

2019 World GreenMech Contest Regulations

GreenMech Junior



Hosts : National Chung Hsing University, World Forum for GreenMech Promotion

Co-organizers : Genius Toy Taiwan Co., Ltd

World GreenMech Contest Official Website : www.worldgreenmech.com

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

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1. Contest Purpose

The 2019 World GreenMech Contest is a fun engineering competition run by the World Forum for GreenMech Promotion. Using scientific principles, this competition combines the five aspects of learning and growing : Science, Technology, Engineering, Art, and Mathematics, also referred to as STEAM. There are three contests : (i) GreenMech (ii) R4M and (iii) GreenMech Jr.

The three contests inspire contestants to engage in scientific study, creative problem solving, and help them better understand use of scarce resources in project planning. Contestants can enjoy pitting their different skills and creativity against each other in a fun and friendly environment. There is ample opportunity for all contestants to show the benefit of their contribution.

GreenMech Jr. began in 2018 to give entry level opportunities for newcomers to get involved. Designed for kindergarten 1st grade and elementary school grades 1 to 4, GreenMech Jr. (GMJr.) is the stepping stone to the higher-level device designs found in GreenMech. Contestants can enjoy the fun of hands-on design, teamwork and scientific literacy. All the skills developed in the contests will be internalized and can be carried into the contestants' future lives.

2. Contest information

2.1 Summary Events :

2019 World GreenMech Contest		
Contest Name	GreenMech Jr.	Remarks
Participant Selection	1. Kindergarten 1 st Grade 2. Full-time students in grades 1-4.(Birthday is between September 1, 2008 and August 31, 2013).	Students in education until June 4, 2019.
Team Size	1 to 2 people.	For rules governing replacement of team-mates see section 2.1.1.
No. of Instructors	1 person.	Instructors can be a teacher or parent.

2.1.1 Player Replacement

If a player should be unexpectedly absent from the contest for any reason, the team leader should apply for a player replacement prior to July 19th 2019.

2.2 Enrollment & Qualification

Notes	County/city level regional contests	Remarks
Enrollment through Gigo's distributors is strongly recommended.	Recommended by the Gigo's distributors in accordance with the prescribed quota.	Gigo's distributors should report the recommendation list to the Organizers on or before May 31, 2019.

2.3 Event Schedule

	Online Registration Date	Admission Announcements	Contest Date	Contest Location	Remarks
Regional Contests	1. Regional contests will be arranged by Gigo's distributors. 2. Afterward the distributors will submit a list of recommendations to the organizers before the end of May, 2019. 3. Organizers will offer a Verification code for registration. Overdue submissions will result in lost registration quota.				
2019 GMJr. Contest	2019.6.04~ 2019.6.14 (Teams must complete registration online.)	2019.7.1	2019.8.1	National Chung Hsing University	Rainy day back-up plan, please refer to Section 2.4.

2.4 Force Majeure & Unforeseen Circumstances

In case of force majeure, the content will be postponed until August 2, 2019. Schedule amendments will be subject to Taichung City Government announcements regarding working-days due to dangerous weather or other natural phenomena. The location will remain the same (National Chung Hsing University) unless specified. For up to date information please visit the World GreenMech website.

3. Notes for Applicants

3.1 Notes for Applicants: Participation must be completed within the time limits for online registration.

3.2 Team names: If two teams select the same name, the name will be granted on a first come, first served basis. The second applicant will be required to change their team name. The Chinese team name is limited to a maximum of 7 characters. The English team name is limited to 30 letters (including spaces) and there must be no indecent or innuendo. The Organizer has the right to ask the team to change its name.

3.3 Registration Fee: Teams must pay NTD \$800 registration fee, not deposit. Please pay online to completed registration.

Each team will receive a set of Gigo #1261 Scientific Tour, individual contestants will each receive, one T-shirt, a Gigo #T191 Pink Pig, a Certificate of Participation, and a commemorative medal. Instructors will receive a Gigo #T191 pink pig and a Certificate of Participation.

3.4 Up to date Information:

Up to date information and announcements are available on the event website.

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 8.1 and submit the required identity documents at the time of the contest. If you have not submitted the required information, contestants will need to take a photo for future reference.

4.2. Access Restrictions: During the contest team leaders or parents are not permitted to enter the contest area or pass anything to contestants. Any violations of this rule will result in a 5-point deduction from the team.

