

# CoderZ Spring League



## USER GUIDE

*Version 1.00 (Last updated February 2, 2023)*

*Dear Teacher,*

## **Welcome to the CoderZ Spring League 2023!**

On behalf of the entire CoderZ team, we are so excited to be welcoming you and your students to join the 2023 CoderZ Spring League!

CoderZ Spring League is an international virtual robotics competition that was designed to support your efforts of making your students' experience with STEAM an incredible, inspiring, meaningful, and engaging one.

As you'll see during the competition, STEAM knowledge is not the only mastery your students will perfect during our time together. As your students advance in the competition, they will practice critical life skills, such as collaboration, computational thinking, creativity, problem-solving, and leadership - all wrapped in our fun and engaging game environment they will love.

This guide was created to provide you with step-by-step guidance, our best practices, tools, and our top tips to make sure you are leading a successful learning journey. We hope you will enjoy this ride and find it a meaningful one.

We are always here for you,  
The CoderZ team



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# 1. Introducing CoderZ Spring League

CoderZ Spring League is designed to improve engagement in STEM learning by providing hands-on experience in a fun and interactive way. We are excited to introduce students to the world of coding through our gamified missions and competitions.

As mentioned earlier, our goal is to help students practice and apply 21st century skills such as critical thinking, collaboration, communication, and creativity through real-time competition. By participating in the CoderZ Spring League, students will not only learn valuable coding skills, but also develop the ability to work well with others, think critically, and communicate effectively.

We believe that the best way to learn is through doing, and our program is built around this principle. Students will work on challenging missions and compete with their peers to put their skills to the test.

Whether your students are beginners or experienced coders, the CoderZ Spring League is a perfect opportunity for them to take their skills to the next level, celebrate their learning journey throughout the year and have fun doing it.

Thank you for joining us on this journey, and we look forward to seeing your team progress throughout the league!



## 2. Important Terms

The following terms are essential for understanding the structure, regulations, and scoring system of the CoderZ Spring League:

- **Team:** A collection of students from the same age range and institution working together to achieve the highest possible score.

Team size: our recommendation is to have 6 students per team.

Please note: A team can participate with less than 6 students with a minimum of **3 students** but this will put your teams at a disadvantage.

- **Mission:** Activities in which all team members program a virtual robot to complete a task and gain points.
- **Contribution:** The number of points a team member contributes to the team for each mission or challenge.
- **Challenge:** A summative, open-ended activity, in which team members program a virtual robot to navigate the game's interface and earn as many points as possible.
- **Leaderboard:** Visible ranking of teams or individuals for a given mission or challenge.
- **Training Camp:** A collection of activities that introduce students to the CoderZ platform and prepare them for the actual competition. During the training camp, students will learn key concepts they will need to apply to the missions and challenges they will face.
- **Division:** The CoderZ Spring League is divided into two divisions, Novice and Junior. The Novice division is intended for younger participants or those new to coding, while the Junior division is intended for older participants or those with more experience. The missions and challenges in each division are tailored to the appropriate skill level for each group. By participating in the appropriate division, students will be able to work on tasks that are challenging but also within their ability level, allowing for the best learning experience.

**Region:** Groupings of teams within the same division based on their geographic location.

# 3. League Structure

## 3.1. Objective

CoderZ Spring League is a virtual competition where teams complete a series of activities called missions and challenges, in which they program a robot in a virtual simulation. The goal of every team is to earn the most points.

## 3.2. Divisions

CoderZ Spring League is comprised of two divisions based on age group. Students may participate in higher divisions, but not in lower divisions (example: students from the Novice division may participate in Junior, but Junior division students are not allowed to participate in the Novice division as that would be unfair to the younger students)

	Age Group	Coding Language(s) Used
Novice Division	Grades 4-6	Blockly
Junior Division	Grades 6-9	Blockly

## 3.3. Regions

### 3.3.1. What are Regions?

Regions in CoderZ League are geographic segments of teams participating in the competition. Regions may include teams from the same area, not necessarily from the same exact state. Teams compete with other teams in their region throughout the competition.

### 3.3.2. How to Join a Region

**On March 27**, every team will be placed in a region, depending on the school's geographic location. Teams are automatically assigned to the region that they belong to. Any team which will be set up after March 3rd, will be assigned automatically to a US or Non-US open Region.

### 3.3.3. Exceptions

Regions that do not have at least 32 teams or 2 different organizations participating (school / club = organization) will not be opened. The teams from that region will instead be placed in one of the open regions: For US teams, the open region is the US Open region, for non-US teams, the open region is the international region.

