

## General Rules 2024-2025



### WELCOME TO ZONE01!

Season 3 of Planet Z (or the final season) is underway, and it's going to be another spectacular season full of learning and creativity!

This year brings a big change as **Zone01 opens up to all robotic platforms**. Whether you're a beginner or more experienced, take the time to read and understand these general rules with your teams.

Any questions? We are here to help: [info@zone01.ca](mailto:info@zone01.ca). Have a good robotics season!

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## DEFINITIONS

The rules in this section apply to robotics challenges created by Zone01.

**RESPONSIBLE PERSON:** Person who registers one or more teams for an event. This person will enter the team details and choose the challenges or delegate this responsibility to a coach.

**TEAM:** A group of students aged between 6 and 19 representing a school, college, university, robotics club or coming from a parent's initiative.

**COACH:** Adult who supervises a team of students and accompanies them during the event.

**ASSISTANT:** Adult who assists a coach in leading several teams during the event. This adult can be a teacher, an education specialist, a parent, etc.

## CATEGORIES

There are 4 categories of Zone01 challenges, each with its own special features.

### MISSIONS



- Table games where robots accumulate the most points in 2 minutes
- Educational challenges perfect for learning robotics
- Creative challenges to build even more

### SPORTS



- Matches between 2 or more robots who compete against each other
- Tests of strength, skill or sportsmanship
- Emotion and suspense guaranteed

### PROJECTS



- Animated presentations in front of judges
- Prototypes in motion
- Ingenious solutions and promising concepts

### RACING



- Races on large tracks and obstacle courses
- Autonomous vehicles on track
- From driving to artificial intelligence

## REGISTRATION TO A ZONE01 EVENT

Registration for Zone01 events and payment of registration fees can be made online at the Zone01 shop, accessible from the <https://zone01.ca> website.

### AGE GROUPS

When registering, the responsible person must choose an age group for his teams, according to the age of his young roboticists. This choice cannot be changed later. A team may not register for more than one age group at the same event.

	Age Group	Age	School year Quebec	School year Rest of Canada	Students per team
A.	<b>6-10</b>	6-10 y.o.	Up to grade 4	Up to grade 4	2 to 3 students
B.	<b>10-12</b>	9-12 y.o.	Grade 4-5-6	Grade 4-5-6	2 to 4 students
C.	<b>13-15</b>	13-15 y.o.	Secondary 1-3	Grade 7-9	2 to 4 students
D.	<b>16-19</b>	16 -19 y.o.	Secondary 4-5 and Cegep	Grade 10 and up	2 to 4 students

Zone01 strongly recommends forming teams of 2-3 students for the challenges.

There should be no more coaches and assistants than teams registered by a responsible person.

All registered students, coaches and assistants attending a Zone01 event must sign the participation and photo/video release form before entering the event.

## WORLD ROBOT OLYMPIAD GAMES

Zone01 can offer World Robot Olympiad challenges at an event. These challenges are open to Zone01-registered teams.

WRO age groups are slightly different from Zone01 age groups.

- WRO Elementary 8-12 age group (**born after 2012**) is open to teams registered in Zone01's 10-12 age category.
- WRO Junior 11-15 age group (**born after 2009**) is open to teams registered in the 13-15 age category in Zone01.
- WRO Senior 14-19 age group (born after 2005) is open to teams registered in the 16-19 age category in Zone01.

WRO challenges are available from January 15. The general rules of the WRO challenges may differ slightly from the Zone01 rules.

We encourage you to try the WRO challenge in your age group, even if you don't want to qualify for the international final. At the national and international finals, only teams of 2 or 3 students can take part in WRO challenges.

## MAX NUMBER OF TEAMS

For a Zone01 event, a limited number of teams may register. Once this number has been reached, it will not be possible to register additional teams. A school may register as many teams as it wishes if there are sufficient places available.

The "first come, first registered" principle applies.

## CHOICE OF CHALLENGE

A team may take part in **2 challenges** in its age group if it has additional robots. However, it is not possible to register for a WRO Future Innovators Project at the same time as a Mission challenge.

Be careful when choosing challenges, as it's difficult for the same students to be in 2 places at the same time!

## **ZONE01 PHILOSOPHY**

Zone01 organizes COOPETITIONS, i.e. cooperative competitions. Our aim is to develop students' sense of teamwork, sharing, mutual aid and cooperation, while enabling them to surpass themselves technically, technologically and scientifically.

This is a competition for students. Only students are allowed on the competition tables and can handle the robots, laptops and tablets on the practice playing fields.

### **FAIR PLAY RULE**

The FAIR PLAY principle requires teams to respect not only the rules of the game and the general regulations, but also the very essence of the game.

Zone01 challenges leave plenty of room for creativity. But the head judge can ask a team to modify its approach, its interpretation of the rules or its strategy if it doesn't respect the spirit of fair play.

### **ORIGINAL DESIGN RULE**

The ORIGINAL DESIGN rule means that the robots must be designed and programmed by the students themselves. The role of teachers, instructors and parents is to guide the students and provide them with the basic knowledge and work methods they need to get organized.

Students can draw inspiration from other designs but must create their own solutions to solve the missions.

## ROBOT DESIGN

To take part in the competition, teams must bring their own robotics hardware, computers or tablets, and a power bar.

