

## Coding

**CLASS -VIII**

**2023-24.**

Date	Topic	Ex./ Demo./Practicals
<b>Important links</b>	<b><u>Student HandBook-</u></b> <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><u>Project Booklet for Student -</u></b> <a href="https://www.microsoft.com/en-us/makecode">https://www.microsoft.com/en-us/makecode</a> <a href="https://cbseacademic.nic.in/web_material/codingDS/classVIII_Coding_Project_Booklet.pdf">https://cbseacademic.nic.in/web_material/codingDS/classVIII_Coding_Project_Booklet.pdf</a>
<b>April</b>	<b>Variables and Datatypes</b>	
No.of working days- 20	What are Variables?	Practical based on all mentioned operators 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- 11	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- 24	What are the loops	Activity - Divisibility of a number by 7 or 9 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- 24	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?	

<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- 19	What are collections? 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- 21	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- 25	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 - 24		
<b>Note: The students will be assessed on the basis of the classroom performance, task assigned as Home Assignments / Holiday Homework / Project.</b>		