## 3.4. The competition phases

### March 27, 2023 - Competition Starts

All Teams are divided into regions based on geographic location. Teams can access three games which include various missions. In the missions, students learn and practice the mechanics which they will later use to complete the challenges. Missions allow students to earn points that will be added to their team's totals.

### April 17, 2023 - Challenges Reveal

Challenges are live. Teams can solve three challenges, one in each game, and gain points that contribute to their final ranking.

Novice Games	Junior Games
<a href="#">Robo Golf</a>	<a href="#">Farm Fever</a>
<a href="#">Disco Blocks</a>	<a href="#">Lasers vs. Balloons</a>
<a href="#">Moon Base</a>	<a href="#">Jungle Gym</a>

### May 8, 2023 - Competition Ends

Final leaderboard and team ranking reveals.

Access to league environment remains available until May 8th, but no option to contribute points.

## 3.5. Score

### 3.5.1. Missions

The maximum number of points that can be contributed per mission is 100. Completing a mission multiple times is permitted. However, points obtained for each time a specific mission is completed are not accumulated. Rather, a team member's **highest score** for that mission is contributed to their team. Multiple students can make contributions for the same mission.

### 3.5.2. Challenges

Challenges are summative activities – similar to missions but on a larger scale. All team members may participate in the challenges. However, unlike missions, only the highest-scoring team member contributes their score to the team. Challenges may be attempted multiple times. The highest score for a team is always the one contributed to the final ranking.

As the time to play the missions and challenges end, team scores for each challenge are ranked on a leaderboard. The following point totals are awarded based on final ranking:

Place	Points Awarded
1	2,500
2	1,500
3	1,000
4	750
5	500
6 - 10	250
11-20	100
16-20	700
21+	0

Multiple teams cannot share a place on the leaderboard, meaning two teams cannot both be placed 2<sup>nd</sup>, for example. In the event of a tie, the team to first acquire the tied score will supplant any other teams with that same score.

#### **Example:**

Team A:

The team has 3 students; Student A, Student B and Student C, all of whom completed the Robogolf challenge. Student A got 300 points for the challenge, students B got 400 points and student C got 500 points.

On the Robogolf challenge leaderboard, Team A has 500 points thanks to student C.

Team A is placed 3<sup>rd</sup> on the leaderboard with 500 points, right after Team B with 750 points and Team C with 900 points. Team A will receive 1,000 points for the Robogolf challenge, Team B will receive 1,500 points and Team C will receive 2,500 points.



### 3.5.3. Overall Score

A team's overall score is the sum of all their points, including points earned for missions and points earned for challenges. It is the overall score that determines the competition winners.

The Overall Score tab is only revealed after the calculation of the bonus from the challenges, which happens a few hours after the time to play is over.

Examples of calculations for overall score:

	<b>Total Mission Score</b>	<b>Robogolf challenge placement</b>	<b>Disco Blocks challenge placement</b>	<b>Moon Base challenge placement</b>	<b>Overall Score calculation</b>	<b>Overall Score</b>
<b>Team A</b>	6,400	3rd	10th	7th	6,400 +1,000 +250 +250	7,900
<b>Team B</b>	5,900	2nd	24th	40th	5,900 +1,500 +0 +0	7,400
<b>Team C</b>	7,700	1st	5th	60th	7,700 +2,500 +500 +0	10,700

