



Datta Meghe World Academy

Coding Syllabus

Grade I & II

Programming language: Scratch Jr

No	Topic	Learning Outcome
1	Introduction to Scratch Jr	Get to know about Scratch Jr platform and process of downloading and installing the application
2	Explore the playground	Students will understand the different areas of Scratch Jr platform
3	Shark and Minnows	Students will learn to make game using scratch Jr
4	Dance the Hokey Pokey	Build a project using scratch Jr
5	Play a game of tag	Build a game to understand how to remember english words
6	Catch the ball	Build an interactive game
7	Mini Golf	Students will understand the measurement concepts through this activity
8	Free choice	Build a project using scratch Jr
9	Drive across the city	Students will understand basic principle behind working of car
10	Run a race	Students will learn to make game using scratch Jr
11	Sunset	Make and understand sunset and sunrise concept
12	Culmination	Make your own project
13	Moonrise after sunset	Build a project to improve your critical thinking
14	Phases of the Moon	Students will understand the different phases of moon through this activity
15	Moon orbiting the Earth	Build a project to improve your critical thinking
16	Spooky forest	Build a project using scratch Jr
17	Dribble a basketball	Students will understand rules of basketball game
18	Dance party	Build a project using scratch Jr
19	Meet and greet	Students will learn about basic manners when they meet someone
20	Conversation	Make yourself conversation ready, improve your presentation skills
21	Move the frog up the stairs	Build a project to improve your critical thinking
22	Spin the turkey	Students will learn to make game using scratch Jr
23	Halloween animation	Build a project using scratch Jr
24	Culmination	Make your own project



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Coding Syllabus

Grade 3

Programming language: Block based

Session No	Topic	Learning Outcome
1	Introduction to Coding	Student will familiarize with coding, importance of coding and sequencing
2	Algorithm	Student will learn about basic tools of programming i.e., algorithm
3	Flowchart	Student will learn about basic tools of programming i.e., flowchart
4	Introduction to mBlock programming part 1	Student will learn about programming interface and different commands used in programming
5	Introduction to mBlock programming part 2	Student will learn about programming interface and different commands used in programming
6	Food	Build an app to differentiate between different kinds of foods
7	Solar System	Build an app to represent our solar system
8	Number game	Build an app which represents our solar system
9	Money	Students will learn to develop a game on money concept
10	Time	Build an app based on time management system
11	Geometry	Build an app to draw different geometrical shapes
12	Culmination	Students will create and present their project
13	Simple machine part 1	Build a game to understand concept of simple machines
14	Simple machine part 2	Build a game to understand concept of simple machines
15	Even and odd number	Students will learn about even and odd numbers
16	Mouse and cheese game	Students will learn to develop game
17	Where is the Panda?	Students will learn about Looks block
18	Campus Sport Event	Students will learn the programming for sports events
19	Parrot's Travel	Build a program in mBlock using motion block
20	Running moth	Build a game to understand the concept of variable
21	Maze game	Build a game by using mBlock to understand the working of blocks.
22	Spiderman animation	Create animation using motion, looks and sound block
23	Food catcher	Student will learn about different types of food
24	Culmination	Students will create and present their project



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Coding Syllabus

Grade 4

Programming language: Block based

Session No	Topic	Learning Outcome
1	Introduction to Coding	Understand the coding platform and how to use it. Installation of the software on your system
2	Introduction to blocks part 1	Students will learn to use different commands present in each block
3	Introduction to blocks part 2	Students will learn to use different commands present in each block
4	Seasons	Students will learn about the different seasons and which cloths we required for which seasons.
5	Parts of plants	Build a quiz show on parts of plant.
6	Safety & first aid	Students will learn about the safety rules and first aid using mBlock.
7	Light and shadow	Build an app based on light sensor.
8	Types of matter	Concept of matter. 3 types matter (solid, liquid, gas)
9	Simple calculator	Build an app that will do the calculation with 4 basic operation
10	Simple interest	Build an app to Calculate the principal, rate, time, or interest when the other three quantities are known.
11	Music	Build an app to develop an analytical, creative, and intuitive understanding of music by using mBlock.
12	Culmination	Students will create and present their project
13	Advance geometry	Build an app to draw different geometrical shapes.
14	Plane and cloud animation	Students will learn to create animations in mBlock
15	Talk show	Build a program based on talk show
16	Quiz on chemistry	Make a quiz game using mBlock
17	Game 1- Ballon fight	Build a game by using mBlock to understand the working of blocks.
18	Game 2- Maze	Build a game by using mBlock to understand the working of blocks.
19	Game 3- Monkey & apple	Build a game by using mBlock to understand the working of blocks.
20	Energy and it's types	Students will learn about different types of energy
21	Water cycle	Students will understand the concept of water cycle
22	Electric circuit	Students will learn about basics of electrical circuit
23	Apple and Panda game	Build a game by using mBlock to understand the working of blocks.
24	Culmination	Students will create and present their project



