

| Date                                    | Topic   | Ex./ Demo./Practicals  |
|---|---|--|
| <b>Important links</b>                  | <b>Student HandBook-</b><br><a href="https://cbseacademic.nic.in/web_material/codingDS/classViii_Coding_Student_Handbook.pdf">https://cbseacademic.nic.in/web_material/codingDS/classViii_Coding_Student_Handbook.pdf</a> | <b>Project Booklet for Student -</b><br><a href="https://www.microsoft.com/en-us/makecode">https://www.microsoft.com/en-us/makecode</a><br><a href="https://cbseacademic.nic.in/web_material/codeingDS/classVIII_Coding_Project_Booklet.pdf">https://cbseacademic.nic.in/web_material/codeingDS/classVIII_Coding_Project_Booklet.pdf</a> |
| <b>April</b>                            | <b>Variables and Datatypes</b>  |  |
| No.of working days- 22                  | What are Variables?   | Practical based on all mentioned operators<br>Activity1 - Can you create a Triangle?   |
|   | Naming Variables  |  |
|   | Data Types in Variables   |  |
|   | Performing operations on Variables  |  |
|   | What is Variable Initialization?  |  |
|   | Data Types in programming   |  |
|   | 1. Integer 2. Floating-Point Number 3. String   |  |
|   | Math Operations in Programming  |  |
| Logical Operators                       |   |  |
| Relational operators                    |   |  |
| Precedence of logical operators         |   |  |
| <b>May</b>                              | <b>Conditional in Details</b>   |  |
| No.of working days- 18                  | Types of control structures   | Activity- Create a programe in Make code to check if a number is Odd or Even?  |
|   | Understanding of IF-Else ans Else- If Statements  |  |
|   | Flow chart - to check no. is Odd or Even using if else  |  |
| <b>July</b>                             | <b>Get Creative with Loops</b>  |  |
| No.of working days- 25                  | What are the loops  | Activity - Divisibility of a number by 7 or9 or by both  |
|   | Different types of loops  | Activity: Create a staircase using for and while loops   |
|   | The While Loop  |  |
|   | The For Loop  | Activity: Raining pigs and pandas  |
|   | Nested loops  |  |
| Exit Criteria                           |   |  |
| <b>August</b>                           | <b>Fun with Functions</b>   |  |
| No.of working days- 23                  | Introduction  | Activity - 1. Calling a function which has no parameters   |
|   | What exactly are functions?   |  |
|   | Examples of Functions in Arcade   |  |
|   | Advantages of using functions   | Activity -2. Calling a function with a single parameter  |
|   | How to reduce redundancy using functions  |  |
|   | Advantages of using Functions   |  |
| What are different Function Parameters? |   |  |

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|-------------------------|--|---|
| <b>September</b>        | <b>Functions in depth</b>                        | Activity - .To display a cube of numbers                |
| No.of working days- 23  | Function Parameters                              | Activity: Calculating Volume of Cuboid                  |
|                         | Returning value from a function                  | Activity- Return Values from Functions                  |
|                         | <b>Calling function to print statements</b>      |   |
| <b>October</b>          | <b>UNDERSTANDING ARRAYS</b>                      | Example 1: Is 36 a perfect square?                      |
| No.of working days- 20  | What are collections?<br>What are arrays?        | Activity – Algorithm for a perfect square               |
| <b>November</b>         | <b>UNDERSTANDING ARRAYS</b>                      | Activity - To create an array and calculate its length  |
| No.of working days- 23  | How can we iterate over collections?             | Activity- To print the first element of Array           |
|                         | Modifying Collections                            |   |
|                         | Adding Elements During Iteration                 |   |
|                         | Removing Elements During Iteration               |   |
| <b>December</b>         | <b>Programming with arrays</b>                   |   |
| No.of working days- 24  | Playing with Colors                              | Activity - To calculate the sum of elements in an array |
|                         | Array declaration                                | Activity - Use of append function                       |
|                         | To add an item in an array                       |   |
|                         | Working on array using for loop                  |   |
| <b>January</b>          | <b>Programming with arrays</b>                   | Activity: Building stairs                               |
| No.of working days- 13  | Sorting an Array                                 | Activity- An array in ascending order using bubble sort |
|                         | Searching in an array                            |   |
| <b>February</b>         | <b>Submission and assessment of the projects</b> |   |
| No.of working days - 22 |  |   |

**Note: The students will be assessed on the basis of the classroom performance, task assigned as Home Assignments / Holiday Homework / Project.**