STEM IT UP SPORTS

STEM It Up Sports is an innovative collaboration of science, technology, engineering, and mathematics performed as a sport to excite the first time or experienced individual passionate about the world of robotics.

*Our **MISSION** is to motive youth to analyze the collaboration of STEM core components with a primary focus of the incorporation of technology designed to encourage originality, promote the design thinking process, build self-confidence, and strengthen leadership qualities.*

We strive to provide a STEM experience to all ages using robotic engagement with an established and accredited curriculum. Everyone deserves the opportunity to explore STEM in a fun and inventive way.

We here at STEM It Up Sports hope you will experience STEM with us!

SPHERO IN ACTION!

GENERAL COMPETITION RULES

- There will be 20 teams in the tournaments in total

- Teams can have up to 5 members each

- Middle School Teams will be scored on 5-Mission Objectives and their Slide Presentation for a total of 600 points. (500 from Mission Objectives, and 100 from their Slide Presentation)

- Once "Start" is pressed on any BOLT program, no human interaction can take place for the reminder of the program.

MISSION OBJECTIVES (BEGINNER & INTERMEDIATE)

- Mission Objective 1: BOLT on Safari

  - Level: Beginner
    Use your BOLT to navigate through the Sphero Safari. Follow the path to roll by all the animals. Choose one animal to bring to life. Use BOLT's features to mimic the animal you choose on repeat while it passes by.

- Mission Objective 2: A Day and Night in the Life

  - Level: Intermediate
    Choose any animal and show off a typical day in the life of that animal using BOLT. Use movements, lights, sounds, and functions to show behaviors of your chosen animal, while you narrate. Use the ambient light sensor to show the difference between their behavior at night and during the day.

- Mission Objective 3: Predator and Prey

  - Level: Intermediate
    Every animal needs food to survive and every ecosystem strikes a delicate balance between predators and their prey. You'll program one BOLT to represent a wildebeest searching for food and another to represent a lion hunting its prey. Using BOLT's IR sensors, you'll show how your wildebeest evades the lion and escapes back to its herd.

MISSION OBJECTIVES (ADVANCED)

- Mission Objective 4: BOLT Migration

  - Level: Advanced

    Many animals migrate throughout the year to different feeding, mating, and climate areas. Caribou in the arctic migrate every year to avoid snowstorms and cold weather and ensure that they have enough food. In this Mission Objective, you'll use BOLT's IR sensor to help a lost caribou follow a migration corridor and avoid man-made obstacles to rejoin its herd. You'll use events and variables to successfully complete the course.

- Mission Objective 5: Engineer a Rescue

  - Level: Advanced

    Poachers are an unfortunate reality for animals that have features that are considered desirable. In this Mission Objective, you will save BOLT from a poacher's cage using a mechanism that you design and a program you create.

MATERIALS AND COSTS

- Required materials for competitions (per team)
  - 2 Sphero BOLTS
  - Programming devices
  - Various craft supplies for building

- Tournaments
  - Sphero Registration Team Fee: $75.00 (up to 5 students per team)
  - Regional Tournament: $25.00 per participant
  - State Finals Tournament: $45.00 per participant

SEASON CALENDAR

Event	Date	Location
Deadline to Register for Regionals	October 20, 2022	Online
Regional Tournament	November 5, 2022	Boys & Girls Club of Greater Dallas-Grand Prairie
Deadline to Register for State	February 4, 2023	Online
State Competition	March 4, 2023	UNT-Dallas
World Championship	Spring 2023	Virtual

LET'S TAKE THE CHALLENGE

TEAM REGISTRATION PROCESS

1. Attend or review orientation meeting

2. Register with STEM It Up Sports to compete in the regional rounds: https://stemitupsports.com/registration

3. Register with Sphero Edu to gain access to the coaches' guide and the mission briefs: https://sphero.com/products/sgc-season-3-registration-middle-school

4. Register for the State Finals Competition