



# SPHERO GLOBAL CHALLENGE ROBOTICS

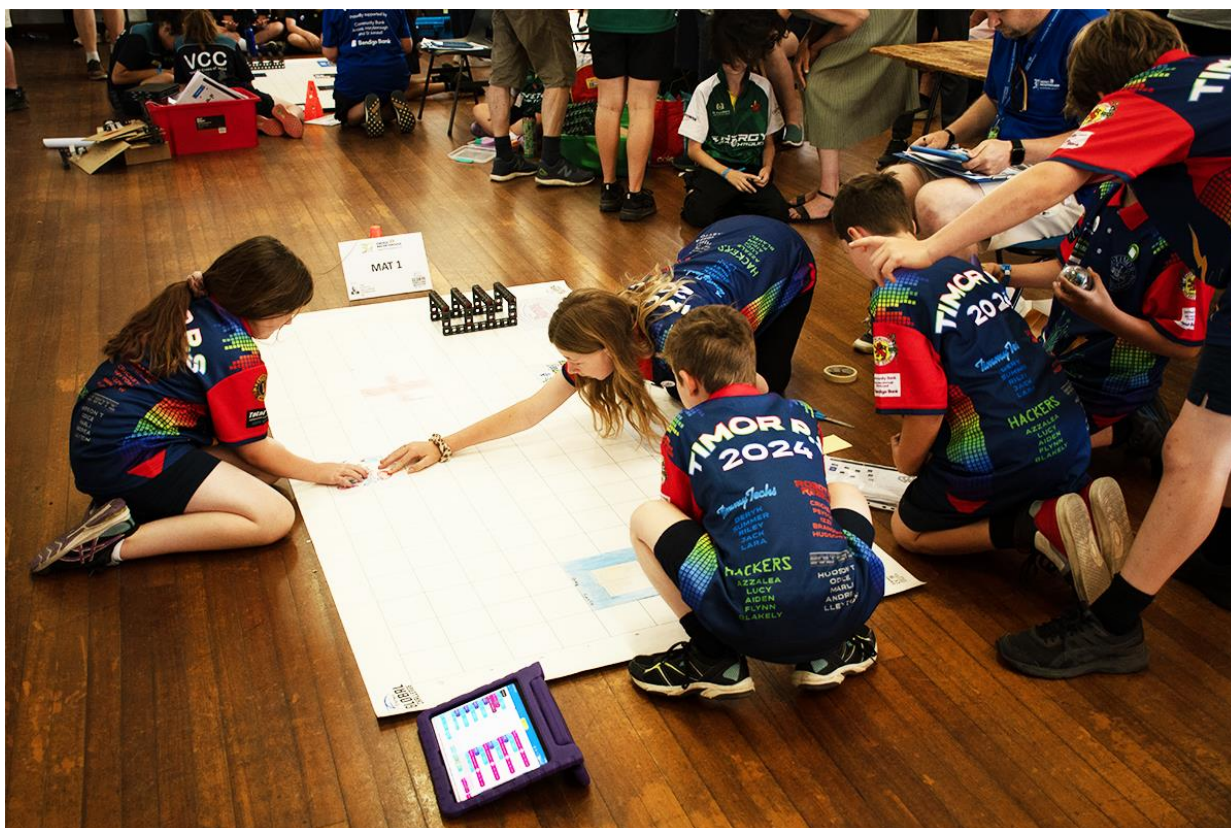
## 2025 SCHOOL'S HANDBOOK

**Coordinator:** Rob Higgins – [robh@eb.org.au](mailto:robh@eb.org.au)

[Version 2025.01](#)



**MARYBOROUGH, VICTORIA  
FRIDAY – SATURDAY 21-22 NOV 2025**



# 1. OVERVIEW

Hands-on STEM learning, solving problems, thinking creatively, and working as a team to achieve a breakthrough.

**The Sphero Global Challenge at the Energy Breakthrough is a STEM competition that invites students to engage in computational thinking, engineering, and programming skills through Sphero robots.**

The Energy Breakthrough presents a unique opportunity for students to extend their learning experience beyond the boundaries of formal education and to explore “coding” in a creative way.

Through creativity, innovation, and teamwork, students are asked to solve problems and program their robots to accomplish missions.

There’s no other Australian event that is part of the Sphero Global Challenge: the ultimate Robotics competition where winners will progress through to the World Championships!

The Sphero Global Challenge is an opportunity for students to go deeper with computational thinking, engineering, and programming skills.

It challenges learners to become master programmers, stealthy problem solvers, and top-notch teammates. With Mission Objectives designed for student coders of all ability levels, learners will grow and have a blast on this adventure.

The ultimate STEM competition where students go deeper with computational thinking, engineering, and programming skills.

