 3 |
| 2. General Contest Information..... | 4 |
| 2. 1. Summary of Events | 4 |
| 2. 2. Player Replacement..... | 4 |
| 2. 3. Enrollment & Qualification | 4 |
| 2. 4. Event Schedule..... | 4 |
| 2. 5. Registration Deadlines | 5 |
| 3. Notes for Applicants | 6 |
| 3. 1. Registration Information | 6 |
| 3. 2. Team Names | 6 |
| 3. 3. Registration Fee | 6 |
| 3. 4. Up-to-date Information | 6 |
| 4. Venue Regulations | 7 |
| 4. 1. Identity Check..... | 7 |
| 4. 2. Access Restrictions | 7 |
| 4. 3. Causing Unwanted Disturbances | 7 |
| 4. 4. On-site Facilities | 7 |
| 4. 5. Communications & Communication Devices..... | 7 |
| 4. 6. Theft or Sabotage | 7 |
| 4. 7. Permitted Materials | 7 |
| 4. 8. Video Records for Evidence | 8 |
| 4. 9. Dispute Handling | 8 |
| 5. GreenMech Junior Contest..... | 9 |
| 5. 1. Theme: Programing Robo-Sports | 9 |
| 5. 2. Event Schedule..... | 9 |
| 5. 3. Contest Objectives | 9 |
| 5. 4. Contest Method..... | 10 |
| 6. Awards | 17 |
| 6. 1. GreenMech Junior Contest Award..... | 17 |

| | |
|--|----|
| 6. 2. Award Revision..... | 17 |
| 6. 3. Award Distribution | 17 |
| 6. 4. Competition Certificates | 17 |
| 6. 5. Awards Delivered by Mail..... | 18 |
| 6. 6. Winning Team Obligations..... | 18 |
| 7. Legal Policy | 19 |
| 7. 1. Contestant Insurance | 19 |
| 7. 2. Intellectual Property Rights | 19 |
| 7. 3. Organizer’s IPR..... | 19 |
| 8. Appendix & Forms..... | 20 |
| 8.1. Code Card Definitions | 20 |
| 8.2. Student Enrollment Certificate..... | 21 |
| 8.3. Complaint Form | 22 |

World GreenMech Contest Regulations

1. Contest Purpose

The *GreenMech Junior Contest*, launched in 2018, enables novice students from kindergarten to elementary school (grades 1 to 4), to enjoy the fun of hands-on design and team-based project work through shared problem-solving experiences. The contest lays the foundation for mechanical design, and also provides a stage for younger students to play, while developing directed creativity. For safety reasons, the 2020 contest was suspended, but is expected to resume in 2021. In order to increase the learning opportunities connected to coding and robotics, the World Forum for GreenMech has increased the attention given to the “programming Robo-Sports”. Several new events give children a chance to demonstrate their outstanding abilities in the fields of programming and logic. Everyone who wishes to join us and participate in a fair and equitable set of challenges is warmly welcomed.

1.1 All times and dates in this document use the standard US time system, mm/dd/yyyy and the 24-hour clock.

2. General Contest Information

2. 1. Summary of Events

| | GMJr. | Remarks |
|-----------------------|---|---|
| Participant Selection | Kindergarten and full-time students in grades 1-4. (Born between Sep 1, 2010 and Aug 31, 2015). | Students in education until June 7, 2021. |
| Team Size | 1 to 2 people. | For rules governing replacement of team-mates see in section 2.2. |
| No. of Instructors | 1 person. | The instructor can be a teacher or a parent. |

2. 2. Player Replacement

If a player should be unexpectedly absent from the contest for any reason, the team leader can apply for one person replacement prior to July 12th 2021.

2. 3. Enrollment & Qualification

| | |
|---|---|
| Notes | All countries |
| Enrollment through countries is strongly recommended. | Local and national Organizers for each country and region will be responsible for their region. |

2. 4. Event Schedule

| | Online Registration Date | Admission Announcements | Contest Date | Contest Location | Remarks |
|--------------------------|-------------------------------|-------------------------|--------------|--|---------|
| 2021 GMJr. World Contest | 06/07/2021 – 06/11/2021 | 06/16/2021 | 08/05/2021 | National Chung Hsing Universit, Taiwan | |

2. 5. Registration Deadlines

Registration for the World GreenMech Contest must be completed within the time limits specified by online registration, there will be no flexibility in this regard. Deadlines remain the same for independent applications and regional qualifying.

