



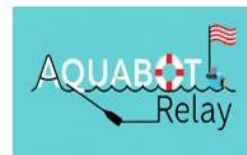
STEMATHLON 2026



Soccerbot



BaSTEMball



Aquabot Relay



Game description and rules

Game Design: Nikos Sazaklidis

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A. Brief Description of the Game

3athlon is an original educational robotics competition that includes three game categories: SoccerBot, BaSTEMball and Aquabot Relay. Each team consists of students from all grades of elementary school, who are invited to compete in different games, with coordination and a clear distribution of roles. During the tournament, teams are united in alliances with other teams, through a random draw, and the victory is shared jointly between the two teams.

B. Participants

- **Ages:** 1st – 6th grade of Primary School (Attention! See below in E 1.1.1 Distribution in age categories in student groups)
- **People per team:** Total from 6 to 9 players: 3 per game (minimum 2 and maximum 3).
- **Coach: 1** (from 20 years old and over)

C. Pedagogical framework

3athlon is a groundbreaking educational experience that brings educational robotics to the fore as a vehicle for collaborative learning, enhancing social skills, and engaging children experientially in modern STEM environments. Beyond the technological challenge, the competition is a pedagogical innovation: for the first time, every age of primary school is united in a common group with a specific role, through a model of cooperation and collective action.

The competition was designed so that students from the first to the sixth grade of primary school would jointly form a single team. The younger ones take action in the game SoccerBot, the older ones in BaSTEMball and Aquabot Relay. Older students are not just gamers – they are mentors for the little ones, guiding them, encouraging and supporting them, thus learning to lead with empathy. Thus, every child, regardless of age or class, has an important role in the success of the team, so that a culture of inclusion, respect and cooperation is cultivated, fundamental elements for modern education.

3athlon also introduces another essential feature: In each game, two teams unite in one alliance, work together and compete against other alliances. Victory is not an individual process, but a collective one: the two teams of the victorious alliance share the first place equally. With this model, 3athlon teaches that success doesn't just come through collaboration skills within the same team, but from its ability to meaningfully collaborate with another. Through random draws that form alliances, children learn to work with new companions, adapt quickly, communicate, support each other and develop flexibility in thinking and behavior – skills necessary for the 21st century.

One of the great advantages of 3athlon is that it is based on affordable equipment. The robots used are materials known to the educational community, simple and easy to use. This allows for the participation of schools in each region, even with limited resources, promoting equity in access to STEM education.

At the same time, the programming of robots is done through a visualized environment (block-based programming), which allows children to develop algorithmic thinking, without the need for knowledge of complex programming languages. Thus, students of even the youngest grades can actively participate,

experiment and understand basic concepts of computational thinking, so that in a friendly and playful way they can take their first steps in robotics and form a positive attitude towards the objects it deals with.

In conclusion, we would say that the 3athlon competition redefines the concept and role of school educational robotics. It unites ages, unites groups, unites people. It enhances soft skills, strengthens self-confidence, cultivates team spirit, and shows children that the path to progress is through collaboration. 3athlon is more than a competition: it's a celebration of learning and coexistence.

D. General Principles of the Game

According to the educational objectives, the following general principles should be compulsorily applied:

1. For each game category, the separate rules listed in a booklet apply, unless something separate is stated in this description. Robots should be built and programmed exclusively by students.
2. The decisions of the referees are final. The result of a match cannot be changed unless a mistake has been made in the counting of the score.
3. Students and their coaches should work together in such a way that the educational goals of the game are not violated. Both should also help keep the games running smoothly.
4. What counts most is not the victory, but the participation itself and the emotions that the game has in store.
5. Students must share roles to ensure that everyone participates during the game.
6. The organizing committee shall have the right, at its discretion, to expel a group from the competition if it finds that it is attempting to use unfair means contrary to the spirit of fair competition on equal terms not expressly provided for in these rules.
7. The rules of the game may be amended by decision of the category officials and the organizing committee before the start of the tournament and may be announced to the players, in order to maintain the pedagogical spirit and the smooth conduct of the games. They also have the right to instruct the judges to intervene on the track or its material objects in case of damage or displacement.