# BOLT+: WILDERNESS SURVIVAL



Each season revolves around a specific theme that provides context for the missions and challenges students need to complete. **The theme for the 2025 season is “Wilderness Survival”**

Students will compete in groups of five in a series of rapid-fire missions across one day. Teams of all abilities are encouraged to work together to identify problems and develop solutions. Your BOLT robots and Construction Kits are your only companions and you must use your programming, engineering, and problem solving skills to navigate the **Mission Objectives**. Get ready for the ultimate test and let the wilderness survival begin!

**The Mission Objectives** will take your skills to the next level:

- Program two BOLT robots to move with accuracy around the **Competition Field**
- Design and build structures
- Creatively find solutions to programming and engineering challenges
- Create programs that allow your BOLT robots to gather information from their environments and communicate with one another

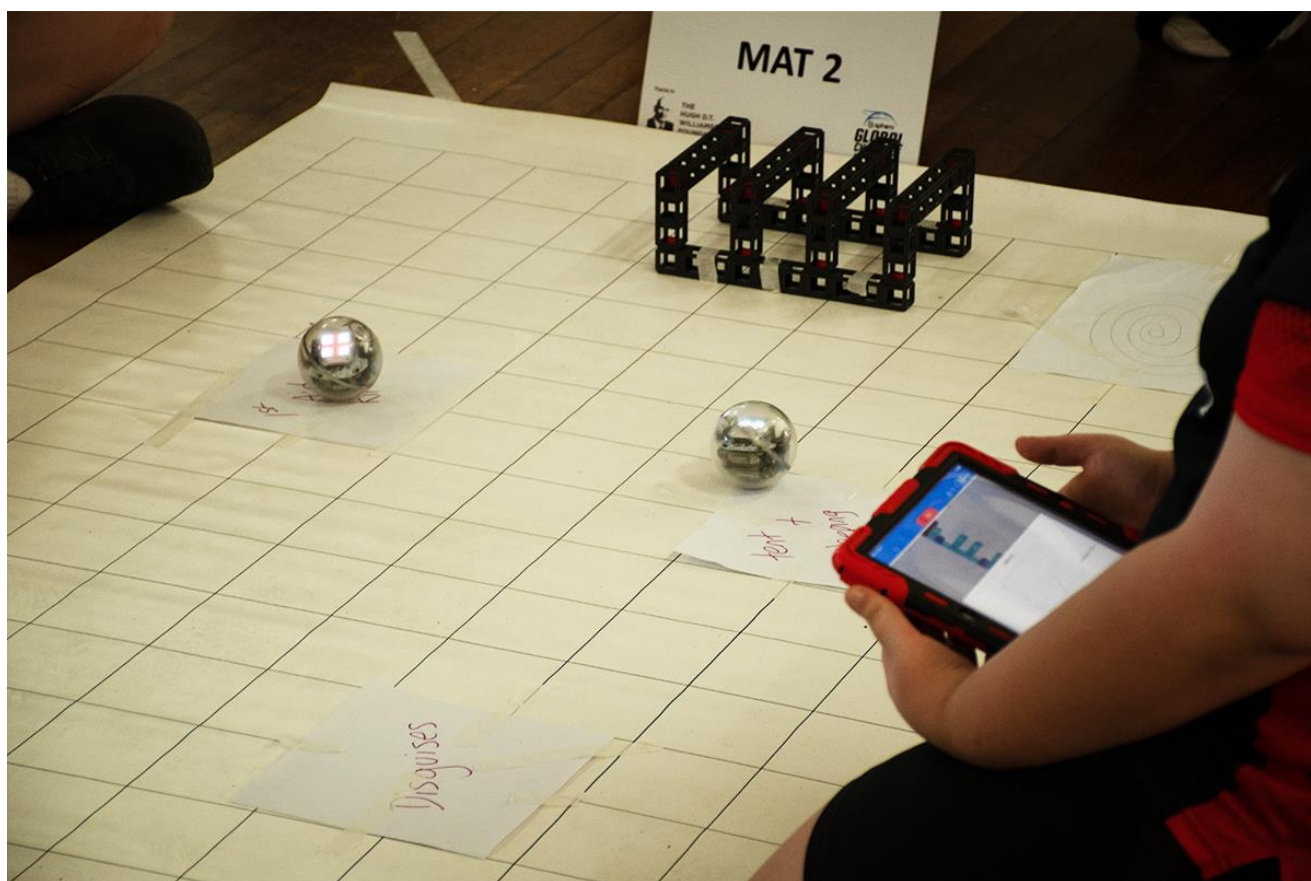
Your team will need two BOLT or two BOLT+ robots to complete the **Mission Objectives**. Most excitingly, teams will have the opportunity to compete not only at Maryborough in November, but the winners may have the opportunity to compete at the World Championship. Teams competing in the **first round of competition** are eligible to advance for the Sphero World Championship. Teams will be selected for the Sphero World Championship based on the following criteria:

## **Virtual Submissions:**

- Teams in the top ten percent (10%) of **Event Scores** are guaranteed to be selected as **Finalists**
- Additional teams may be selected as **Finalists** if there is capacity. These teams will be selected based on their **Event Scores** from the first round.

