ENJOY AI 2026: Mining Expedition

Competition Rules

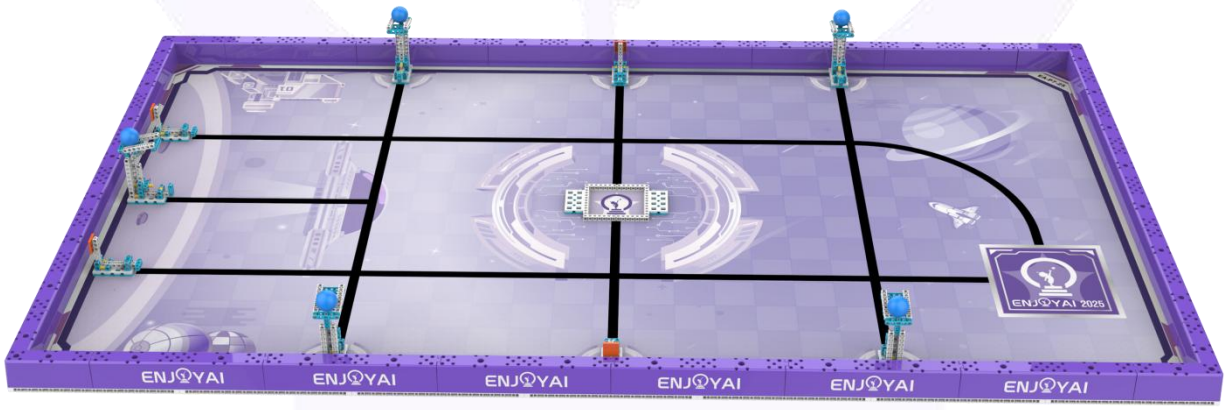
1 Competition Theme

Welcome to the world of ENJOY AI! You—a young and brave explorer—are facing your very first challenge: the search for power. Energy is the key to unlocking a deeper ENJOY AI world exploration, and your mission begins with the detection and mining of mysterious minerals. In this simulated scenario, you'll remotely control or program a robot to explore, identify, and extract these valuable resources.

2 Competition Field and Environment

2.1 Competition field

The competition field, covered by a 216 × 120 cm map (see Fig. 1) is made of PU fabric or printed cloth, with a network of black guide lines on it. Each guide line is around 2 cm wide.



The base is on the right side, with 30 × 30 cm in size.

Fig.1 Competition field for elementary school participants

2.2 Competition environment

The competition field has fixed edge frames. The field should have cool, soft lighting and no magnetic interference. The field conditions may change, like different surfaces, small bumps, lighting or position. Participants are not allowed to change any elements, especially the fixation of the field and task models. Please keep these in mind when building your robots.

3 Tasks and Scoring

The tasks are set in fictional scenarios. Please do not confuse them with real-life situations.

3.1 Element discovery

3.1.1 Task model: The model has two magnets that attract each other and a platform holding a blue EVA foam block about 3.5 cm per side (see Fig. 2).

3.1.2 Model position: The models are fixed on the map at points A, B, C, D, and E, with the push rod oriented towards the reference lines.

