



# دي بي اس - مدرسة مونارك الدولية DPS-MONARCH INTERNATIONAL SCHOOL

NEXT BRAIN LAB

Nurturing Young Innovators

DPS-Monarch/CIR/SCY/2023-24/132

Date: 26.03.2024

## ROBOTICS PROGRAM


Dear Parents,


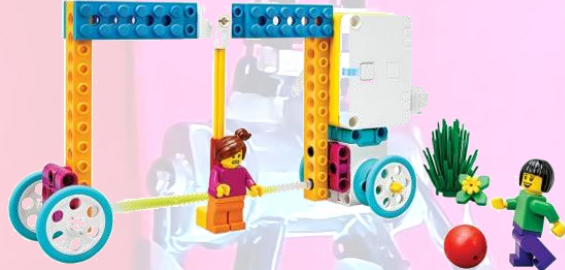

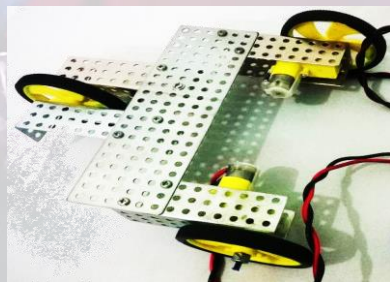
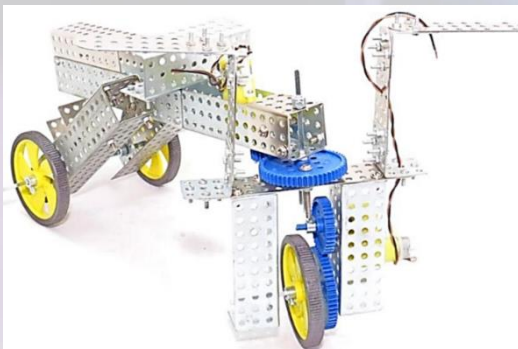
Greetings of the day!

As we prepare for the Academic Year 2024-25, we are thrilled to open the registration of our Robotics Program and extend an invitation for your child to enroll. We are pleased to offer this program to students across all grade levels, from primary to secondary school. However, please note that there are limited seats available, and enrollment will be on a first-come, first-served basis. Therefore, we encourage interested students to register as soon as possible to secure their spot in the program. Please find below the details of the Robotics program for the upcoming academic session 2024-25 for Grade 1 to 12.

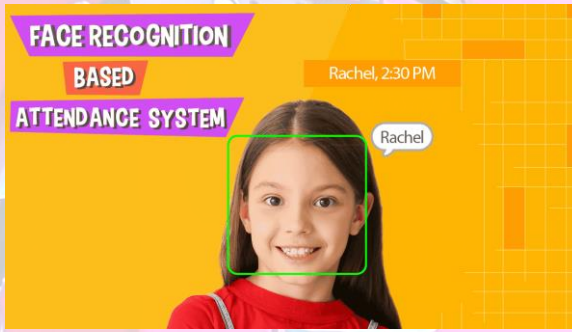
### COURSE FEATURES

The courses aim to provide students with tools, exposure, and understanding which would help them address problems using the design thinking process:

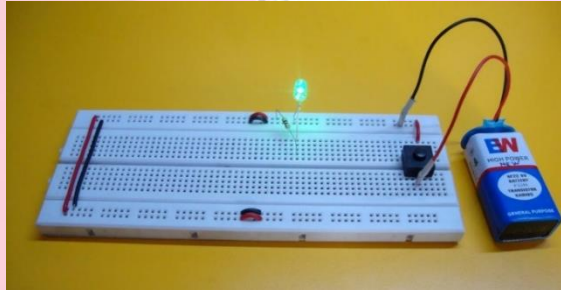
GRADE	COURSE	CURRICULUM OBJECTIVES
Grade 1	LEGO ROBOTICS – SPIKE BASIC 	<ul style="list-style-type: none"><li>Identifying and assembling parts from the kit.</li><li>Usage of mechanical components and building various robots.</li><li>Programming robots using icon-block based coding.</li></ul>
Grade 2	LEGO ROBOTICS - BOOST	<ul style="list-style-type: none"><li>Identifying and assembling parts from the kit.</li><li>Usage of mechanical components and building various robots.</li></ul>

