
WIZARD 2 CURRICULUM HIGHLIGHTS

Basics: Students learn how to control the Driving Base and trigger events based on input from the various sensors before proceeding to the advanced robots with complex tasks.

Beyond Basics: Students learn fundamentals of more complex topics, such as program loops, switches, multiple switches, arrays and data wires.

Hardware: Students learn about Intelligent EV3 Brick and the assorted sensors and motors.

Data Logging: Students master various data logging concepts, such as live and remote data logging, graph programming and dataset calculation.

Tools: Students learn how to use the various tools that are included.

Student Documentation Tool: The Content Editor allows students to document their progress and findings as they work through each tutorial. The Content Editor allows them to:

- Write full descriptions of their working processes
- Insert their own pages
- Add images and videos of their robot in action
- Share their unique project with other students.

Course Overview



CURRICULUM FOCUSES ON 5 IMPORTANT ASPECTS

Basics of Robotics

Computer Science

Middle School Science

Mathematics

Technology / Engineering

Basics of Robotics: Programming, Programming Overview, Configuring Blocks, Straight Move, Curved Move, Tank Move, Move Object, Stop at Line, Stop at Angle, Stop at Object, Brick Programming, Multitasking, Loop, Switch, Multiple Switch. Students will gain the knowledge they need to manipulate the hardware and software components.

Computer Science: Students learn the fundamentals of graphical programming, Programming, Multitasking, Loop, Switch, Data Wires, Variables, Arrays, Mathematics - Basic and Mathematics - Advanced.

Middle School Science: First students learn about Gyro Sensor, Color Sensor - Light and Ultrasonic Sensor. Students learn about collecting and analyzing data logged by the sensors. Data Logging, Data Logging Overview, Oscilloscope, Live Data Logging, Remote Data Logging, Brick Data Logging, Autonomous Data Logging, Dataset Calculation, Graph Programming.

Mathematics: Students use of mathematics and advanced mathematics this includes randomizing, defining a range, angles and rotational angle, as well as basic mathematics operations that calculate speed and trigonometry to navigate the Driving Base.

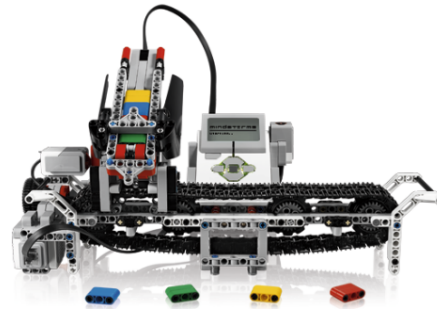
Technology / Engineering: Students learn Brick Sound, Brick Status Light, Brick Display, Brick buttons, Large Motor, Medium Motor, Touch Sensor, Gyro Sensor, Color Sensor – Color, Color Sensor – Light, Ultrasonic Sensor.

WIZARD 2 - ROBOTS:

1. **DRIVING BASE:** This robot is to teach students the basics of programming.
2. **GYRO BOY:** It is a self-balancing robot that takes advantage of all EV3 motors and sensors as well as advanced programming to control its behavior.



Gyro Boy

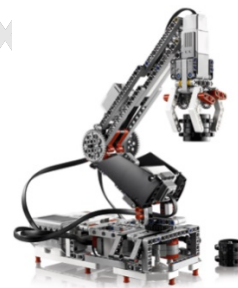


Color Sorter

3. **COLOUR SORTER:** This robot scan and load colored objects and let the color sorter place them in the right area. The color sorter uses the Touch sensor, Color sensor and motors to control its movements.
4. **PUPPY:** This is very interactive robot. This Puppy uses the Color sensor, Touch sensor and advanced programming to control its behavior.



Puppy



Robot Arm H25

5. **ROBOT ARM H25:** This robot picks up objects in specific locations and deliver them to another. The Robot arm uses the Color sensor and Touch sensor to control its movements.
6. **CREATIVE MIND EXPLORATION:** Students build their own robot using their imagination, creativity and programming skills.