3.1.3 Scoring rule: Each element block that falls off the platform gets 10 points (see Fig. 3).

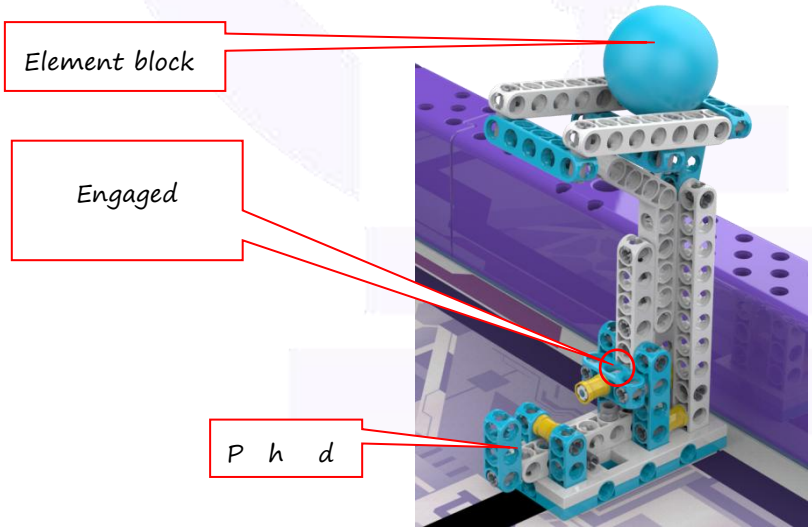


Fig.2 Initial state

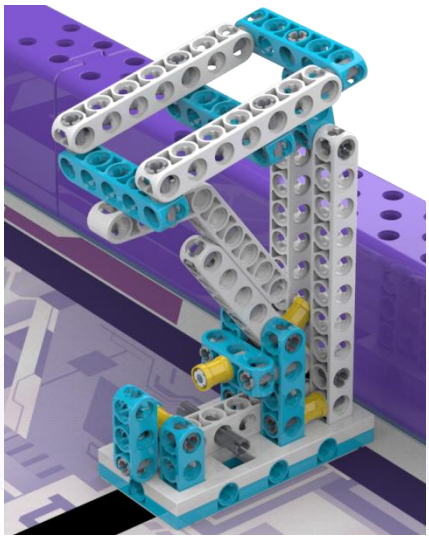


Fig.3 Final state

3.2 Element collection

3.2.1 Initial state: The collection zone is set up in the center of the map (see Fig. 4).

3.2.2 Scoring rule: Each block that is partially or fully placed inside the collection zone gets 20 points.

Fig.4 Collection zone

3.3 Quick battery replacement

3.3.1 Initial state: The decorative part stands upright to the base (see Fig. 5).

3.3.2 Scoring rule: Each model whose decorative plate lies parallel the base gets 20 points (see Fig. 6).

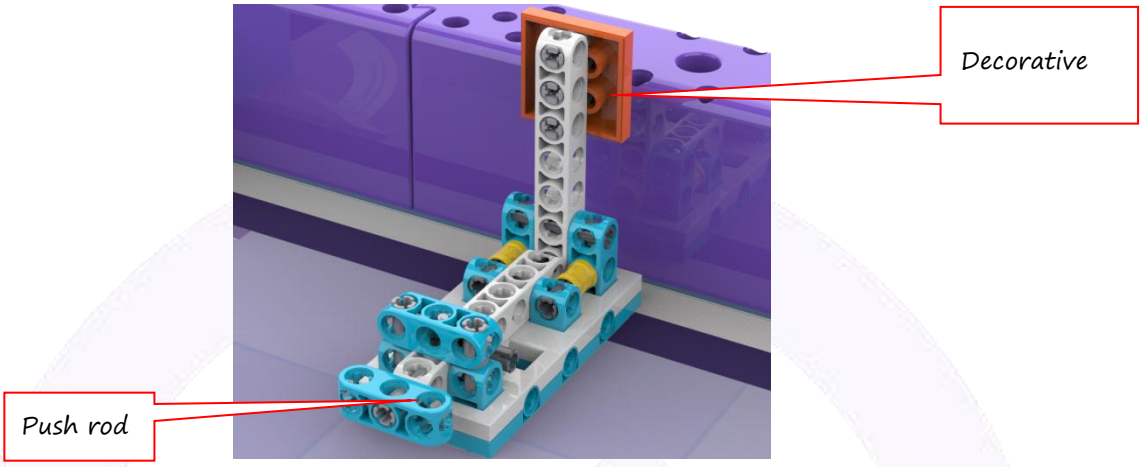


Fig. 5 Initial state

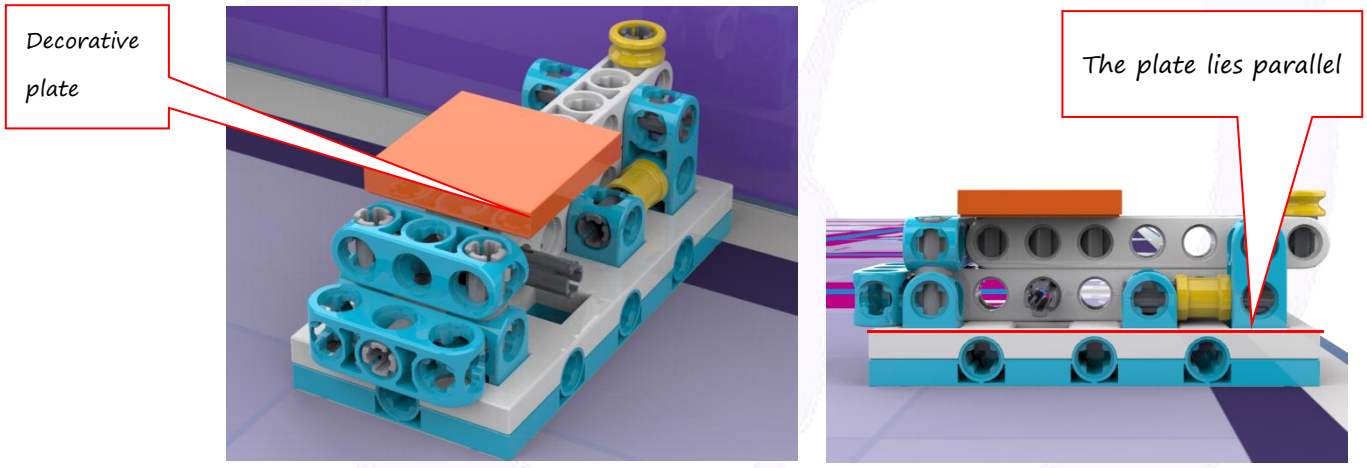


Fig. 6 Final state

3.4 Bonus task

The bonus task is designed by the organizing committee. If it is included, rules will be revealed before debug.

4 Robot

4.1 Robot size: The robot cannot exceed 30 × 30 × 30 cm (L*W*H) before leaving the base.

After that, parts of the robot can unfold or expand as needed.

4.2 Controller: You cannot change your controller during a single match. You must use only one controller for each robot. The controller must be an integrated circuit board without extensions or additional circuit boards.

4.3 Motor: You can use at most 4 motors (including servos) for each robot in a single match.

4.4 Sensor: No restriction on the types and number of sensors for each robot.

4.5 Structure: The main frame of the robot (such as the chassis of a wheeled robot) must be made of metal.

4.6 Drive wheel: No restrictions.

4.7 Power supply: The robot must be powered by an onboard battery. The battery voltage cannot exceed 5V, and you cannot use circuits to change the voltage.

4.8 Each team can use only one robot. You cannot share your robot with other teams.

5 Competition

5.1 Participating team

5.1.1 Each team must have two students and one coach. The students must still be enrolled in school as of June, 2026.

5.1.2 Contestants should proactively deal with problems they may meet during the competition. They must respect and politely communicate with their teammates, opponents, volunteers, referees, and all those who contribute to the competition.

5.2 Competition format

5.2.1 The competition will be grouped by elementary school grade levels.

5.2.2 There will be no separate preliminary or intermediate rounds. Every team will have an equal chance to compete, and every round will be scored.

5.2.3 The tasks to be completed will be clearly marked (including Bonus Tasks where applicable). The number of tasks and the placement of task models may differ between divisions. The organizing committee will decide on any adjustments and announce the final plan before the competition begins.

