BANZIS TRIAL

delegates are required to bring their own kits and materials for all rounds
all judging for this category will be external

Round 1: Innovation Fair – **Dream, Design, Deliver**
Delegate cap: 4
Duration: 2.5 hours

Welcome to the **Innovation Fair**, where ideas take flight and robots come to life! This round is all about unleashing your creativity and showing the world how robotics can make a difference.

Your mission? Select a topic from the list below and design an innovative solution to a real-world problem:

1. **Sustainable Robotics** – Create solutions for a greener, more sustainable future.
2. **Healthcare Helpers** – Innovate new ways to improve healthcare systems and practices.
3. **Smart Agriculture** – Design robotics that enhance farming efficiency and productivity.
4. **Disaster Relief** – Develop technologies to aid in crisis response and recovery.
5. **Robotics in Education** – Shape the way robotics can transform learning.

Using **Arduino Uno technology**, you will conceptualize and build a prototype that brings your solution to life.

Teams must present:

- A **functional prototype** of their robotic solution. This prototype must be made prior to the event
- A **professional presentation**, which could include PowerPoint slides, posters, or visual displays to explain the concept and its impact.

This is your chance to **think big, innovate boldly, and deliver solutions** that could shape the future. Let the innovation fair begin!

Judging Criteria:

Idea innovation and originality	5 points
Research and design	5 points
Presentation quality	5 points
Skill and functionality of the prototype	5 points

Round 2: Infinity on Track
Delegate cap: 4
Duration: 3 hours

Let's dive into the intense universe of marvel with this round! The dreaded round of the line following maze is finally here.

All robots must be built prior to the event. Delegates will be given time to practise running their robot on the event.

Your mission is to maneuver through a maze leading up to the most challenging course you will ever meet. Each contestant must collect a total of 6 infinity stones on their robot in order to successfully gain a 100% of the points.

Your robot must follow a line to maneuver through this course, the stones will be magnetic in nature and must be attached to your robot till the end of the course.

This round will be conducted individually for each team and the cumulative points earned in this round will contribute to your eventual victory!

The judging criteria is as follows:

Judging Criteria:

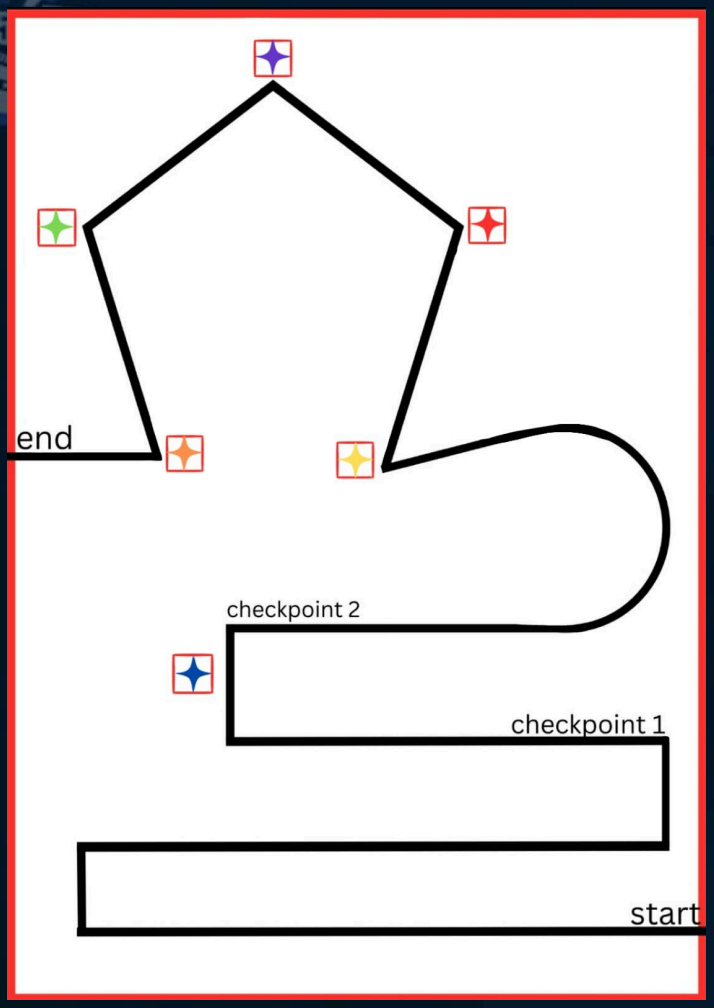
Checkpoint one	5 points
Checkpoint two	5 points
Ending point	5 points
Magnet retrieved and brought to the end	60 points (10 points per magnet)
Magnet dropped	-2
Additional retries (after 3)	-2
Time duration (in seconds)	Total time to be subtracted from the total score received

Rules:

- Each contestant will run their robot alone and will be scored individually
- The robot must be following the line and should not deviate from the designated track
- Hard code is allowed
- You will not be awarded extra points for retrieving the magnet after it has been dropped however the point reduction for dropping will be dismissed
- The timer will only be stopped if the track is completed or if the contestants call out to stop the timer (if by accident the contestants call out stop before crossing the ending point, the designated points will NOT be awarded)
- There are a total of 3 retries allowed per team after which a deduction of points will take place
- The total number of seconds took to complete the course will be subtracted from the total number of points achieved.