E. Rules

1. Student Group

- 1.1. Each group in total can consist of 6 to 9 students who must be divided as follows: The team of each game can consist of only 2 or 3 students. The Soccerbot team consists of the students of the team who attend from grade 1st to 3rd. The BaSTEMball team includes students from 5th to 6th grade. The Aquabot Relay team includes students from 5th to 6th grade.

- 1.2. The above classification of age groups may be modified in the cases of the multigrade primary schools of the country in which they participate.
- 1.3. A fifth or sixth grade student from BaSTEMball or Aquabot Relay can assist the Soccerbot team to supervise and assist his young classmates and reinforce them, but under no circumstances is he allowed to operate the remote control.
- 1.4. A student of the fifth or sixth grade is appointed captain of the entire team and undertakes to coordinate and encourage the players of each category.
- 1.5. Each group of students should have only **one** robot for each category, that is, three in total.
- 1.6. It is forbidden to replace a robot for any reason. Teams that replace one of their robots during the matches are eliminated from the tournament.

2. Specifications of Robots

- 2.1. Teams must use three **ELECFREAKS TPBot** car kit robots, one for each game, with **ELECFREAKS 360 Degrees Building Blocks Servo** motors and up to 2 **microbits**.
- 2.2. The robots will have to follow the special construction rules and specifications of each game of the 2026 competition year.
- 2.3. As far as Soccerbot is concerned, the robot will also be a **TPBot car kit by ELECFREAKS** with dimensions that do not exceed **16 cm long, 14 cm wide and 25 cm high**. Only LEGO-type building materials or equivalent packages are allowed.

3. Assembly of the Robots

- 3.1. Players will have to bring the robots ready on the day of the competition.
- 3.2. Competing students should not use any kind of assistance, such as instructions or drawings on paper, photos stored on the computer, etc.
- 3.3. Competing students are allowed to use programs they have written earlier (before the day of the competition).
- 3.4. Students are allowed to modify their constructions or programs from the time they enter the competition area or in the gap between games. That is, there is no quarantine before or during the games.
- 3.5. It is the responsibility of the teams that their robots continuously meet all the specifications and restrictions set by the rules. If, after a race, a robot turns out to break a rule in terms of construction, then the points it has earned in that race will be deducted from the alliance.

4. Tournament Procedure

- 4.1. The tournament will be held in two phases: the qualifier and the final.
- 4.2. The qualifier includes 4 competitive rounds. In each competitive round of this phase, alliances will be formed by random draws.
- 4.3. In each game of each category, the teams of the winning alliance will share the victory points set by each game.
- 4.4. At the end, the teams add the points from each category and are ranked in a single leaderboard.
- 4.5. In case of a tie in the table, the following criteria will apply in order of priority:
 - More points in the game Aquabot Relay
 - More points in playing BaSTEMball
 - Goal difference in Soccerbot
 - More goals in Soccerbot
 - More goals in a single match on Soccerbot
 - Draw
- 4.6. The teams of the qualifying phase that will finish in positions 5-8 qualify for the small final. The alliances in the small final arise with the 5th team allying with the 8th, and the 6th with the 7th.
- 4.7. The first 4 teams of the qualifying phase advance to the grand final. The alliances in the final arise with the 1st team allying with the 4th, and the 2nd with the 3rd.
- 4.8. The grand final alliances choose which of the three categories they will compete in. If the proposals do not match, then a draw takes place.
- 4.9. The teams of the small final must choose one of the two remaining categories. If they do not agree, a draw is held
- 4.10. The teams of the alliance that will win the tournament will share the 1st place together, while the teams that will lose will share the second place.
- 4.11. The teams of the alliance that will win the small final share the 3rd place together, while the teams that will lose share the fourth.