5.2.4 Teams will be ranked by their total points of all rounds after the competition is completed.

5.2.5 The organizing committee may change the competition format based on the number of signed-up teams and the actual venue setup.

5.3 Procedure

5.3.1 Building and programming

5.3.1.1 You can code and debug your robot only in the allowed area of the competition field.

5.3.1.2 Teams can build their robots ahead of time. They must sign in before entering the preparation area. Referees will check all tools and parts to make sure that they can be used in the match.

5.3.1.3 If a team goes online, downloads files, or takes photos or videos of the field, their score for that round will be cancelled.

5.3.1.4 Teams will have some time to test and adjust their robots before the match. After that, robots must be placed in the set area. Once placed, teams can't change the robot, download programs, or switch the controller until the match is over.

5.3.1.5 After a round end, teams can fix their robots and update the program in the prep area, but they must keep the same turn order for the next round.

5.3.2 Pre-match preparation

5.3.2.1 Take your robot and follow the guide into the match area. If you and your teammates are late, your team will lose the match.

5.3.2.2 Team members on the field must stand near the robot base and must not lean against the competition table.

5.3.2.3 Put your robot into the robot base. The top-down projection of the robot (including any attached components) cannot extend partially or entirely beyond the robot base.

5.3.2.4 Attending team members must finish all preparations within one minute, during which the robot must remain within the robot base, and no program modifications or downloads are allowed. Once you are ready, signal to your referee.

5.3.3 Start of a match

5.3.3.1 After the match starts, your robot starts moving on its own.

5.3.3.2 When referees confirm that a team is ready, they will count down "3, 2, 1, start". After hearing "start", you can start your robot.

5.3.3.3 If a robot moves before "start" is said, it is a false start. The team will get a warning or a penalty.

5.3.3.4 Each round consists of an auto phase and a manual phase.

Auto phase (0–60s): During the first 0–60 seconds, the robot must run only by its own program after leaving the base. Remote controls must be placed outside the field, and team members cannot touch them during this time.

Manual phase (60–180s): In this phase, you can control your robot either through pre-programmed instructions or remote control.

5.3.3.5 After the robot starts, no parts should come off or be left on the field. If parts fall off by accident, the referee will remove it and the players cannot use it again in that round. If players make a part come off on purpose to complete the task, their score for that task will be cancelled.