3. Notes for Applicants

3. 1. Registration Information

Participation must be completed within the time limits specified for online registration (06/07/2021 – 06/11/2021). More information can be found at the WGM official website:

www.worldgreenmech.com.

3. 2. Team Names

Teams must use English for their team name. If the name is duplicated, the name will be granted on a first come, first served basis. The second applicant will be required to choose a different team name. The English team name is limited to 30 letters (including spaces) and there must be no indecency or innuendo. The Organizer has the right to ask teams to change their names.

3. 3. Registration Fee

(1) GMJr.: Teams must pay a USD \$30 (NTD \$800) registration fee. This is a non –refundable deposit and can be paid online during registration. Each team will receive a set of Gigo #7442-A Coding & Robotics Challenge Pack 1. Individual contestants each receive a T-shirt, a set of Gigo #T208 Happy Ox and a commemorative medal. Instructors will receive one set of Gigo #T208 Happy Ox.

3. 4. Up-to-date Information

For up to date information and announcements, please check the event website regularly.

Contestants are expected to take personal responsibility in this regard.

4. Venue Regulations

4.1. Identity Check

Please fill in the Certificate of Student Enrollment shown in section 8.2 and provide appropriate identity documents at the time of the contest. If the required information is not received, contestants will need to be photographed for future reference. If a contestant's identity is in question, proof of identity must be submitted. If the student cannot supply the required proof, they will be disqualified.

4.2. Access Restrictions

During the contest, team leaders or parents are not allowed to enter the contest area or pass anything to the contestants. Any violations will result in a 5-point deduction from the team score.

4.3. Causing Unwanted Disturbances

During the contest, no person or team can disturb the work of other persons, teams or judges in any way. This includes running around or making loud noises. If this rule is violated and a warning has already been given, violators will receive a 5-point deduction.

4.4. On-site Facilities

Competing teams can bring their own tables and chairs if required. Any additional furniture should not obstruct main pathways or exits.

4.5. Communications & Communication Devices

During the contest, contestants shall not speak to or exchange information with any non-contestant. This ban includes team leaders or parents, and all means of communication including phones or written notes. Upon confirming such communication has taken place, an offending team will suffer a 5-point deduction from their score. In the event of distress, contestants should contact event services for help.

4.6. Theft or Sabotage

In the highly unlikely event of any theft, between group sabotage, robbery or fraudulent seeking of another's possessions, event Organizers will first verify the claim. If the claim is verified, the offending team will receive a 5-point deduction as a minimum punishment.

4.7. Permitted Materials

Contestants can carry written materials, pictures, video files and other printed data into the contest area.

4. 8. Video Records for Evidence

To avoid any unwanted controversy after the contest, each contesting team should cooperate with the Organizer to record their project in operation for future reference.

4. 9. Dispute Handling

Contestants should respect the final decision of the Organizer at all times. If there is any doubt about a decision during production or appraisal, the contestants should object to the assessment immediately. If a consensus cannot be reached, the staff present will take contestants to the information counter to fill out an official complaint (see section 8. 4.) and then invite the chief judge to make a final ruling. Contestants shall sign and confirm details regarding the complaint after chief judge has explained the outcome of the appeal. After the contest, no further objections can be raised or heard.

