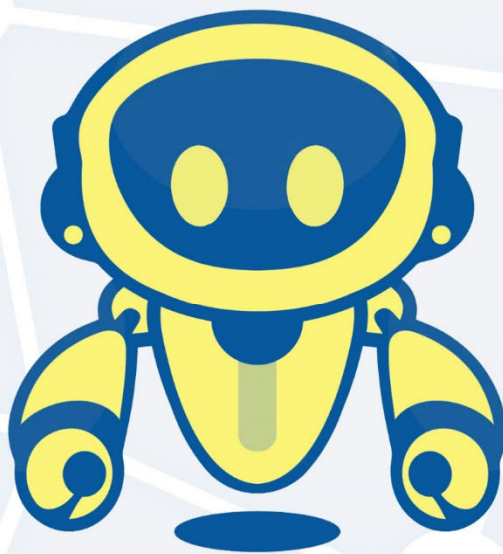




SAF 2023

—STEAM AZERBAIJAN FESTIVAL—



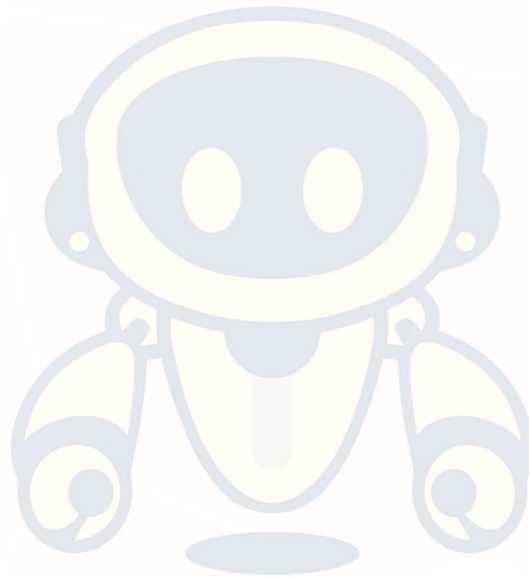
# RoboKids

**GUIDELINES**

BAKU 2023

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# 1. Introduction

- 1.1. **Aim:** The main goal of this category of the festival is to form the skills of creative thinking, problem solving, cooperation, and implementation of projects of various contents in kids of the lower age group.
- 1.2. **Description of the Exhibition:** In this module in the festival the theme for participation is presented. Participants must research this topic, prepare a poster according to the topic in advance, present their designs on the day of the competition and complete the given task.
- 1.3. **Course of the Festival:** During the festival, teams that participate will have to cooperate and build their projects on the given area and present them to the juries. On the last day of the festival, participants will have to bring the batteries thrown in different places of the project with the help of their Matata robots to the disposal area.
- 1.4. **Theme:** Damage of improperly disposed batteries to the environment:  
*Participants will learn about the environment while researching this topic. Their research issue is the environmental damage that batteries can create if they are not properly disposed of and thrown away. This topic will educate participants on environmental protection as well as the need of not tossing batteries into nature.*

## 2. Terms of Participation

- 2.1. **Terms of participation in the festival**
  - 2.1.1. According to the rules, the teams will develop and exhibit projects aimed at solving problems related to the given theme and perform the task with Matata robots.
  - 2.1.2. Teams must consist of 1 team leader over 18 years old and 2 students of 6-8 years old. Team members can be preschool, primary school 1st and 2nd grade students. Each team member can join a maximum of 1 team and a team leader can lead a maximum of 1 team. People don't have to be affiliated with any school or institution to lead a team.
- 2.2. **Poster.** The dimensions of the poster to be made should be 90-125 cm. The poster should cover the given theme.
- 2.3. **Requirements for team members.**
  - 2.3.1. Each participating team consists of one Matatalab Lite and one Matatalab Pro set robot, two people and a team leader. A team leader can supervise a maximum of one participating team.
  - 2.3.2. The age limit of the participants is 6-8 years (at the time of the competition) and the participating team must have at least one team leader who is over 18 years of age (at the time of the competition).
- 2.4. **Requirements for robot.**
  - 2.4.1. The only robots allowed to use are Matata robots.
  - 2.4.2. The robot can be modified to perform the task.
  - 2.4.3. After modification, the size of the robot should not exceed 150mm\*150mm. There is no height limit.
  - 2.4.4. After modification, the weight of the robot should not exceed 350 grams.