The arena for this round is provided below:

- ***the dimensions of this arena are 15x20ft.***
- ***Your robot must fit within 12x12 inches.***



the diamonds represent the magnetic gems delegates must collect

Round 3: Robowars

Delegate cap: 4

Duration: 3 hours

Get ready for the most intense round of the competition – the **Robo War**! In this head-to-head battle of engineering and strategy, teams will face off with their robots in a high-stakes arena designed to test their skills to the limit.

Before the matches begin, contestants will have **30 minutes** to modify their robots from the previous round. Using the **HC-05 Bluetooth module**, teams must attach the component to

their robot and integrate it with custom code developed on the spot. Once the modifications are complete, participants will have **15-20 minutes** to test and fine-tune their creations.

The Robo War will be conducted in a **1v1 elimination format**, with each team battling their way to the top going head to head through a track and into a common arena. This track will consist of a ramp and a line to follow into the common arena. Upon reaching the arena both of the robots will face each other in a battle. They would then be required to permanently destroy the opponent's robot or push it out of the boundaries of the arena in order to secure their win. This will be conducted with each team until 2 finalists remain and the winner for this particular round is decided.

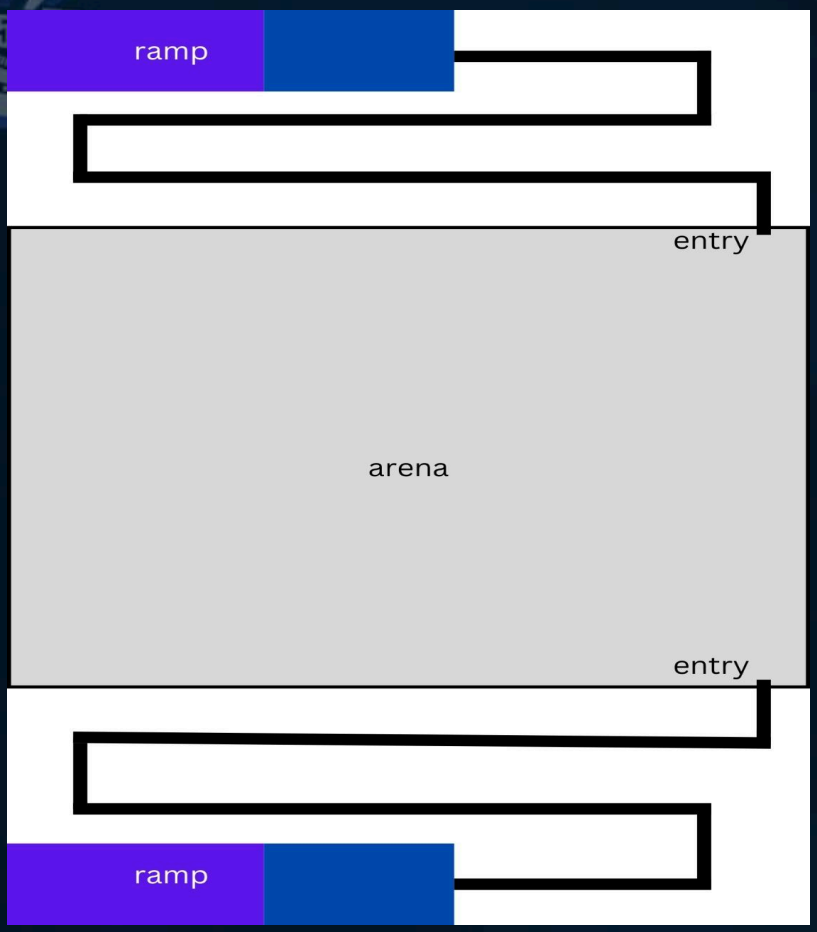
The winner for each conducted round will be decided from the best of three matches, each match must end within 3 minutes

Judging Criteria:

Completes the track and reaches the arena first	30 points
Completes the track and reaches the arena second	15 points
Pushes out of arena (Best of three)	30 points each round
bonus points-Taking the tire off of your opponents car/ damaging the car	20 points
Damaging the maze	-20 points

The arena for this round is provided below:

- *The dimensions of this arena are 15x20ft*
- *Your robot must fit within 12x12x12 inches (width, length and height)*
- *your robot must weigh within 1.5-1.8kg*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