5. GreenMech Junior contest

5.1. Theme: Programing Robo-Sports

5.2. Event Schedule

| 2021 GMJr.- Programing Robo-Sports | | |
|------------------------------------|---|---|
| Time | Item | Remarks |
| 08 : 20 - 08 : 50 (30 mins) | Registration and Materials Inspection | Teams may bring up to 3 robot control boxes, but all device memory must be erased during inspection. |
| 08 : 50 - 09 : 00 (10 mins) | Opening Ceremony | |
| 09 : 00 - 09 : 10 (10 mins) | (i) Regulation reminder (ii) Lot drawing for scoring area | |
| 09 : 10 - 09 : 20 (10 mins) | Warm-up / Practice Time | Teams can prepare for the assembly section of the official competition. |
| 09 : 20 - 09 : 50 (30 mins) | Warm-up / Competition Time | Teams must complete the warm-up challenge within the allotted time. |
| 09 : 50 - 11 : 30 (100 mins) | Official Competition Time | 15 minutes before the official competition, teams draw lots to determine their goals. They will then have 15 minutes to practice on their own in the team preparation area. |
| 11 : 30 - 11 : 50 (20 mins) | Grading Time | |
| 11 : 50 - 12 : 20 (30 mins) | Awards Ceremony | Awards will be given after the results are settled. |

5.2.1. **If a team fails to enter the venue at or before the designated check-in time, due to any force majeure factor, they may still join the competition, however, no time extension or regulation change will be granted. They may only participate in the remaining unspent time.**

5.3 Material Specifications:

With the exception of instructions, the competition map card is standardized for all groups. Other required items are prepared by the participating teams, and must be disassembled. Teams are not

permitted to preassemble any parts of the body in advance. Teams violating this rule will be disqualified.

5.4 Contest Method

5.4.1. Each team may bring up to 3 robot control boxes to participate in the competition. The memory of all devices must be cleared by pressing and holding the delete button for 2 seconds while inspectors are present. The control box body shall not be modified, violation of this regulation results in disqualification.

5.4.2. Warm-up Round

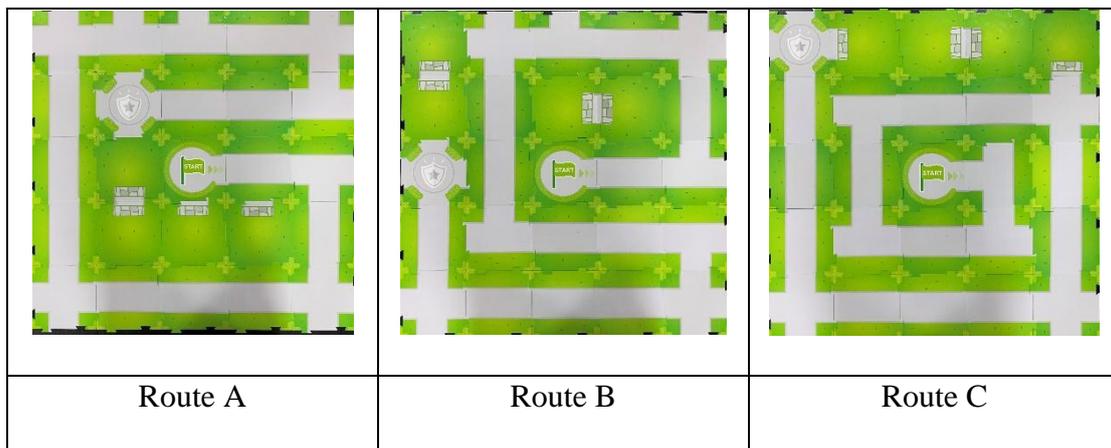
For additional information on the cards, see Appendix 8.1.

- (1) The competition map is shown in Figure (3). Teams must plan a route for their robot by themselves. Beginning at the starting map card, robots must pass, in order, through the cards marked with orange blocks numbered 1 through 5. The destination is the fireworks event map card.
- (2) Each team has three chances to score in the warm-up competition. Success on the first attempt earns 30 points, success on the second attempt earns 20 points, success on the third attempt earns 10 points. Warm-up points contribute to the total score.
- (3) Warm-up competition arena:



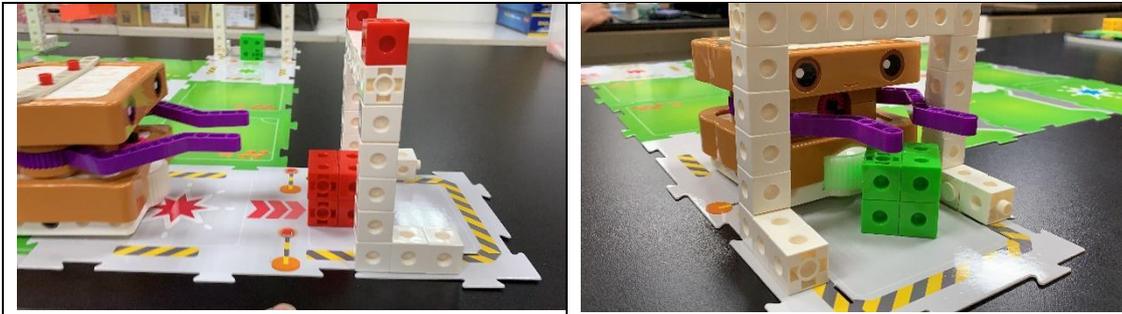
5.4.3. Official Contest:

- (1) The competition is divided into three projects with a time limit of 5 minutes starting after the robot leaves the starting card for the first time. When the front end of the robot control box moves outside the starting map card, the timer will commence. Teams can prepare 1-3 robots for the competition. When one robot is completing the challenge, other robots that are not in use can be used to read program cards by the side of the contest area. When the robot in play stops running, teams are permitted to restart with another at the starting map card when the referee indicates. The timer will not be stopped.
- (2) Contestants can ask the referee to suspend a running robot at any time during the contest. The referee will then signal the team to retrieve the robot. The timer will not be stopped. The part of the project completed up to the point the robot was removed will be included in the total score calculation for that team. If the project passes the same event marker where it was stopped previously, the scored part will not be scored again.
- (3) Project 1: Skating
 - a. The team will draw lots to determine which competition route their robot must follow. Lots will be drawn 15 minutes before the practice round. If the robot fails to follow the route, it will be considered a failure. Within the allotted time, the challenge can be repeated. Winners get 30 points.
 - b. The end point of this project will use the star-event map card, and the rest will use non-functional, general map cards. Robots must follow the route to the star-event map card.
 - c. The three road maps (A, B, C) are shown below. Robots must stay on the road area or the project will be considered a failure.



(4) Project 2: Hockey

- a. The project area is shown in section (d). below. Robots begin at the starting map card. There are three colored base cards on the competition map, red, green and blue. Each base card has a block-puck. Robots should complete the designated action on the base card (earn 2 points), then push the block-puck into the goal (earn 6 points); see images below.



The block-puck is a cube composed of eight CUBES (880-W10-A1). The robot will score a goal when it pushes the puck through the goal posts (earn 6 points).

- b. Designated actions for the base cards:

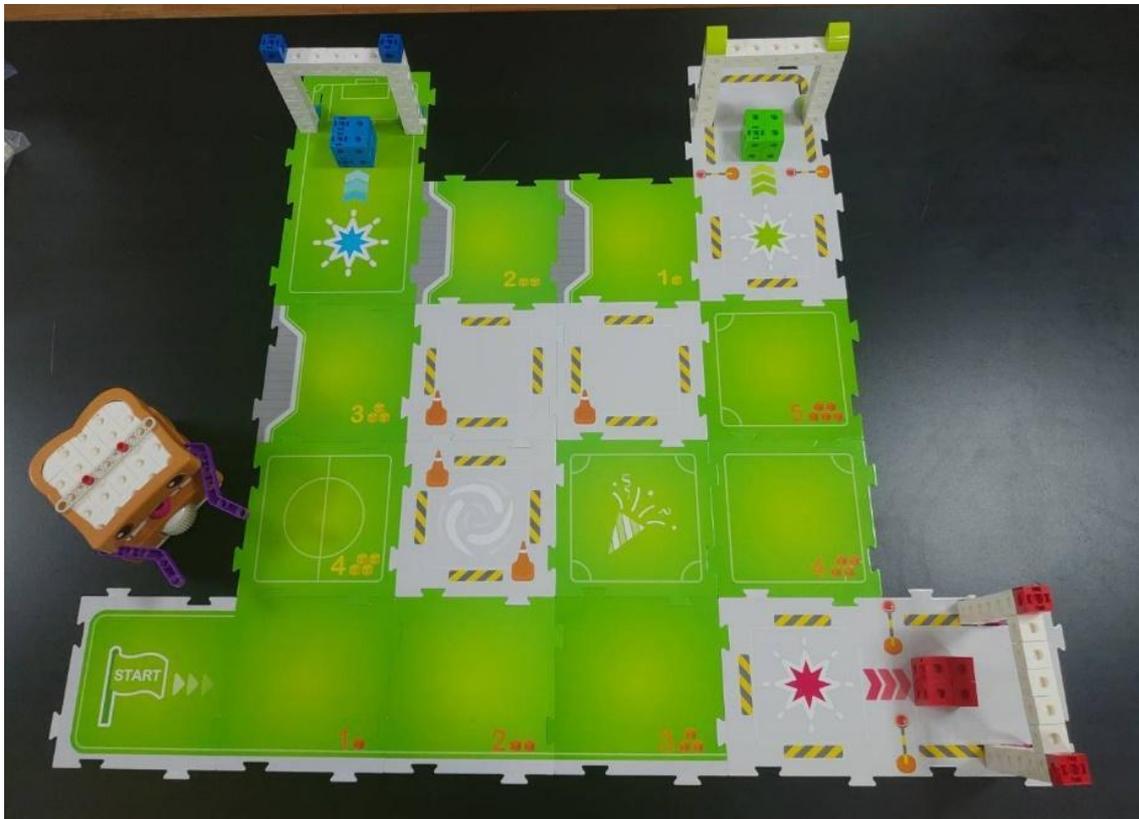
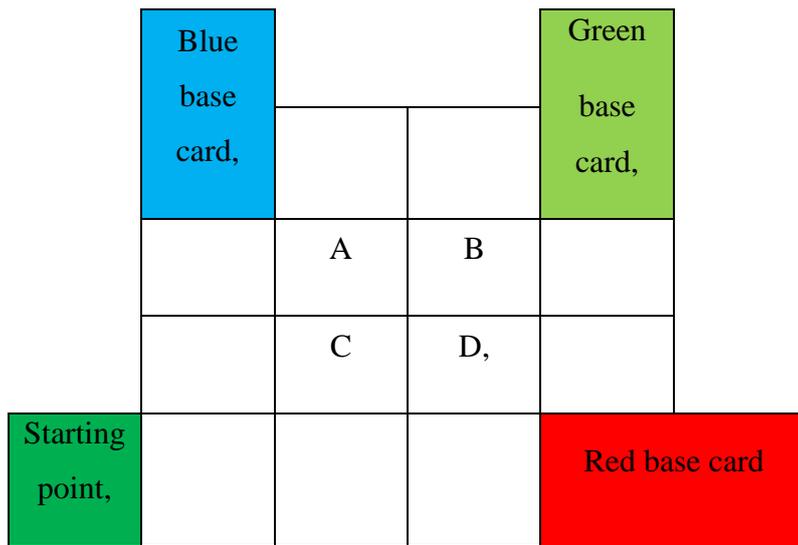
Red: Red light on for four seconds (2 points), and mouse humming sound effect (2 points).

Green: Green light on for five seconds (2 points), and a cheering sound effect (2 points).

Blue: Penguin quack (2 points), and front output gear rotates (2 points).

- c. Extra points and delay traps: Firework-Event Map Cards and Trap-Event Map Cards will be placed in two of the squares marked A, B, C, and D below. The remaining 2 grids are general squares, with no function or punishment. Placement of the extra point and delay cards is decided at random on the day of the event. After completing the specified actions of the three base cards and pushing the ball, to the firework-event map card, teams earn 5 points. If teams land on the Trap Event Map card, the robot must complete the action before it can continue. No points are gained or lost for the Trap event card, but no extra time can be granted.

d. Schematic diagram of the competition map:



(5) Project 3: Football

- a. An example competition map is shown in Figure F. Exact base card positions will be decided on the day, 15 minutes before the competition. All maps contain one blue and one red goal card, one set of orange cards numbered 1 – 5, one set of yellow cards numbered 1 – 5, a love-event map card, and a trap-event map card. Each team will draw a lot to determine the color of the target goal they are attacking. The positions of the red base card, blue base card, start card, and yellow #1 card are fixed.
- b. Dribbling skills: The yellow and orange number cards are used for bonus and deduction points, respectively. The team score is calculated by the number on the yellow number card, multiplied by 5. Orange number cards are used for point deductions, and deductions are calculated by the number on the card multiplied by 5. Card points are only added or deducted once.
- c. Bonus for feint: If robots navigate to the firework-event map card and turn left and right, teams earn an extra 8 points. This bonus is only available once.
- d. Points are deducted for straying into a trap card: 5 points will be deducted if robots go over the trap-event card. Points will only be deducted once.
- e. Shooting goal: After entering the target base card, robots throw the ball into the goal to earn 10 points. The assembly method of the ball is shown below, no variation is allowed in this construction.

SOCCER BALL

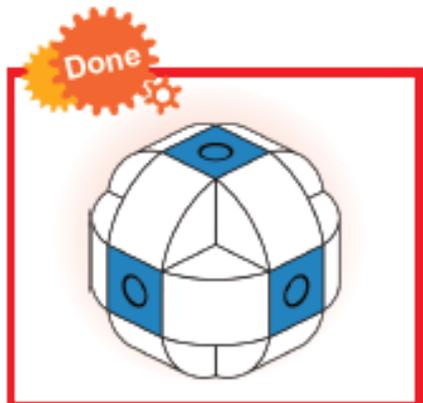
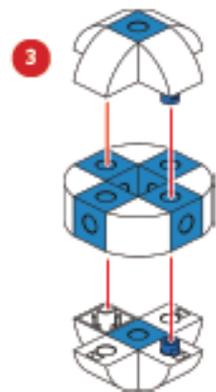
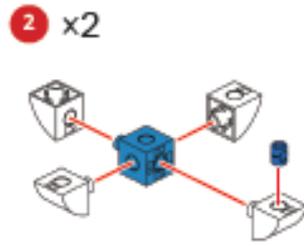
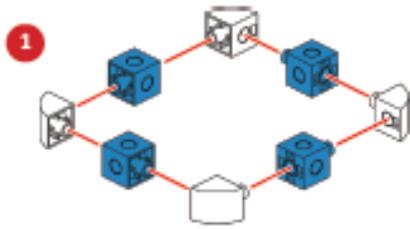


Figure F. Competition map.

| | | | | |
|----------------|----|---------------------|----|---------------|
| | 1 | 2 | 3 | 4 |
| Blue base card | | 5 | 6 | Red base card |
| 7 | 8 | Yellow block 1 ↑ | 9 | |
| 10 | 11 | Starting point | 12 | |



9.5.1 This contest adopts a point based ranking system. If two teams' point scores are equal, the rankings will be arranged according to the following table.

| Sequence order | Sequence item |
|----------------|--|
| 1 | The total score of warm-up and official Score. |
| 2 | The score of official Score Project 3. |
| 3 | The score of official Score Project 2. |
| 4 | The score of official Score Project 1. |
| 5 | Warm-up Score. |
| 6 | The official contest total time. |

6. Awards

6.1. GreenMech Junior Contest Award

| Position | Prizes | Number of Awards |
|-----------------|---|---|
| Gold Medal | <ol style="list-style-type: none"> 1. Award certificates for contestants and team leaders. 2. One product prize for each participant. 3. One Princess Cup Trophy | One team for each division |
| Silver Medal | <ol style="list-style-type: none"> 1. Award certificates for contestants and team leaders. 2. One product prize for each participant. 3. One Princess Cup Trophy | One team for each division |
| Bronze Medal | <ol style="list-style-type: none"> 1. Award Certificates for contestants and team leaders. 2. One product prize for each participant. 3. One Princess Cup Trophy | One team for each division |
| Honorable Award | Award certificates for contestants and team leaders. | For top 50 th percentile in each division. |

6.2. Award Revision

The Contest Organizers hold the right to adjust the above prize schedules for any reason, which may mean increasing or decreasing them. The total number of teams entered in the competition may be a factor in deciding final prizes if the number of contestants' changes.