## 2.5. Requirements for participating team

- 2.5.1. Participants must direct their robots in a specific area of the field. On the first foul, the referee will issue a 10-second penalty, and if this occurs more than once, the referee can subtract 10 points off the team or dismiss the team.
- 2.5.2. Participating teams must arrive at the venue of the competition at least 5 minutes before the start of the games. If 5 minutes after the start of the match, two players of the team have not arrived due to reasons such as delay or inability to pass the inspection, the referee determines that the absent team has lost the competition and evaluates the total score for that stage as 0.
- 2.5.3. If both teams fail to arrive at the specified time for reasons such as lateness or failure to pass inspection, both teams will be deemed to have forfeited the race.
- 2.5.4. If there are reasons such as delay in the first round or failure to pass the inspection, team can participate in the second round if they are ready within the specified time before the start of the second round and robot of the team passes the inspection.
- 2.5.5. Participating teams must adhere to the spirit of competition, do not argue with others, insult them, create physical conflict, sabotage or steal other teams' robots and objects. Penalties for non-compliance will be commensurate with the severity of the misconduct in the arena.
- 2.5.6. Participating teams have to be conscious of safety issues and refrain from engaging in activity that endangers the safety of their teammates or other employees. Illegal usage of electric lanes, the use of open flames, and the introduction of dangerous materials into the competition area are all prohibited.
- 2.5.7. Team coaches and team escorts are not permitted to access the competition field or interfere with the match in any way from outside of the venue during the competition. If the team's coach or an accompanying member leads the team and interferes with other teams' games, the referee has the authority to warn, disqualify, and inflict other punishments.
- 2.5.8. Each candidate is only allowed to compete in one category. Duplication of the competition, fake registration, misrepresentation of the contestant's age, unlawful changing of contestants, and similar practices are severely forbidden. The contestant will be disqualified if the incidence is discovered and confirmed.

## 2.6. Special Cases

- 2.6.1. The main reasons for special cases are interruptions due to venue staff, venue control, competition area or force majeure. After inspection and negotiations, the head referee can decide whether to let for a rematch or not.
- 2.6.2. There will be no rematch for match interruptions or suspensions (including but not limited to equipment failure or equipment communication failure) due to any robot malfunction or insufficient battery power.
- 2.6.3. Participants who cannot compete at the venue of the competition due to their personal reasons or force majeure must inform the organizing committee of the competition in advance.

### 3. Application Method

- 3.1. Applications will be accepted through the official website of SAF. (<https://saf.steam.edu.az/>)

### 4. Qualification

- 4.1. The teams will create projects based on the theme and address problems with Matatalab. The presentation will be presented in video format, and it will be judged. After the selection process is completed, the total number of finalist teams will be announced.
- 4.2. The prepared video should not exceed 3 minutes.

### 5. Qualification Criteria

- 5.1. Selections will be made according to 3 main skills:
- Presentation
  - Project Design
  - Coding

### 6. Final Stage

#### 6.1. Competition Rules

- 6.1.1. There are three stages of the competition. The participants will place the prepared posters in the proper locations during the first step. Participants will work together with the other team that was assigned to them by the draw to prepare for the second and third stages. For this age group, the competition will go from the start of the morning until its end of lunchtime. If any team wants to continue working past lunch, there will be no time restrictions.
- 6.1.2. "Creating a Poster" is the first assignment. The challenge sharpens the competitors' problem-solving, research, and observational skills. Each team conducts research on the subject, creates a poster, and is prepared to make a brief presentation if the judge requests it. Judges will assess each team's poster and presentation separately. 20% of the overall final score will be made up of the judges' poster score.
- 6.1.3. "Setting the field" is the second assignment. In order to complete the second objective, each team works with the other team that was assigned to them to develop their own design the given area. Based on the teams' shared vision, this design should be made, and it ought to depict the surroundings. The organizing committee will supply materials for setting up the design. Judges will assess the submitted design, and the final score will be split between the two competitors. This point counts for half of the team's total score.
- 6.1.4. "Delivery of batteries to the location of disposal" is the third assignment. Teams must transport 10 batteries that have been placed randomly in their designated area to a specified disposal site for this assignment. The third assignment will include two

components. Participants in the first half will program the robot using the Matatalab Pro set and attempt to clean the batteries using the provided code. The first portion of the third task will be handed to them in 90 seconds. The participants will use the Matatalab Lite robot to clean the batteries in the second portion of the third assignment. The second portion of the final task will be presented to students with 90 seconds to spare. The third task will count for 30% of the final score.