4.3 Causing Unwanted Disturbances

During the contest no person or team is allowed to disturb the work of other people, teams or the judges in any way. This includes running around and/or making loud noises. If this rule is violated and a warning has already been given, there will be a 5-point deduction from the team.

4.4. On-site Facilities

This contest only provides the contestants with display tables (two teams share one table). Competing teams should bring their own chairs if required and should not obstruct the main passages.

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

4.7. Permitted Materials

Contestants are allowed to carry written materials, pictures 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 the determination during production or appraisal, contestants should object to the assessment immediately. If a consensus cannot be reached, the staff will take contestants to the information counter to fill out a complaint form (please refer to 8.2) and invite the chief judge to make a final ruling. Contestants shall sign and confirm the complaint after the chief judge explains the outcome of the appeal. After the contest, no further objections can be raised or heard.

5. GreenMech Junior Contest

5.1. Theme: **【Competition One: Race Car】** , **【Competition Two: Inertia Flywheel】**

5.2. Event Schedule

GreenMech Junior Schedule		
Time	Item	Remarks
08 : 40- 09 : 00	Registration and Materials Inspection	<ol style="list-style-type: none"> 1. Contestants should refer to the team location map on the official website before the contest begins, so they can go directly to their team table and report on the day of the contest. 2. Contestants should check the provided materials against the list they are given. If there is any part missing, the staff must be informed before the contest begins. Once the production time begins, materials cannot be replenished or replaced. 3. Contestants need to present their Certificate of Student Enrollment at this time, please see 8.2 in the full rule book for more information.
09 : 00- 09 : 10	Opening Ceremony	
09 : 10- 09 : 15	Rules reminder & lot drawing for scoring area	
09 : 15- 09 : 45	【Competition One: Race Car】 Assembly & Practice Time	<ol style="list-style-type: none"> 1. Contestants can only use the materials provided by the organizer on site, please see 5.3 in the full rule book for more information. 2. Models produced for the competition are built and tested at the same time.
09 : 45- 10 : 15	【Competition One: Race car】 Competition Time	<ol style="list-style-type: none"> 1. During the competition contestants may only use the provided peg remover. Other outside tools are not permitted. 2. Models will be weighed before the competition begins.
10 : 15- 10 : 45	【Competition Two: Inertia Flywheel】 Assembly & Practice Time	<ol style="list-style-type: none"> 1. Contestants can only use the materials provided by the organizer on site, please see 5.3 in the full rule book for more information.

		2. Parts and pieces for models will be reused. The model used for the first competition will need to be disassembled for the second contest.
10 : 45- 11 : 15	【Competition Two: Inertia Flywheel】 Competition Time	1. During the competition, contestants may only use the provided peg removal tool. Other outside tools are not permitted. 2. Models will be weighed before the competition.
11 : 15- 11 : 40	Site Recovery	Participants located in venue area B1 should move to the 2F awards area.
11 : 40- 11 : 50	Parents, teachers may enter venue	
11 : 50-	Awards Ceremony	Awards will be given after the results are settled.

5.2.1 If a team fails to enter the time at check-in due to any force majeure factor, they may still join the competition, however they may not request an extension to the contest time or other regulation changes. They may only participate in the remaining unfinished time.

5.3. Contest Objectives

5.3.1. Material Specifications:

This contest equipment is standardized for all groups and includes: 1 set of Gigo #1261 Scientific Tour (excluding instructions), 1 ball (A-40mm Gigo ball, the diameter of the ball is 40mm, the weight is about 8 grams, PE material), 20 rubber bands. Do not prepare or bring other materials or tools.

5.3.2. The materials used in this competition are meticulously standardized and checked by the Organizer. No additional tools or materials (including blocks) shall be provided or bought in from outside. Teams violating this rule will be disqualified.

5.4. Contest method

5.4.1. 【Contest one: Race Car】 Contestants can refer to the Gigo#1261 Elastic Car Model

a. Production Restrictions :

- (1) Each team must make a car, the chassis and body are not limited. The model must be completely placed in the preparation area. The full length and breadth of the vehicle must not exceed the sides of the preparation area.