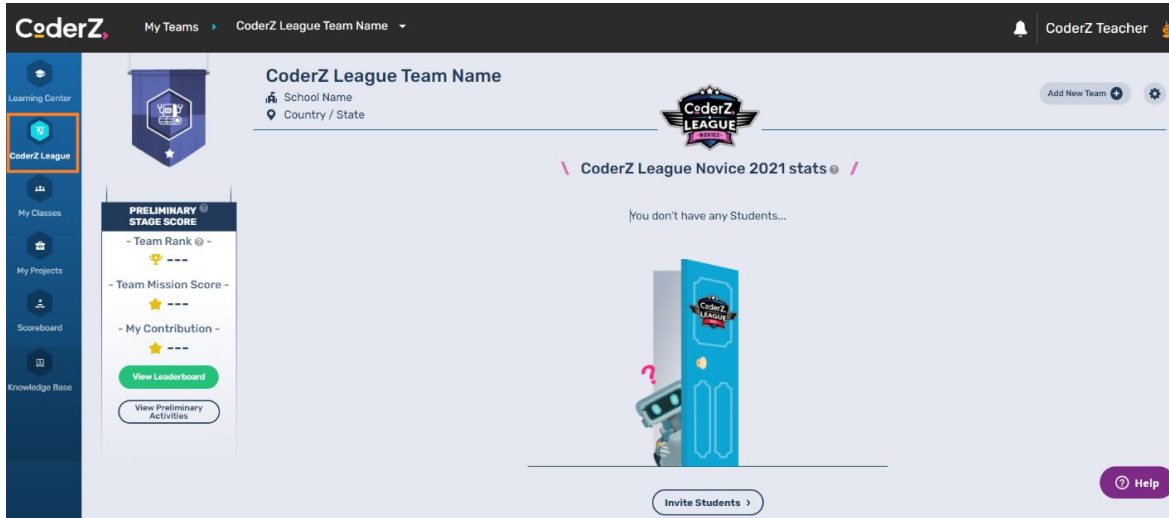
# 4. The CoderZ League Platform

## 4.1. Using the Platform

### 4.1.1. General

Go to <https://play.gocoderz.com> and log in with your credentials.

2. To see the CoderZ *Spring League* content, navigate to the “CoderZ League” tab.



On this page you will be able to:

- Create teams
- Upload the team flag
- Edit team information
- Invite students to join
- Check your students' contribution to the team and their last login date
- Check the Leaderboard

For more information, visit the [CoderZ Knowledge Base](#) to learn about:

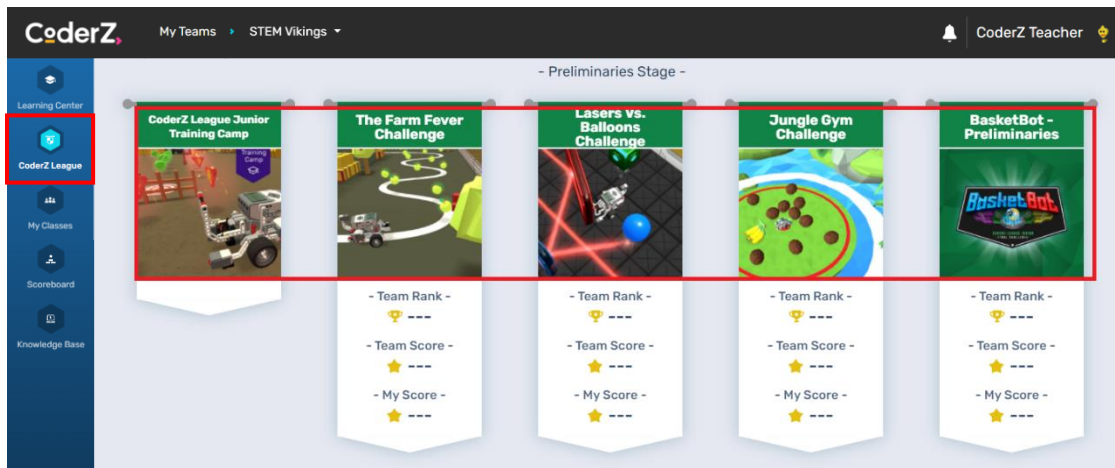
- [Creating your team/class](#)
- Managing your roster (including [adding and removing students](#))
- [Troubleshooting](#)
- [Minimum computer requirements](#) needed to run *CoderZ League*

## 4.1.2. Missions and Challenges

### 4.1.2.1. Access

To access a mission or challenge:

1. Go to <https://play.gocoderz.com>.
2. Navigate to **CoderZ League** tab.

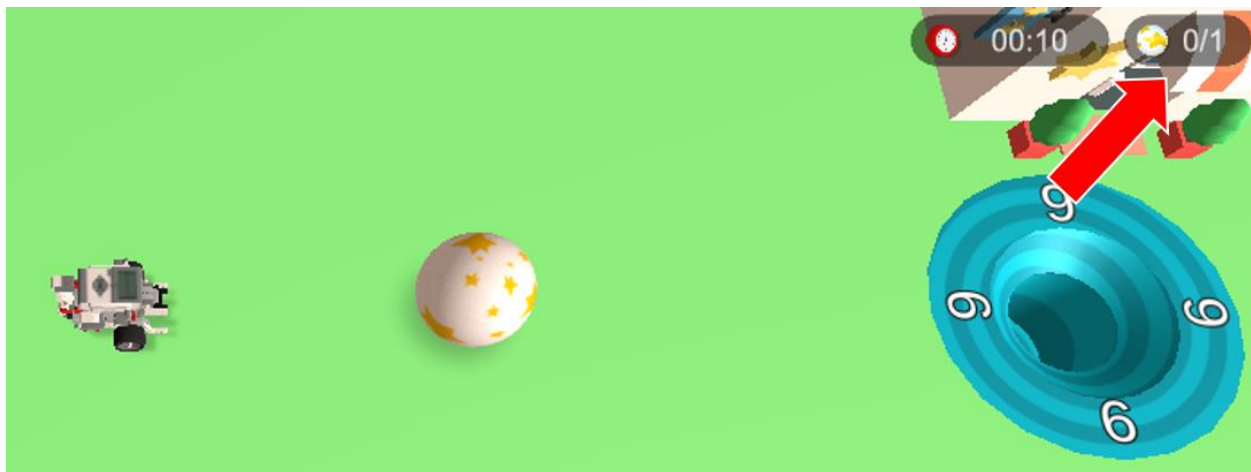


3. Select the game you want to play.
4. Select your desired Mission or Challenge.

### 4.1.2.2. Mission Completion

For a mission to be completed, the win condition must be met. The win condition is found at the top-right corner of the mission simulation screen.

In the example below, the team member must knock one ball into the hole to complete the mission.



#### **4.1.2.3. Challenge Completion**

Challenges are open-ended, and there is no limit to the number of points that can be scored for a challenge. Rather, the highest score for each team is submitted (automatically), and that score is ranked.

To view the number of points awarded to a team based on this ranking, see [Challenges](#).

#### **4.1.3. Profiles**

##### **4.1.3.1. Overview**

There are three types of profiles for CoderZ League, each with different levels of permission and access. They are:

- Student
- Team
- Teacher

To access your profile, click your name at the top-right corner of the CoderZ screen.

##### **4.1.3.2. Student Profiles**

Teams are made up of student team members. Student profiles include:

- Information about the student's team.
- The number of student contributions to their team.

##### **4.1.3.3. Team Profiles**

Team profiles are accessible to teachers. These profiles include the team's name, flag, and score.

##### **4.1.3.4. Teacher Profiles**

In their profiles, teachers have access to:

- The team roster list.
- Details of their students, including number of contributions and last login time.

# 5. Running the Competition

## 5.1. Strategy Suggestions

The league is composed of missions and challenges. The missions, though becoming harder and harder as they progress, never reach the same level of complexity the challenges. There are many possible ways to approach the league, here are a few suggestions that could help you strategize with your team:

- **Let the whole team work together on the challenges:** It could make a huge difference to the final result! The challenges are very complicated, and every student can come up with an idea that could make a difference.
- **Ensure all students complete all the missions:** Each mission awards 100 points, so it's important to make sure all students, even those who may be struggling, complete all the missions to secure these valuable points.
- **Submit a code for every challenge:** Not all challenges are created equal, some are more difficult than others. Even if some challenges have many teams competing for them, others may have very few. Since the bonus for the challenge is based on your team's placement on the leaderboard, it's important to have a strategy in place for every challenge, as even a small number of points can secure a significant bonus.
- **Try different strategies:** Submitting identical code for a challenge by multiple students doesn't yield any additional benefit as the team is only counted once. Encourage students to try different approaches and even once a strategy has been selected by the team, continue to explore ways to refine and improve the code.

## 5.2. How to Start? Five Simple Steps

*every teacher can take to make sure they are on the right path for a successful competition:*

STEP 1: [Create a team](#)

STEP 2: [Invite students](#)

STEP 3: Choose a team name and design the team [flag](#)

STEP 4: Start working on the training camp

STEP 5: Start working on the missions and challenges

### 5.3. Inclusivity

Our competition is centered on the principle of inclusivity, and we are committed to ensuring that each student is regarded as an integral part of our team. Our goal is to provide opportunities that enable all students to highlight their individual strengths and abilities, cultivating their self-confidence and fostering a sense of belonging within the STEM community.

We accomplish this through a variety of means, such as providing creative students the chance to design the team flag and allowing those with strong leadership skills to facilitate morale-boosting activities before each class. Furthermore, we provide administrative roles to students, such as spearheading the creation of promotional materials and delivering speeches, to increase their sense of pride and engagement in the competition. We aspire to establish a constructive and supportive atmosphere that recognizes and celebrates each student's unique aptitudes and capacities.

**Thank you again for inspiring your students through CoderZ League.**

We hope that our user guide has provided a comprehensive understanding of the competition. We look forward to witnessing your students' impressive progress and are excited to cheer on each team as they compete for the championship. If you have any questions or feedback, please do not hesitate to contact our support team [support@gocoderz.com](mailto:support@gocoderz.com).

We will keep in touch throughout our weekly updates.

In the meantime, best of luck to all the teams!

We are rooting for you!

