

CPCRC

Crescent Park Coding & Robotics Club

VEX IQ + Robotic Training & Challenge Mats PAC Proposal

November 6, 2017

Learning Intentions & VEX IQ



Elementary and middle school is the most formative time in a young student's life. The best way to instill a lifelong interest in the areas of Science, Technology, Engineering, and Math (STEM) is to provide a fun, engaging, and hands-on opportunity to explore and experience it for themselves.

- Teamwork & Communication
- Technical skills & problem solving
- Community interaction
- "A Celebration of Ingenuity!"

Why VEX IQ Robotics?

Each kit includes graphical step-by-step build instructions to help students build their first robot. All kits are also structured around the VEX IQ Curriculum to ensure seamless integration into a STEM classroom or club.

The VEX IQ Classroom Kit

Implement a **12-team** solution into your classroom! Perfect for a group of **24 students** (working in pairs), this discounted bundle contains everything needed to start building robots in your classroom, after school club, or summer STEM camp.

(12) Super Kits - Over 10,000 pieces total!

(2) Cube Kits

When you use 3-Inch Cubes to set up a simple game, it fuels a competitive atmosphere and engages students right away.



Gear Bots Training & Challenge Mats

The purpose of these challenges are to train/teach the engineering teams the basic process and logistical aspects of completing a robotic challenge. These challenges consist of missions that

reinforce the key concepts needed to compete in more advanced challenges. Points could be awarded for completion and accuracy of robotic programming and quality of engineering.



All of these challenges provide an excellent opportunity for students to demonstrate their knowledge of effective engineering, programming and teamwork skills. All of the challenges are organized along a theme and consists of four or more missions that need to be accomplished within a set time period.

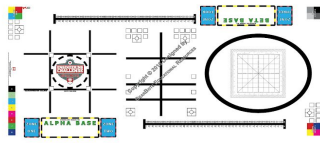
Introduction to Robotics: Core Instructional Designs

These four designs are an essential instructional tool for your robotics / coding unit.

Basic Training Mat

Item number: TM001
Mat One Side A with no border

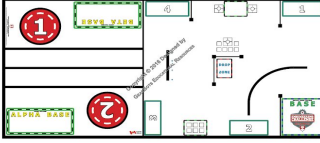
This is a great overall design to use in your robotics lab for testing your programming skills.



Vortex / Obstacle Course Mat

Item number: VT005
Mat One Side B with border

This design includes the Vortex Challenge and the summative challenges: Obstacle Course Challenge and the Fruit Picker Challenge.



Grid Navigation / Maze Mat

Item number: TM002
Mat Two Side A with no border

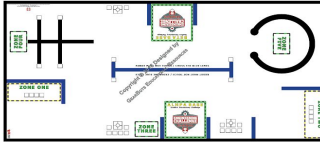
This design includes the Grid Navigation and Maze Challenges. They are great for practicing precise controls.



GearBots Challenge

Item number: CM001
Mat Two Side B with border

Once you have finished an introduction to robotics unit, challenge your class with this design. It is a great way for your students to show off their engineering / coding skills.



To learn more about our designs: [PHONE 604.308.2241](tel:6043082241) | [EMAIL info@gearbots.org](mailto:info@gearbots.org) | [VISIT www.gearbots.org](http://www.gearbots.org)

Key Benefits of Gear Bots Mats

- Enhances instructional opportunities and easy to manage larger class/club sizes
- Versatile and adaptable designs
- Can be used to build basic programming knowledge or training for robotic competitions
- Can be personalized with school logo or sponsorship
- Included instructional sequence needed to teach participants the core skills required to complete the Training Mat Challenges

Moving the Learning Beyond Crescent Park

- Develop robotics meetups & challenges with other Surrey Schools & Students (this is currently an untapped potential)
- Develop & Grow “Robotics Championship” within the District (currently does not exist, but we can champion this with your support)
- Opportunities for local, national and international competitions. (Explore: “First Tech Challenge,” “VEX Robotics Competitions,” “Skills Canada Robotics,” “First Robotics Competition,” “Jr. Skills Canada Gearbots Competition”)

