TECH स्पर्धा

<Gear Surge>   <Robo Rumble>

<Goal Gears>   <Playtopia>

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<Steel Clash>   <Mechanica>

<Mind Maze>   <VisionSprint>

Bal Bharati
PUBLIC SCHOOL

NITI Aayog

AIM
ATAL INNOVATION MISSION

Dear Principal,

We are delighted to invite students from your esteemed institution to Techस्पर्धा 2025, the Annual Science-ATL Competition hosted by Bal Bharati Public School, Noida. This event endeavors to provide a dynamic platform for young innovators to explore, experiment, and showcase their talent in science, technology, and problem-solving.

Techस्पर्धा 2025 encourages students to push boundaries, think critically, and bring creative ideas to life. It is a celebration of ingenuity and scientific excellence, fostering an environment where curiosity meets innovation. We look forward to the enthusiastic participation of budding entrepreneurs and witnessing the future of technology unfold On 23RD April 2025.

We eagerly await the presence of your students at this exciting event.

With warm regards,

Ms. Asha Prabhakar
Principal,
Bal Bharati Public School, Noida

General Instructions

Video Submission Requirements:

- Teams must submit a YouTube link showcasing their bot's features and handling. Description of the video should be 1 minute duration only .

- The video should clearly demonstrate:

  - Multi-directional movement

  - Control mechanism (autonomous or remote-controlled)

  - All features of the bot (No surprise features will be accepted)

Deadline for Submission:

- 18th April, 11:59pm.

- Late submissions will not be considered.

Specifications Document:

- Teams must also submit a document (PDF or Word) detailing the bot's specifications, including:

  - Battery type and voltage

  - Key components used

- The document should be clear and concise.

Selection Process:

- Submitted videos will be reviewed based on the bot's functionality and compliance with event specifications.

- Shortlisted teams will be notified and invited for the offline rounds.

  Submit your best creation and secure your place in the race.
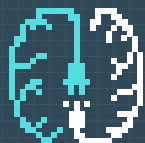
Events at a Glance

Registration Commences	7 April 2025
Registration Concludes	18 April 2025 (11:59 pm)
Shortlisted Teams	20 April 2025
Event Date	23 April 2025
Result Declaration	25 April 2025

Event	Class	Participants
Gear Surge	IX-XII	2
Mind Maze	VI-X	1-2
Goal Gears	IX-XII	2
Steel Clash	VI-XII	2-4
Robo Rumble	X-XII	2
Vision Sprint	VIII-XII	1-3
Mechanica	X-XII	2
Playtopia	IX-X	2
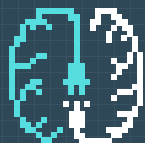
Registration Links

Discord Server	link
School Registration Link	link
Whatsapp group link	link
Gear Surge	Click Here
Mind Maze	Click Here
Goal Gears	Click Here
Steal Clash	Click Here
Robo Rumble	Click Here
Vision Sprint	Click Here
Mechanica	Click Here
Playtopia	Click Here
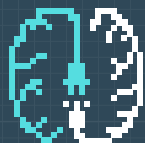
Gear Surge (Robo Race)

Race against time, race with gears - let the bots do the work!

- Classes: 9-12
- Participants: 2
- Duration: 5 mins (maximum) per round
- Objective: Create a bot that can navigate a challenging racecourse..
- Specifications:
  - Power: Max 12V DC; only sealed batteries allowed.
  - Control: Autonomous or remote-controlled bots.
  - Motion: Multi-directional movement required.
  - Originality: Bots must be built entirely by the team.
- Rules:
  - Premade bots are not allowed - all bots must be custom-built for this event.
  - Points deducted for leaving boundaries.
  - Judges reserve the right to disqualify non-compliant bots.
- Judging Criteria:
  - Speed
  - Accuracy
  - Obstacle navigation
  - Stability
- Registration & Shortlisting:
  - Please refer to the General instructions page.
- Registration and Submission Link - Click Here

Mind Maze (Maze Solver)

Navigate the maze, outsmart the challenge - it's all about the fastest route!

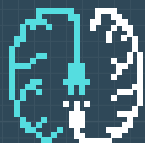- Classes: 6-10
- Participants: 1-2
- Duration: 4 mins (maximum) per round
- Objective:
  - Program a bot to autonomously navigate a line maze.
- Specifications:
  - Bots must solve the maze within a time limit.
  - Bot size: Must fit within 25x25 cm dimensions(10% tolerance).
- Rules:
  - Every time you touch or interact with your bot, you will lose points. Be careful with your actions!
  - Judges reserve the right to disqualify non-compliant bots.
- Judging Criteria:
  - Completion time
  - Path optimization
  - Algorithm efficiency
- Registration & Shortlisting:
  - Please refer to the General instructions page.
- Registration and Submission Link - Click Here

Goal Gears (Robo Soccer)

Score goals, build bots, and lead your team to soccer glory!