5.3.3.6 Once the match starts, if a task model leaves the field, it cannot be returned until the current round ends. Any loose or broken model during the match will be taken away by the referee and won't count for points.

5.3.4 Retry

5.3.4.1 A retry will be triggered in any of the following cases:

(1) You touch the robot after it leaves the robot base.

(2) The robot goes off the competition field.

(3) You operate a robot that has left the base using a remote-control device.

5.3.4.2 During a retry, the field must stay the same (unless the rules say you can reset certain parts). The robot must be carried back to the base.

5.3.4.3 Tasks that are completed before the retry will still count.

5.3.4.4 The number of retries for each round is not limited. The timer won't stop or restart during retries.

5.3.5 The autonomous return to robot base

5.3.5.1 The robot can be programmed to return to the robot base as many times as needed without being considered as retries.

5.3.5.2 The return is considered successful only if the top-down projection of any part of the robot is entirely within the boundaries of the robot base.

5.3.5.3 After the robot returns, you can touch the robot to make changes or repairs.

5.3.6 End of match

5.3.6.1 Each round lasts for 180 seconds.

5.3.6.2 If participant decide to stop the competition, raise hand to signal the referee. The referee will stop the timer and end the match. Otherwise, wait until the referee announces that the match is over.

5.3.6.3 Once the referee announces the end of the match, teams must immediately turn off their robot and are not allowed to touch the robot or any models on the field. If a team or their robot changes the position or state of any model, they will lose points for the related task.

5.3.6.4 The referee will read the final score. If something is wrong, the team may ask for a fix. If there is no problem, the team must sign to confirm. If there is a disagreement, a student can report it to the head referee.

5.3.6.5 After the round ends, teams must return the field to its original setup and take their robots to the preparation area.

6 Scoring

6.1 After each match, points will be given based on the tasks the robot completes. If a team or their robots damage the model of a completed task before the match ends, their score for that task will be cancelled. For the scoring rule of each task, see Section 3 in this document.

6.2 The order in which your complete tasks do not affect your points for a single task.

6.3 If a team finishes the run smoothly without any retries, they will get 40 points. With one retry, they get 30 points; with two retries, they get 20 points; and with three retries, they get 10 points. After the fourth retry, the team gets no points.

7 Fouls and disqualification

7.1 If a team doesn't arrive 15 minutes after the match starts, the team will not be allowed to continue that round.

7.2 If a team has a false start for the first time, it will get a warning. The robot must return to the standby area to restart, and the timer will be reset. If there is a second false start, the team will not be allowed to continue the round.

7.3 If a team's robot hits any part of the field and causes damage, the team will get a warning. If it happens a second time, the team's score for that round will be canceled.

7.4 If a team or their robots damage a task model, the team will receive a warning and their score for that task will be cancelled.

7.5 If any team member who is not currently competing interferes with the match, the team will not be allowed to continue that round, and the affected team will be allowed to restart the match.

7.6 If any team member touches a task model outside the robot base, that model will be considered invalid, and the match will be stopped immediately. The team's score will be counted based on the current state.

7.7 If a team doesn't follow the referee's instructions, their score for that round will be cancelled.

7.8 If a team goes online, downloads files, or takes photos or videos of the field, their score for that round will be cancelled.

7.9 If a team contacts coach or parents without permission from the chief referee, their score for that round will be cancelled.

8 Ranking

8.1 Teams in each division will be ranked by total scores. If there is a tie, the following rules will be used one by one until the tie is broken:

(1) The team with shorter time across all rounds ranks higher;

(2) The team with fewer retries across all rounds ranks higher;

(3) The team with the highest single-round score ranks higher.

8.2 Awards are given based on the team's ranking. Teams with 0 points or that quit the competition will not get a ranking. Awards include Champion, Runner-up, Third Place, and First/Second/Third Prizes.

Appendix:

Scoring Sheet of Mining Expedition				Round__	
No.		Team		Division	
Task	Description		Full points	Scored points	
Element discovery	The element block falls off or is released from the platform.		10/each		
Element collection	The element block touches the map area inside the collection zone.		20/each		
Quick battery replacement	The decorative plate lies parallel to the base.		20/each		
Bonus task	If there is a bonus task, detailed rules will be provided in the official on-site announcement.		100		
Extra reward	40-10 x Number of retries (>0)				
Total score					
Time spent					
Score Confirmation					

I hereby confirm that the scores recorded above are accurate, valid, and reflect the true results of the match. I have no objections.			
Team members:		Referee:	
Remarks			
Chief referee:		Scorekeeper:	