		<ul style="list-style-type: none"> <li>▪ Programming robots using icon-block based coding.</li> </ul>
<p><b>Grade 3</b></p>	<p><b>LEGO ROBOTICS – SPIKE ADVANCE</b></p> 	<ul style="list-style-type: none"> <li>▪ Identifying and assembling parts from the kit.</li> <li>▪ Usage of mechanical components and building various robots.</li> <li>▪ Programming robots using word-block based coding.</li> </ul>
<p><b>Grade 4</b></p>	<p><b>LEGO ROBOTICS with AI</b></p>  <p><b>MANUAL ROBOTICS - BASIC</b></p> 	<ul style="list-style-type: none"> <li>▪ Understanding basic concepts of AI.</li> <li>▪ Programming of robot using block based coding platform and controlling with AI.</li> <li>▪ Usage of mechanical components and building various robots.</li> <li>▪ Fundamental mechanical concepts.</li> </ul>
<p><b>Grade 5</b></p>	<p><b>MANUAL ROBOTICS - ADVANCE</b></p> 	<ul style="list-style-type: none"> <li>▪ Usage of mechanical components and building various robots.</li> <li>▪ Fundamental mechanical concepts.</li> <li>▪ Understanding basic concepts of AI.</li> <li>▪ Building of various AI models.</li> </ul>

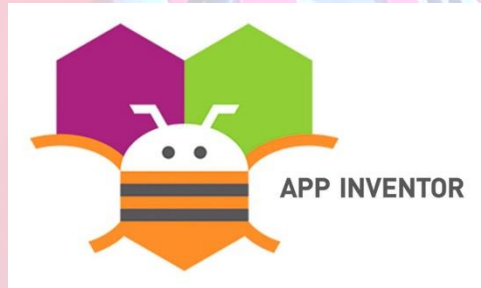
### AI with SCRATCH



### ELECTRONIC CIRCUIT BASIC



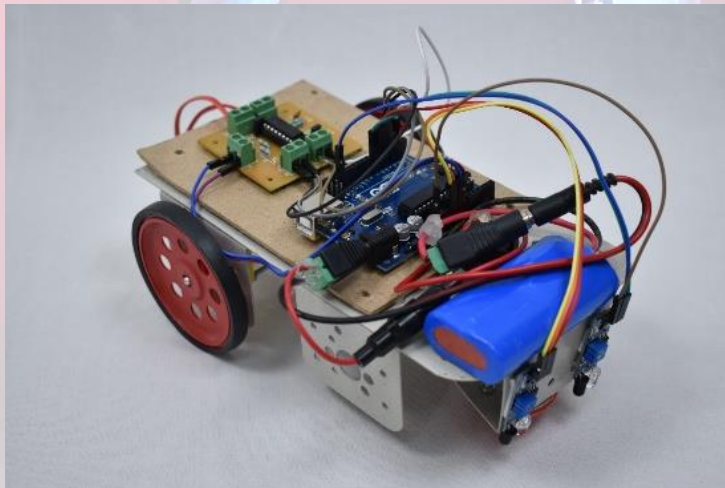
### APP DEVELOPMENT



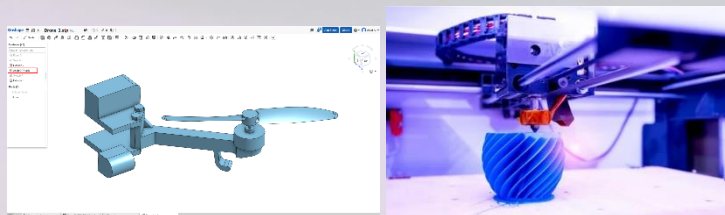
Grade 6

- Understanding of basic electronic components.
- Building and Simulating circuits on online platform.
- Building electronic circuits on a Breadboard.
- Learning to design user interfaces (UI) and coding for the application.
- Integrating graphic design, content creation, and logical thinking into the app development process.

### ARDUINO BASICS

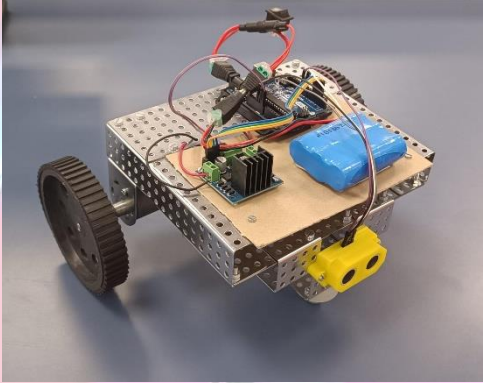
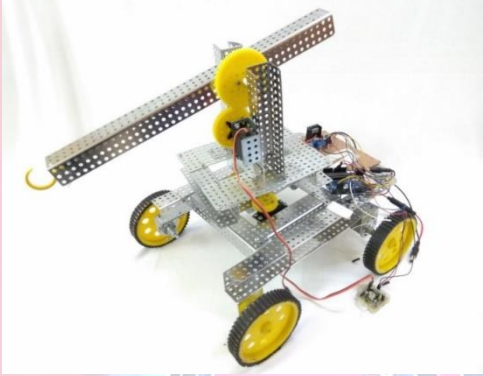