### ALLOWED ROBOTIC PLATFORMS

From season 2025 onwards, Zone01 Mission challenges will be open to all robotic platforms. But be warned: it's risky for teams to venture onto platforms that are too complex, or sensors that are too advanced, since the students have to do the work.

Teams will need to demonstrate that they have mastered their robot on the day of the competition. Students will have to adapt, and simpler solutions are generally easier to modify.

CATEGORY	ALLOWED PLATFORMS
Missions 6-10 y-o	Any platform, max 2 ports used for motors and sensors. Max 2 motors on the robot. Remote control is not allowed
Missions 10-19 y-o	Any platform
Sports	See the challenge rules
Projects	Any platform
Races	See the challenge rules

### ALLOWED PARTS

Any parts allowed, but the robot must comply with the rules of the challenge that takes precedence, which may include restrictions on weight, dimensions, motors and sensors.

The robot must not damage the playing surface (metal, sharp, sticky parts, etc.) or include pneumatic or hydraulic elements, liquids, gases or lubricants.



## **3D PRINTED PARTS**

It is permitted to create and print 3D parts for your robot. These parts must be of your own creation, and the judge may ask to see the drawings.

## **PROGRAMMING LANGUAGES ALLOWED**

There are no restrictions on the programming environment. But avoid the need to access the Internet to program (programming in a web browser), as there may not be public WIFI access at event.

Unless otherwise specified, robots must be able to operate autonomously, i.e. be programmed in advance by the team.

## **MANDATORY INSPECTION AT THE EVENT**

Robots can be built and programmed prior to the event. All robots in the Missions, Sports and Racing categories will be inspected by the judge before the start of the challenge to ensure compliance with the rules. Particular attention will be paid to the number of motors, robot dimensions and weight.

A team unable to comply within the given time limit will receive a score of 0 for that round.

A robot CANNOT be used by more than one team, just as a student CANNOT be registered in more than one team.

At any time, the judges and the head judge may question the design or programming of a robot under the FAIR PLAY and ORIGINAL DESIGN rules. If an irregularity is pointed out by the head judge, the team will have 5 minutes to comply with the rules.

If a team appears to be using a robot designed or programmed by an adult, if the robot is a copy of one purchased on the Internet, or if several teams appear to be using identical robots, the head judge may question the students about the design and programming. At his or her discretion, the head judge may apply a penalty of 50% or 100% of points or exclude the team from participation in the subsequent round.



## DESCRIPTION OF THE PLAYING FIELDS

Zone01 offers schools the opportunity to purchase official challenge mats by ordering them from the Zone01 shop at <https://zone01.ca>.

Although it is not mandatory to purchase these surfaces, it is recommended that you use them to calibrate your robots to the correct parameters.

Some surfaces may require wooden construction. The challenge editorial committee makes every effort to describe the surfaces as accurately as possible by publishing detailed plans and photos.

During the competition, teams (robots) must adapt to the playing surface, not the other way around. Teams may not request modification of the official surface or special permission. Teams should build their robots with adaptability in mind.

## SCORING

A team that does not take part in a round or challenge for which it has registered will receive a score of 0.

Bonus points available in certain challenges are only awarded if the robot has completely exited the starting zone.

Points for finishing in the finish area are only awarded if the robot has obtained other points in the challenge, excluding bonus points.

## TWO-STEP STARTING PROCEDURE

The team must wait for the judge's start signal before starting the program.

However, it is also permissible to start the program in two stages. The judge may allow the team to start the program that does not directly set the robot in motion. Then, on the judge's start signal, the team can set the robot in motion by pressing a button or a touch sensor connected to the robot.

## **JUDGES**

Zone01 invites volunteers to judge regional competitions and the national final. Some judges may also be invited to participate in international competitions.

Throughout the year, interested parties can add their names to the bank of judges/volunteers for the competition season by registering online.

Judging is carried out with the help of a tablet connected to the scoring system by Wifi. For tabletop challenges, scores are entered by observing the position of the robot and game accessories at the end of the round. For projects, scores are entered by assigning scores from 1 to 5 or 1 to 10 to several criteria.

Video are prepared and Zoom meetings are held with judges before competitions to clarify certain elements and answer questions.

Zone01 also enables judges to practice entering scores remotely.

On the day of the competition, Zone01 will lend judges a judge's jacket and a tablet for score entry. If two judges are assigned to the same table, only one tablet is provided.

## **CRITERIA FOR JUDGING AT ZONE01**

For a regional or national event, a judge must be fluent in either French or English, ideally both. For an international event, fluency in English is essential.

A judge must know the rules of the challenge and act impartially.

A judge may not judge a team he or she is coaching, or in which a member of his or her family is participating. Should this be the case, the judge must withdraw and ask to be replaced by a judge from another table.

## **JUDGES' RESPONSIBILITIES AT ZONE01**

- Ensure robots meet challenge requirements
- Position challenge accessories on competition table
- Ensure that the robot is correctly positioned in the starting area
- Ensure team is ready and satisfied with the positioning of accessories
- Give starting signal by counting 3-2-1 GO and starting stopwatch
- Enter scores

## **SCORE ENTRY**

At the end of the round, the judge ensures that no one touches the challenge table during score entry. The judge notes the position of the robot and accessories and enters the information into the judging interface.

The judge asks a team member to confirm the scores entered on the tablet. In the event of disagreement between a team and a judge, the latter may call on the competition's head judge to settle the matter.