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| **TITLE: LCD Monitorand Ic2 Module** |

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| **LEARNING SCENARIO** |
| ***School:***  | Duration (minutes): | 40 |
| Teacher:  |  | Studentsage: | **12 -13** |

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|  Essential Question: |  |

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| Topics: |
| * Arduino Programing Card and Block coding (Mblock)
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| Aims: |
| * They will learnhow to use LCD monitor as display
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| Outcomes: |
| * They will code Arduino with Mblock.
* They will use LCD
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| Work forms:* Work in pairs

Methods: |
| Presentation and Project based Learning |

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| **ARTICULATION** |
| Course of action (duration, minutes) |
| **INTRODUCTION** |
| **Talk about the final project:****We will write text via arduino and use LCD monitor to display this text**  |
| **MAIN PART*** **Give information about LCD Monitors and I2c Module**

**LCDs like these are very popular and broadly used in electronics projects as they are good for displaying information like sensors data from your project.****The 16x2 LCD has a total of 16 pins. As shown, eight of the pins are data lines (pins 7-14), two are for power and ground (pins 1 and 16), three are used to control the operation of LCD (pins 4-6), and one is used to adjust the LCD screen brightness (pin 3). The remaining two pins (15 and 16) power the backlight.****As seen in the Picture, If you use LCD with 16 pins, you have to make at least 12 connections. But IC2 module make it more easer.****https://www.allaboutcircuits.com/uploads/projects/lcd2.png****Wiring an I2C LCD is a lot easier than connecting a standard LCD. You only need to connect 4 pins instead of 12.****Karakter LCD I2C/IIC Dönüştürücü Kartı Satın Al | Robotistan.com*** Let’s make Park Sensor
* Set up this circuit with Arduino and LCD monitor with I2C module

C:\Users\user\Desktop\arduino lessons\LCD\I2C-LCD-with-Arduino-Wiring-Diagram-Schematic-Pinout.jpg |
| * **Open Mblock and connect the Arduino**
* **Write this code:**

C:\Users\user\Desktop\arduino lessons\LCD\CODE.JPGVideo:[**https://youtu.be/BvS7k-wlWaM**](https://youtu.be/BvS7k-wlWaM)Scenarios for discussion**In which projects can we use LCD Monitors ?** |
| **CONCLUSION****We read the data come from analog pins and we used these data as conditions for another equipment’s working.** |
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| Methods | Work forms |
| *presentation interview**talk demonstration**work on the text role playing**graphic work**interactive exercise /simulation on the computer* | *individual work**work in pairs**group work**frontal work* |

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| Material |
| * Arduino and USB connection Cable
* Computer
* LCD Monitor with I2c module
* jumper Cables
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| Literature |

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| **PERSONAL OBSERVATIONS, COMMENTS AND NOTES** |
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