## 6.2. **Description of assessment**

- 6.2.1. First stage: During the poster evaluation, the design of the poster prepared by the teams will be evaluated with 10 points, and the description and presentation of the topic by the teams will be evaluated with 10 points.
- 6.2.2. Second stage: Project design will receive 25 points, cooperation will receive 25 points, project presentation will receive 25 points, and problem explanation will receive 25 points during the project evaluation. The two teams will split the points earned up to this point in half.
- 6.2.3. Third stage: Batteries will be transported from ten separate locations to the disposal facility during the robot competition. Each battery in each disposal area will earn each team three points.
- 6.2.4. In total, each team can earn a maximum of 20 points for the Poster, a maximum of 50 points for the Project, and a maximum of 30 points for the Robot Competition. The maximum points that can be collected is 100 points.
- 6.2.5. During the competition, if a contestant touches the robot with hands, his robot will be returned to the starting area, and the referee will let a restart soon after waiting 10 seconds.

## 6.3. **Determination of Violations and Penalties**

- 6.3.1. During the competition, a sticker will be put to the robot to help the judges and identify the robot.
- 6.3.2. Participants are only permitted to utilize LEGO parts while altering the robot. Violations of the aforementioned rule will result in disqualification from the competition.
- 6.3.3. Except in rare cases, the team that fails to show up at the inspection place within the time limit established will be designated the task's losing team. Judges can make judgements depending on the facts of the case.
- 6.3.4. If during the "Third Task" the robot's body goes completely off the map, this attempt is considered unsuccessful. The player must take the robot to the start and restart it, but the time will not reset.
- 6.3.5. Participants are not permitted to touch the robot or any of its props while it is executing a task. For the initial time, the team that breaches this gets fined for 10 seconds.
- 6.3.6. If the referee allows a participant to take away his robot from the competition area or place it in the beginning area during the competition, the contestant must not touch the props or other robots in the competition area (including his teammates' and other team's robots). Teams who break these rules will be penalized. Judges can make judgements depending on the facts of the case.
- 6.3.7. If a team proposes to stop the competition for an inappropriate reason, that team will be

immediately disqualified.

- 6.3.8. During the competition, participating teams are not allowed to use other teams' robots, otherwise the team will be disqualified. *(Please inform the organizer if the robot needs to be relocated at the venue. Use no robots from other teams).*
- 6.3.9. Repeated violations will cause team disqualification.

#### 6.4. **Robot Repair Instructions**

- 6.4.1. Each team is only given two chances to succeed in the tasks per round. Before the repair, the contestants raise their hands in the air to indicate to the referee that they intend to exploit the repair opportunity. Following acceptance, the participant may remove the robot from the competition area. After the robot has been recovered, the team can return it to the competition field and continue the competition. The robot can go in whatever direction it wants.
- 6.4.2. When participants ask for recuperation, if there are racing props on the body of the robot, they must give them over to the referee, who will remove the props from the competition area.
- 6.4.3. Competitors may request repairs between competitions, however the duration between rounds will not be increased as a result of repairs. The subsequent phase of the competition will begin as scheduled.

#### 6.5. **Robot Inspection Instructions**

- 6.5.1. It is recommended that the robots be inspected before the competition when the participating teams are determined. If the robot does not pass the inspection within the specified time, the robot will be disqualified.
- 6.5.2. Teams who fail the pre-competition examination must change the robot to satisfy the specifications and reapply until the next inspection. If the robot is unable to adjust to the needed circumstances within the time limit, it will be disqualified.
- 6.5.3. The robot may be needed to be examined again before or following the tournament (before the team departs the competition area). The team will be disqualified if the robot happens to be in breach of the technical conditions.