- Classes: 9-12
- Participants: 2
- Duration: 10 mins (maximum) per round
- Objective:
  - Compete in a soccer match with two bots per team (one goalkeeper and one attacker).
- Specifications:
  - Bots must fit within a 30cm x 40cm (10% tolerance).
  - Weight: Max 5kg (5% tolerance).
  - Features: Dribbling mechanisms allowed.
  - Power: Max 12V DC; only sealed batteries are allowed.
  - Control: Autonomous or remote-controlled bots.
  - Motion: Multi-directional movement required.
  - Originality: Bots must be built entirely by the team; no pre-made parts.
- Rules:
  - Goalkeeper must stay within its designated zone.
  - Wireless or wired control.
  - Teams must demonstrate bot functionality before matches.
  - Judges reserve the right to disqualify non-compliant bots.
- Judging Criteria:
  - Bot design
  - Ball control
  - Teamwork
  - Match performance
- Registration & Shortlisting:
  - Please refer to the General instructions page.
- Registration and Submission Link - Click Here

Steel Clash (Robo War)

Where machines battle it out - only the strongest will survive!

- Classes: 6-12
- Participants: 2-4
- Duration: 4-5 minutes per round
- Objective:
  - Engage in a battle where bots attempt to disable, push, or outlast their opponent in an arena.
- Specifications:
  - Size: Bots must fit within a 50cm x 50cm x 50cm cube(10% tolerance).
  - Weight: Max 15kg (5% tolerance).
  - Active weapons (spinners, hammers, wedges, etc.) allowed.
  - Mechanisms for self-righting are encouraged.
- Rules:
  - No explosives, projectiles, or liquids.
  - Bots must adhere to arena constraints.
  - Teams must ensure interference-free wireless operation.
  - Judges reserve the right to disqualify non-compliant bots.
- Judging Criteria:
  - Bot design
  - Offense and defense
  - Control and maneuverability
  - Performance
- Registration & Shortlisting:
  - Please refer to the General instructions page.
- Registration and Submission Link - Click Here
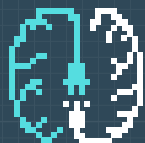
Robo Rumble (Robo Sumo)

Sumo with robots - who will dominate the ring?

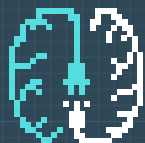- Classes: 10-12
- Participants: 2
- Duration: 2.5 mins (maximum) per round
- Objective:
    - Compete in a sumo arena. Push opponents out of the ring to win.
- Specifications:
    - Bots must fit within a 50x50x30 cm dimension(10% tolerance)
    - Weight: Max 8kg (5% tolerance).
- Rules:
    - Arena is circular; robots start on opposite sides.
    - Judges reserve the right to disqualify non-compliant bots.
- Judging Criteria:
    - Strength and stability
    - Effective strategies
    - Aggression and defense
- Registration & Shortlisting:
    - Please refer to the General instructions page.
- Registration and Submission Link - Click Here
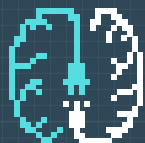
Vision Sprint

Innovate, create, and present your solution to change the world!

- Classes: 6-12
- Participants: Max 3
- Objective:
  - Present an innovative solution to a real-world problem.
- Rules:
  - Presentations should be 5-7 minutes long.
  - Use slides, prototypes, or diagrams as support.
- Judging Criteria:
  - Originality
  - Feasibility
  - Impact
  - Presentation quality
- Registration & Shortlisting:
  - Teams must submit a synopsis of their idea for shortlisting.
  - Deadline for synopsis submission: 18th April,11:59pm
  - Shortlisted teams will be invited for the offline round.
- Registration and Submission Link - Click Here

MECHANICA

SHOWCASE YOUR CREATIVITY - BUILD A PHYSICS-INSPIRED TOY!

- Classes: 10-12
- Participants: 2
- Objective:
  - Build a toy based on physics principles and present it with an explanation.
- Judging Criteria:
  - Conceptual Understanding (Correct application of physics principles)
  - Innovation & Creativity (Unique and engaging design)
  - Functionality & Practicality (How well the toy works)
  - Presentation & Explanation (Clarity and effectiveness of the explanation)
- NOTE: Participants must be prepared to demonstrate and explain the working of their toy.
- Registration & Shortlisting:
  - Teams must submit a synopsis of their idea for shortlisting.
  - Deadline for synopsis submission: 18th April,11:59pm.
  - Shortlisted teams will be invited for the offline round.
- Registration and Submission Link - Click Here

PLAYTOPIA

CREATE, PLAY, AND INNOVATE - DESIGN YOUR OWN PHYSICAL GAME!

- Classes: 9-10
- Participants: 2
- Objective:
  - Design and build a physical game, then present and explain its rules and mechanics.
- Judging Criteria:
  - Originality & Creativity (Unique and engaging game concept)
  - Game Mechanics & Playability (How well the game functions)
  - Fun Factor & Engagement (Enjoyment level for players)
  - Presentation & Explanation (Clear rule explanation and demonstration)
- NOTE: Participants must be ready to showcase how their game is played.
- Registration & Shortlisting:
  - Teams must submit a synopsis of their game for shortlisting.
  - Deadline for synopsis submission: 18th April, 11:59pm.
  - Shortlisted teams will be invited for the offline round.
- Registration and Submission Link - Click Here