6.3. Award Distribution

The Gold Medal, Silver Medal, Bronze Medal winners will be announced on the day of the contest. All certificates will be sent to the either the school representative or team leader listed on the registration document. Certificates will be sent after the contest and can be expected to arrive within one month of the award ceremony.

6. 4. Competition Certificates

All contestants will be presented with digital certificates as a gesture of encouragement. These certificates will be downloadable by contestants and team leaders after the contest, and can be printed by participants.

6. 5. Awards Delivered by Mail

Merit certificates for winning teams will be sent out within one month of the completed contest. Please pay attention to official website announcements. Winning teams that have not received awards should contact the Organizer for replacements. In the event of incorrect personal information being submitted during registration (i.e. wrong name, mail or email address) postage and other costs for replacement will be borne by the contestant for USD\$7(NTD\$200).

6. 6. Winning Team Obligations

Winning teams must cooperate with the Organizer to display and preserve their works.

7. Legal Policy

7.1. Contestant Insurance

The Organizer shall buy group insurance for all the contestants. This covers the day of the contest only. The contestants and the team leaders shall fill out their correct personal information in the Registration Information Form online. Without this, the Organizer will not be able to buy group insurance and cannot be held liable for payment of any damages.

7.2. Intellectual Property Rights

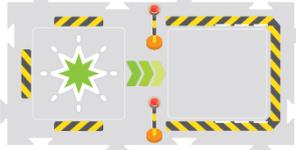
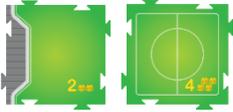
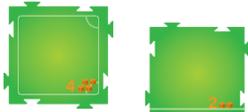
During the online registration, team leaders must sign to confirm the contestants' original production statement and to ensure their works do not infringe on known patent or intellectual property rights of others. If the contestants need to use another person's IPR, they must submit a letter of authorization from the copyright owner at the time of registration to prove legitimate use.

7.3. Organizer's IPR

All competing teams shall grant their project's IPR to the Organizer, who for the need of publicity, is entitled to revision, photography, publishing, book-compilation, exhibition, production and plate display of the created works, with no objection from the winners. In case the Organizer needs to carry out derivative designs of the award-winning work, the winners should cooperate in supplying pictures.

8. Attachment

8.1. Code Card Definitions

| | | | |
|---|---|--|---|
|  | <p>Starting Point Map Card</p> |  | <p>Fireworks- Event Map Card</p> |
|  | <p>Love-Event Map Card</p> |  | <p>Stars-Event Map Card</p> |
|  | <p>Trap-Event Map Card</p> |  | <p>Red Base Card</p> |
|  | <p>Blue Base Card</p> |  | <p>Green Base Card</p> |
|  | <p>Yellow blocks No.1-No.5 map card</p> |  | <p>Orange blocks No.1-No.5 map card</p> |
|  | | | <p>General map card</p> |

8.2 Student Enrollment Certificate

2021 World GreenMech World Cup - Certificate of Student Enrollment

| | | |
|----------------|--------------------------|--------------------------|
| Team Name | | |
| Contest | | GreenMech Junior |
| Photo | Clear photo of the face. | Clear photo of the face. |
| Student Name | | |
| School & Grade | | |
| Date of Birth: | | |

I certify that the above students are still studying in our school and that the above information is correct.

Signed: _____

Director of Academic Affairs: _____

Principal: _____

Date: _____ (dd/mm/yyyy)

8.3 Complaint Form

2021 World GreenMech World Cup- Complaint Mediation Form

| | |
|---------------------|--|
| Plaintive Team | |
| Plaintiff | |
| Complaint Details | |
| Case Officer | |
| Resolution | |
| Plaintiff Signature | |

Notes:

Those who have not filled out this appeal will not be accepted; the overseas team and the GreenMech Junior teams may be sent by Organizers to file the complaint; however, they must still sign it personally to confirm that the details of the complaint are correct.

After the judge has made understood the situation and made a ruling, they must complete the section marked “Resolution” and explain the remaining process to the plaintiff.

If the plaintiff is still dissatisfied with the result of the treatment and refuses to sign, the judge may add a “refusal” in the “Plaintiff Signature” field.