Rubber bands will be used as a power source, and scoring gear must be made (as shown in Figure 1. The scoring gear can be placed anywhere on the car body. If the scoring gear is not attached, the contestant will not receive a score.

b. Contest Method

- (1) The elastic car will be operated with a single hand and prepared in the preparation area. No part of the car may exceed the starting line. If contestants find that the car body is faulty after commencement, the judge will allow up to 30 seconds of repair time. If contestants still cannot operate the vehicle after 30 seconds, the score is 0.)
- (2) If the scoring gear spans two scoring areas, the higher score area is taken to be the correct reading.
- (3) This competition uses rubber bands for propulsion. If a contestant tried to move the vehicle in other ways such as pushing by hand, the first violation is given as a warning, and the second violation result in a zero score.
- (4) Each team has two chances to compete and takes the sum of the two results.

c. Scoring Gear & Installation (Installing a C-40T Gear)

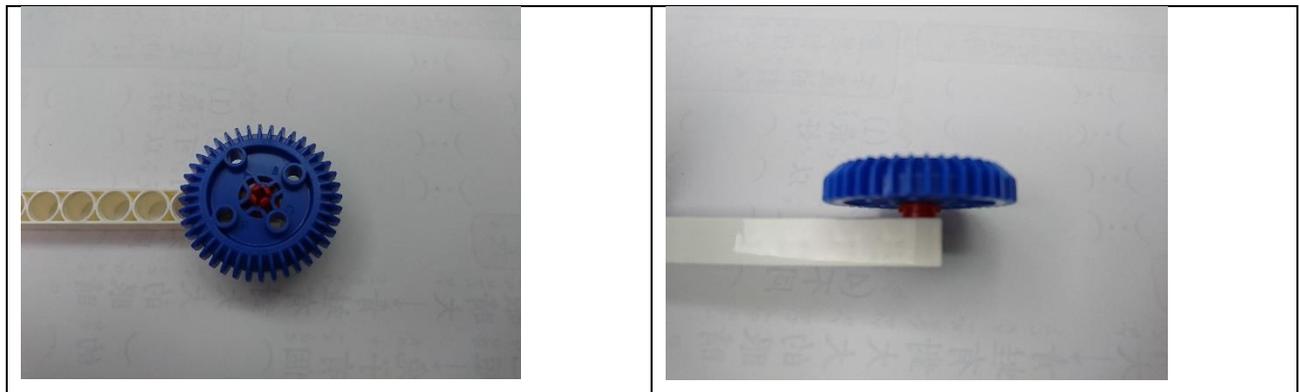
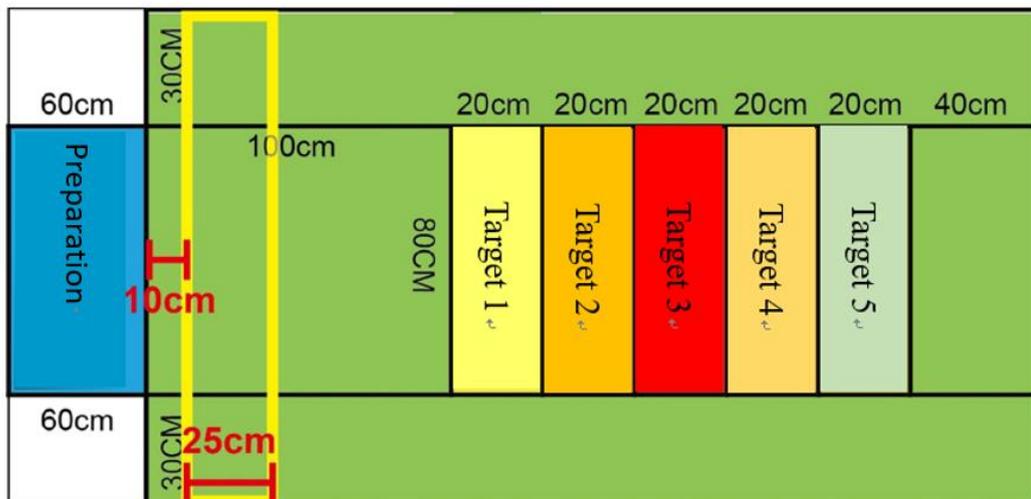


