| Vivekanand School - MICRO PLANNER (2024-25) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Month Class 6** | **Sessions** | **Topic** | **Activity** | **Kits** | **Skills** | **Learning Outcome** | **Teacher Mannual** |
| April | 1 | STEM Orientation | | | | | |
| | 2 | Introduction to Basic electronics and components | Hardware components Description and Kit | Electronics Kit | Basic Electronics | Students will learn to build simple electric circuits using batteries, wires, bulbs, resistors, capacitors, and switches. | NA |
| | 3 | LED & Breadboard | Led Glowing using breadboard and battery | Electronics Kit | Basic Electronics | Students will learn to construct a basic LED circuit using a battery, resistor (if required), and appropriate wiring. | NA |
| | 4 | Transister and LDR | Use of IR Sensor, transister and LDR | Electronics Kit | Basic Electronics | Students should be able to design simple transistor circuits, such as a basic amplifier or a switch circuit, and understand how changes in component values affect circuit behavior. | NA |
| | 5 | Project | Automatic Room light\doorbell | Electronics Kit | Basic Electronics | Students will develop a basic understanding of electronic components such as resistors, capacitors, transistors, LDRs, and buzzers, as well as their functions within the circuits. | NA |

| **Month Class 7** | **Sessions** | **Topic** | **Activity** | **Kits** | **Skills** | **Learning Outcome** | **Teacher Mannual** |
|---|---|---|---|---|---|---|---|
| April | 1 | STEM Orientation | | | | | |
| | 2 | Introduction to Python and its installation | Use of inbuilt method | Python idle | Logical and Computional Thinking | 1. Understand key features that make Python user-friendly (like simple syntax, readability).<br>2. Understand where Python is used in the real world (e.g., web development, data science, automation). | NA |
| | 3 | Lines and angles | Draw Shapes with turtle | Python idle | Logical and Computional Thinking | 1. Understand the concept of a "turtle" in a graphical programming environment.<br>2. Learn how to move the turtle in different directions (forward, backward). | NA |
| | 4 | Project-Practical geometry | square design | Python idle | Logical and Computional Thinking | Understand how to use angles in programming to create geometric shapes. | NA |
| | 5 | Programming | Loops | Python idle | Logical and Computional Thinking | Grasp why loops are used in programming to repeat a sequence of instructions. | NA |

| **Month Class 8** | **Sessions** | **Topic** | **Activity** | **Kits** | **Skills** | **Learning Outcome** | **Teacher Mannual** |
|---|---|---|---|---|---|---|---|
| April | 1 | STEM Orientation | | | | | |
| | 2 | Mathematics | Python operators | Python idle | Logical and Computional Thinking | Familiarize with arithmetic, comparison, logical, assignment, and other types of operators in Python. | NA |
| | 3 | Programming | Conditional Statement | Python idle | Logical and Computional Thinking | 1. Understand how to use if, elif (else if), and else statements to create conditions in Python.<br>2. Develop logical thinking skills by determining the conditions and actions in a program. | NA |
| | 4 | Project-Small Calculator | Python Functions | Python Programming Language | Logical and Computional Thinking | 1. Learn how to define a function using the def keyword.<br>2. Understand how to call a function to execute the code it contains. | NA |
| | 5 | Project -Small Chatbot | Python Module | Python Programming Language | Logical and Computional Thinking | Python Turtle facilitates creative programming through visual drawing and graphics. | NA |

| **Month Class 9** | **Sessions** | **Topic** | **Activity** | **Kits** | **Skills** | **Learning Outcome** | **Teacher Mannual** |
|---|---|---|---|---|---|---|---|
| April | 1 | STEM Orientation | | | | | |
| | 2 | Introduction to Statistics and Data | Data Visulazation | Python and Jupyter Notebook | Analytical and Mathematical | 1. Understand the importance and purpose of data visualization in interpreting and communicating data insights.<br>2. Learn about different types of data (categorical, numerical, time series, etc.) and how they influence the choice of visualization. | NA |
| | 3 | Introduction to matplotlib | Introduction to matplotlib | Python and Jupyter Notebook | Analytical and Mathematical | 1. Gain a basic understanding of what Matplotlib is and its role in data visualization.<br>2. Understand the integration of Matplotlib with data manipulation libraries like Pandas and NumPy. | NA |
| | 4 | Mean Median Mode | Mean | Python and Jupyter Notebook | Analytical and Mathematical | Learn how to calculate the mean (average). | NA |
| | 5 | Mean Median Mode | Median Mode | Python and Jupyter Notebook | Analytical and Mathematical | Learn how to calculate the median and mode of a data set. | NA |