### CAD and 3D PRINTING



Grade 7 and 8

- Fundamentals of microcontrollers and sensors.
- Interfacing of various electronic components.
- Block based coding to develop autonomous robots.
- Learning to design 3D models for printability using CAD software.
- Understanding the core principles of 3D printing technology.
- Operating 3D printers safely and efficiently.
- Calibrating and maintaining 3D printers for optimal performance.

<p><b>Grade 9</b></p>	<p><b>ARDUINO BASED ROBOTS - BASIC</b></p> 	<ul style="list-style-type: none"> <li>▪ Learn the C++-based Arduino programming language to control robot behavior.</li> <li>▪ Understanding robot mechanics, build simple robots with Arduino, and explore different robot designs like line followers, obstacle avoiders, etc.</li> </ul>
<p><b>Grade 10 to 12</b></p>	<p><b>ARDUINO BASED ROBOT – ADVANCE</b></p>  <p><b>Internet of Things</b></p> 	<ul style="list-style-type: none"> <li>▪ Understanding robot mechanics, build simple robots with Arduino, and explore different robot designs like voice control robot, gesture control robot, etc.</li> <li>▪ Text based coding to develop autonomous and wirelessly controlled robots.</li> <li>▪ Building of mobile application to control robot wirelessly.</li> <li>▪ Introduction to the Internet of Things.</li> <li>▪ Read and write data using cloud services.</li> <li>▪ Smart Home Automation using IoT.</li> </ul>

## REGISTRATION LINK

Kindly find below the registration link to register your child for the course:

<https://forms.office.com/r/i4e2TcggGQ>

We request interested parents to submit the registration form and make the first term fee payment by **1<sup>st</sup> April 2024** to reserve the seat, as seats are limited.

## ROBOTICS RESOURCES CHARGES & SEAT AVAILABILITY

Grade	Charges (in QAR)	No. of Seats available
Grade 1 to 3	350 Riyals per term	72 Seats each grade
Grade 4 to 5	450 Riyals per term	72 Seats each grade
Grade 6 to 8	600 Riyals per term	36 Seats each grade
Grade 9 to 12	650 Riyals per term	36 Seats each grade

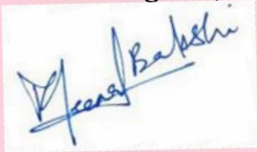
1. Seats will be provided on a first come first serve basis. However, students can't discontinue the Robotics program in the middle of the academic year.
2. Existing robotics students are also required to fill in the registration form.
3. The charges can be paid by any of the payment modes mentioned below:
  - a) Online Bank transfer to our Monarch International School, Doha Bank Account No-0215-920665-001-0010-000 with IBAN No. QA98DOHB02150920 6650010010000, C-Ring Road Branch, Doha by mentioning student details in the "Transaction Remarks" column.  
(OR)
  - b) Online Bank transfer to our Monarch International School, Commercial Bank Account No-4010-477106-001 with IBAN No. QA56CBQA000000004010477106001, Grand Hamad Branch, Doha by mentioning student details in the "Transaction Remarks" column.  
(OR)
  - c) Online Bank transfer to our Monarch International School, Dukhan Bank Account No - 100001858313 with IBAN No. QA95BRWA000000000100001858313, Main Branch, Doha mentioning student details in the "Transaction Remarks" column.  
(OR)
  - d) Payment on the School Fee Counter (Cash / Card (Debit / Credit) / Cheque (Current Dated)

Classes will be conducted during regular school hours from 15<sup>th</sup> April 2024. Please note that the timetable and the monthly syllabus will be shared with parents in April. We are excited to offer this opportunity to our students and look forward to seeing them thrive on the robotics program.

Thank you for your continued support and involvement in your child's education. Please do not hesitate to contact our Robotics teacher-in-charge, Mr. Nikhil Kulkarni, if you have any questions. His email ID is [nikhilkulkarni@misdoha.com](mailto:nikhilkulkarni@misdoha.com)

Have a happy and fun learning experience!

Warm regards,



Meenal Bakshi  
School Principal

**Our Motto**

Education with a difference

**Our Vision**

DPS Monarch International School will deliver learning excellence that is child-centric, value-based, and technology-driven.

**Our Mission**

DPS Monarch International School will ensure that students add value to their community and make the world a better place to live.