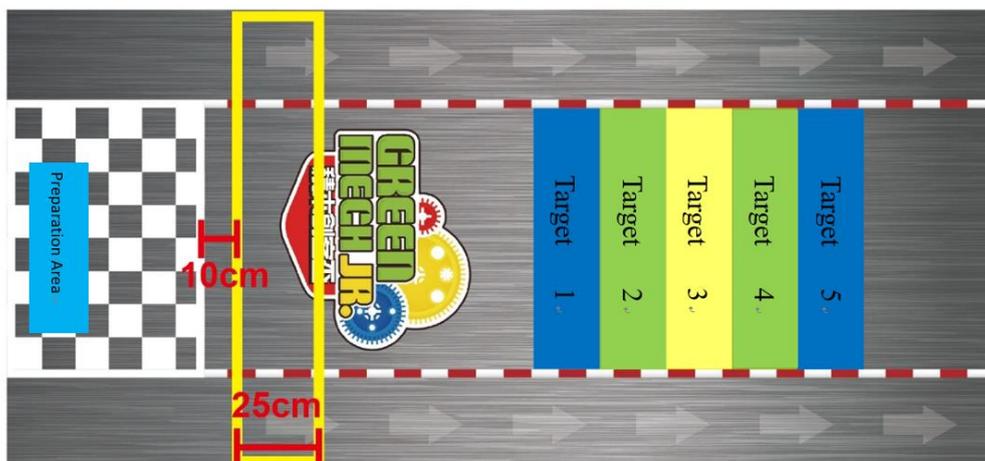
Figure 1. Diagram of scoring gear for use on race car.

d. Competition Figure and Description

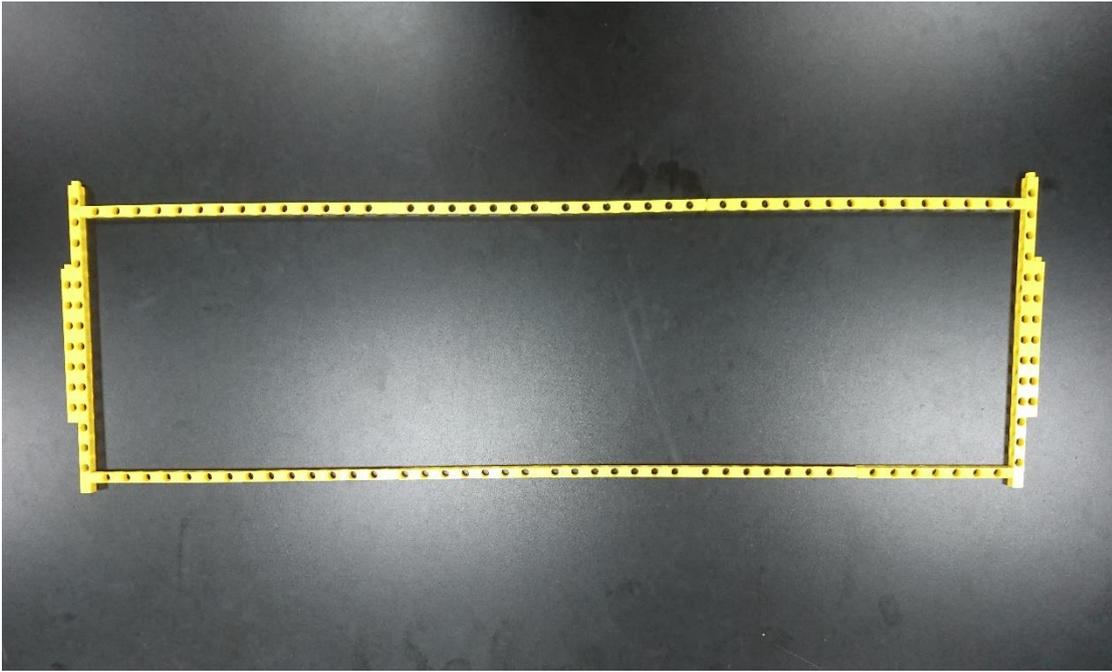
- (1) The competition area is as shown below (unit: cm). At the beginning of the production time, the scores for each target area will be announced (1 zone will be worth 10 points, 2 zones will be worth 5 points, 2 zones will be worth 3 points, non-target areas are worth 1 point). Attempts outside the playing area will not score points. Contestants shall only practice with their models during the practice and assembly time. During the competition time, practice is not allowed. Contestants are encouraged to manage their time carefully in order to get the best result.
- (2) In addition to the scoring area shown, a rectangular frame made of 15-hole dual rods will be placed 10 cm behind the starting line and the racing car has to drive through this area.
- (3) The site is prepared by the organizers in large format printing in water-based pp photographic paper and will be placed on the ground.



(Above: 300cm x 140cm)



(Above: Output Pattern, 300cm x 140cm)



(Above: Rectangular frame, inner edge 150cm x 25cm. Frame will be fixed to the ground.)

