

ATAL TINKERING LAB ACTIVITIES FOR THE MONTH OF JANUARY 2023

REPORT

Name of School: KENDRIYA VIDYALAYA OCF, AVADI, CHENNAI – 54

Activity : BASIC ELECTRONICS

Classes : 6-9

Importance / Values: The aim is to provide some basic electronics activities

Learning goals: To understand the basics of electronics and the difference between electrical and electronic components.

Activities conducted to achieve TLO:

- PPT presentation on the topic “Introduction to Electronics”.
- Familiarize some electronics components such as LEDs, Seven segment display, OLEDs Resistors, Capacitors, Breadboard, Jumper wires, Arduino Nano Board etc.
- Video presentation of making of motor car with sensor

Reflections and Findings:

The students shared their views about electronic circuits. They were familiar with open circuit and closed circuit, resistance, capacitance and voltage of electrical current. They were interested to do these kinds of hands on experience. They showed extra eagerness while taking the classes and doing experiment especially slow bloomers.



Teacher in- charge

ATAL in -charge

Principal in-charge

ATAL TINKERING LAB ACTIVITIES FOR THE MONTH OF FEBRUARY 2023

REPORT

Name of School: KENDRIYA VIDYALAYA OCF, AVADI, CHENNAI – 54

Activity : Arduino Nano - Introduction

Classes : 6-9

Importance / Values: The aim is to provide basic idea about microcontrollers such as Arduino Nano

Learning goals: To understand the basics of working of microcontrollers

Activities conducted to achieve TLO:

- PPT presentation on the topic “Introduction to Microcontrollers”.
- Familiarize some microcontroller boards such as Arduino Nano and Raspberry.
- Basic circuit using breadboard 400 pins and Arduino board.
- Practical experience in Arduino IDE using desktop and Arduino Board

Reflections and Findings:

The students showed eagerness in doing hands on experiments. Some students are familiar with Arduino UNO which is available with Arduino Kit. They shared their experience with Arduino programming. Some children tried to do the activities using Board. But it is found that the lack of knowledge in coding they are facing. And it is found that if we are providing some coding platforms such as Scratch programming and Arduino IDE, they will perform better.



Teacher in- charge

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ATAL TINKERING LAB ACTIVITIES FOR THE MONTH OF MARCH 2023

REPORT

Name of School: KENDRIYA VIDYALAYA OCF, AVADI, CHENNAI – 54

Activity : Air Quality Checker using Arduino Nano Board

Classes : 6-9

Importance / Values: The aim is to develop projects using Arduino Nano board the real life applications of Coding

Learning goals: To understand the real-life applications of coding

Activities conducted to achieve TLO:

- Practical experience in Arduino IDE using desktop and Arduino Nano Board
- Develop a project to check the quality of Air using MQ -135 sensor and Arduino board.

Reflections and Findings: They understood the working of MQ -135 sensor, transistor, buzzer, LCD display and the coding behind the working of Air Quality Checker using Arduino Nano Board. They have got practical experience in how to arrange the components of Air Quality Checker/ CO2 detector in breadboard and the Arduino coding in Arduino IDE.



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ATAL TINKERING LAB ACTIVITIES FOR THE MONTH OF JULY 2023

REPORT

Name of School: KENDRIYA VIDYALAYA OCF, AVADI, CHENNAI – 54

Activity : PAPER CIRCUITS - BASIC ELECTRONICS

Classes : 6-9

Importance / Values: The aim is to provide some basic electronics activities

Learning goals: To understand the basics of electronics and the difference between electrical and electronic components.

Activities conducted to achieve TLO:

- PPT presentation on the topic “Introduction to Electronics”.
- Familiarize some electronics components such as LEDs, Seven segment display, OLEDs Resistors, Capacitors, Breadboard, Jumper wires, Arduino Nano Board etc.
- Hands on experience on making of Paper Circuits

Reflections and Findings:

Children got basic idea of connecting different electrical and electronic components and how to make paper circuits, attractive greeting cards etc.

Paper Circuit made by Master Gajendra, class 8 C



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Principal in-charge

- Participated in JIGYASA 3.0 at CSIR CLRI, Chennai



ATAL TINKERING LAB ACTIVITIES FOR THE MONTH OF AUGUST 2023

REPORT

Name of School: KENDRIYA VIDYALAYA OCF, AVADI, CHENNAI – 54

Activity : ARDUINO LED CHASER WITH 13 different patterns (DANCING LIGHT)

Classes : 6-9

Importance / Values: The aim is to provide of Dancing light using Arduino Nano and LEDs

Learning goals: To understand the basics of coding and real life applications using microcontrollers

Activities conducted to achieve TLO:

- PPT presentation on the topic “Working of Dancing Light”.
- Familiarize the connection of LEDs with Arduino Board using Jumper Wires.
- Identify the different pins (Analog pins and Digital pins) and connection with LEDs using jumper wires
- Hands on experience on making of Arduino LED Chaser

Reflections and Findings:

Children got the practical experience on making of Dancing Light using Arduino Nano board. They understood the different types of pins used in Arduino Nano board and connecting different electronic components with Arduino Nano Board.



Teacher in- charge

ATAL in -charge

Principal in-charge