The following specifications have been framed so that the efforts and experiences of all participants are maximised, to be bound only by the constraints of safety and the spirit of healthy, but friendly competition.

All enquiries regarding these specifications should be emailed to Robotics Coordinator Rob Higgins: [RobH@eb.org.au](mailto:RobH@eb.org.au)



## 2.ENTRIES

### Categories, Classes and Quotas

Category	Class	Quota
<b>Sphero Robotics Challenge</b>	Primary school students in Years 3, 4, 5 & 6 Secondary school students	<a href="#"><u>Up to 30 teams.</u></a>

### Which Students Can Take Part?

#### Teams

- Teams will require 2 x Sphero Bolt robots and tablets.
- Teams will consist of 5 x members
- At least 2 team members must be females
- Teams will be supported by online tutorials



## Schools & Teachers

- The challenge can be done with class groups or coding clubs etc.
- Teachers don't have to be "Coding Gurus"
- Different requirements for Primary and Secondary teams
- Lots of support for teachers
- Free Professional Development programs will be conducted around the state.
- Contact Rob if you are interested in hosting one of these events, 60 – 90 mins after school.

## 3. Registration

### IMPORTANT - Registration with EB

Go to: [www.myeb.org.au](http://www.myeb.org.au) to register

**After registering with Energy Breakthrough teams will be invoiced \$50 by Central Goldfields Shire Council.**

Teams are encouraged to fundraise and seek donations to assist in the event.

### IMPORTANT - Registration with Sphero

Teams will then need to register with Sphero Global Challenge and pay the \$100 US entry fee and indicate your attendance at the Maryborough event.

TEAMS WILL ALSO NEED TO REGISTER AT <https://sphero.com/pages/global-challenge>

On registration with Sphero teams will receive complete guides for Challenges and also evaluation descriptions.

# General Rules/Levels

## **BOLT-G1**

Teams may have up to five total **Students** (at least 2 females)

## **BOLT-G2**

Teams considered **Upper Elementary School Teams** must complete three **Mission Objectives: Mission Objective #1, Mission Objective #2, and Mission Objective #4**  
Teams considered **Middle School Teams** must complete all five **Mission Objectives**

## **BOLT-G3**

Each **Mission Objective** will be scored according to the points associated with each rule.

## **BOLT-G4**

Teams may use either BOLT or BOLT+ robots in the **BOLT+: Wilderness Survival Event** The choice of robot will not impact your team's score, even though the robots have different features (like an LED matrix versus a screen) and program blocks (like a **roll block** versus a **roll to distance block**)

## **BOLT-G5**

Teams that are using BOLT+ may not use the **drive on/off block** in any program for any **Mission Objective** as this is an unfair advantage over BOLT teams

## **BOLT-G6**

Teams do not need to purchase the Sphero Global Challenge Blueprint Kit if they already have Blueprint parts from last year or may use alternative kits if Blueprint kits are not available.

## **BOLT-G7**

Coaches are to participate in a supervisory role and handle the registration, submission, and management of team meetings They are not allowed to actively participate alongside **Students** in the planning or completion of any **Mission Objective** **BOLT-G8**

For teams competing in live, in-person tournaments, teams will have timed rounds to attempt each **Mission Objective** as many times as they want. They will be able to tell their judge which attempt they would like to use for scoring.

# 4. ASSESSMENT

Assessment guidelines will be available from Sphero following registration.

No video presentations are required as all challenges will be presented on the day.

Students must attempt to undertake the 'Mission' and participate in an interview with a judging panel.



## 4. ROBOTICS SCHEDULE

### WEDNESDAY 19 NOVEMBER – THURSDAY 20 NOVEMBER

No activities

### FRIDAY 21 NOVEMBER - PRIMARY EVENT

\* PLEASE NOTE THAT THIS TIMETABLE IS SUBJECT TO AMENDMENTS.

Start Time	Activity	Category	Location/s
8:00AM	Registration and Check-In	Robotics	EB Admin Hub
9:45AM	Primary Robotics Challenge starts	Robotics	Maryborough Town Hall
2.45PM	Presentations	Robotics	Maryborough Town Hall
3:00PM	Primary Robotics Challenge concludes	Robotics	Maryborough Town Hall

( Please note venue change from 2024)

### SATURDAY 22 NOVEMBER - SECONDARY EVENT

\* PLEASE NOTE THAT THIS TIMETABLE IS SUBJECT TO AMENDMENTS.

Start Time	Activity	Category	Location/s
8:00AM	Registration and Check-In	Robotics	EB Admin Hub
9:45AM	Secondary Robotics Challenge starts	Robotics	Maryborough Town Hall
2.45PM	Presentations	Robotics	Maryborough Town Hall
3:00PM	Secondary Robotics Challenge concludes	Robotics	Maryborough Town Hall

( Please note venue change from 2024)

### SUNDAY 23 NOVEMBER

No activities