5.4.2. 【Competition Two: Inertia Flywheel】

(Contestants can refer to the Gigo #1261 Flywheel Model)

a. Production Restrictions:

- (1) Each team produces a car with a flywheel device. The flywheel is a kind of mechanical device used to store the rotational kinetic energy in the rotary motion. The external force acts on the wheel. When the external force stops, the wheel can continue to move.
- (2) The size of the car body is not limited, but it must fit completely within the preparation area (80cm x 60cm) and should not exceed the range of the preparation area.

b. Contest Rules:

- (1) This competition will use the racing car site (pictured P12). The target will be placed at the red dot in the figure below. The target includes: 6 empty “YOIIS” cups of the kind shown below and 4 “Bifido” bottles (with water so they weigh approximately 180g). Each team must use a flywheel made by the team to push the target forward. Each target knocked down will earn a team 2 points. To be considered a knockdown, the whole side of the object (cups or bottles) must be down on the floor without lean on any other object which are car or object.

	
<p>Image of the “YOIIS” cup. Cup mouth is approximately 8.9 cm in diameter, and 8 cm in height, it weighs about 13 grams.</p>	<p>Image of the “Bifido” cup. The bottom of the bottle is about 6.8 cm in diameter, 17 cm in height, and weighs about 180 grams after water has been added.</p>

- (2) Each team has three opportunities to score and targets will not be reset after each opportunity. Judges will remove target objects that have been knocked over so they do not interfere with the contest. The judge may decide not to pick up when there is contact with other targets, or when there is a possibility other standing targets may be affected. If a contestant strikes all 10 cups down (Strike) in round one, they are awarded 5 extra points. If a contestant, on the second attempt knocks down all remaining cups (Spare), they will be awarded 3 extra points. If a contestant knocks down all remaining cups on the third attempt they will receive 1 extra point.
- (3) Each team must send a team member to operate their device (the flywheel). Before making the car body move forward, the car must be put down vertically in place with no push forward movement. The first violation of this rule is considered a warning and contestants may make a second attempt, a second violation will be considered a failure to operate. The placement point of the target object is as shown by the red dots in the figure below, and there are three possibilities in the following illustrations: A, B, C and target area score will be announced on the day of the contest. Contestants should aim to get the best score possible.



Target configuration diagram A	Target configuration diagram B	Target configuration diagram C
※Red dots represent “YOIIS” cups and green dots represent “Bifido” bottles.		

5.5.

Criteria

5.5.1. This competition adopts a points system. If two teams' point scores are the same, the rankings will be arranged in the order of the following table.

Sequence order	Sequence item
1	Score of two tasks
2	Score of task two.
3	Score of task one.
4	Total weight of two tasks. lower weight device is the winner

6. Awards

6.1. GreenMech Junior Contest Award

Position	Prizes	Number of Awards
Gold Medal	<ol style="list-style-type: none"> 1. Award certificate for contestants and team leader. 2. One product prize for each participant. 	One team
Silver Medal	<ol style="list-style-type: none"> 1. Award certificate for contestants and team leader. 2. One product prize for each participant. 	Two teams
Bronze Medal	<ol style="list-style-type: none"> 1. Award Certificate for Contestant and team leader. 2. One product prize for each participant. 	Three teams
Honorable Award	Award certificate for contestants and team leader.	For top 50 th percentile

6.2. Award Reporting

The winners list will be reported to the educational authorities by the Organizer after the contest.

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 received the day after the award ceremony by the team leader.

6.4. All contestants will be presented with certificates as a gesture of encouragement. These certificates will be offered to both contestants and team leaders on the contest day.

6.5 Awards to be 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 a replacement. 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.

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 online registration, team leaders must sign to confirm the contestants' original production statement and to ensure their works do not infringe known patent or intellectual property rights of others. If the contestants need to use others 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 and the documents.

8. Appendix & Forms

8.1 Student Enrollment Certificate

2019 World GreenMech World and Taiwan 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.

Signatory: _____ Director Of Academic Affairs

Principal

_____ (dd/mm/yyyy)

8.2. Contest Complaint

2019 World GreenMech World and Taiwan Cup Complaint

Plaintive Team	
Plaintiff	
Complaint Details	
Case Officer	
Resolution	
Plaintiff Signature	

Notes :

- (1) 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.
- (2) 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.
- (3) 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.