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Coding Syllabus

Grade 5

Programming language: Block based

Session No	Topic	Learning Outcome
	Introduction to coding and mBlock	coding,algorithm,flowchart, introduction to mblock
	Introduction to mblock	
1	Even and odd number	Build an app to test the number on the basis of even and odd property
2	Solar System	Build an app which represents our solar system
3	Art from Heart	Build a game to create your own design using geometrical shapes
4	Average	Build an app to calculate average of numbers entered by user
5	Soil & it's types	Build an app which will show different types of soil
6	Friction	Design a game to see effect of friction on moving objects like car.
7	Guess the number	Students will learn to make "guess the number" game
8	Profit & loss	Students will learn to create project based on concept of profit and loss
9	Ecosystem	Students will learn about our ecosystem
10	Nervous system	Build an app to display different parts of our nervous system
11	Fractions	Students will learn the concept of fractions and how to calculate it
12	Distance Measurement	Build an app to understand concept of distance by measuring distance between two sprites.
13	Electric Circuit	Build a program to understand concept of circuit completion using mBlock.
14	Math Race-Addition Game	Build your own racing game using mathematical addition properties
15	Effect of Motion and Time	Build a game to see effect of motion and time on sprite
16	Square root	Build an app to find out square and square root of any number
17	Factors & multiples	Understand the concept of factors
18	Bar graph	Build an app to represent data using graphs
19	Weather reporting system	Build an IOT based app to report real time weather data
20	AI & ML part 1	Students will learn about concept of AI and will build an app on AI applications
21	AI & ML part 2	Students will learn about concept of AI and will build an app on AI applications
22	AI & ML part 3	Students will learn about concept of AI and will build an app on AI applications
23	AI & ML part 4	Students will learn about concept of AI and will build an app on AI applications
24	Culmination	Build your own project



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Coding Syllabus

Grade 6

Programming language: Block based and python

Session No	Topic	Learning Outcome
1	Flower and it's parts	Build an app which explain different parts of flower & it uses
2	Design making	Build a program which will make different 2D or 3D designs
3	Calculator	Build an app of calculator to solve all your arithmetical problems
4	Game – Pacman level 1	Build a game of pacman level 1 with advance gaming tool
5	Game – Pacman level 2	Build a game of pacman 2 with addition of game components
6	Introduction to machine learning	Students will learn about concept of machine learning
7	ML based face recognition	Build an app for face detection system
8	ML based waste sorting	Build an app to sort waste material using machine learning technique
9	Introduction to Artificial Intelligence	Students will learn about concept of AI and will build an app to recognize handwritten text
10	AI based speech recognition	Build an app to recognize your speech
11	AI powered chatbot	Build an AI based chatbot to answer your questions
12	Culmination	Students will make their own project on concept covered in previous classes
13	Probability	Build a game using concept of probability
14	Changes in matter	Students will learn about reversible and irreversible changes
15	Symmetry & reflection	Learn how symmetry and reflection works through example
16	Statistics part 1	Students will learn the math concept
17	Statistics part 2	Students will learn the math concept
18	Periodic table	students will understand the concept of periodic table and elements of periodic table
19	Game based on Newton's law-1	Make a game based on Newton's law of motion
20	Game based on Newton's law-1	Build a game based on Newton's law of motion
21	Introduction to python	Students will learn about python language, it's features and applications
22	Input & Output in python	Learn how to take input and show output in python
23	Data types in Python part 1	Students will learn about number and string data types in python
24	Data types in Python part 2	Students will learn about list, tuple and dictionary data types in python



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Grade 7

Programming language: HTML/CSS/Java Script

Session No	Topic	Learning Outcome
1	Introduction to html	Student will understand about the HTML
2	Table tag	Students will learn about the table tag
3	List tag	Brief information about the list tag
4	Image and link tag	Students will learn about the image and link tag
5	Audio tag	Student will learn the audio tag
6	Video tag	Students will learn about the video tag
7	Introduction to CSS	Students will learn about the CSS
8	Class Selectors, ID	Students will learn about the CSS
9	Inline CSS	Students will learn the concept of Inline css
10	External CSS	Students will learn the concept of External css
11	Internal CSS	Students will learn the concept of Internal css
12	Culmination	
13	HTML form tag-1	Student will learn to make a forms
14	HTML form tag-2	Students will learn to make a forms with different attributes
15	HTML Form Attributes	Student will learn about the form attributes
16	Form Elements	Student will learn about the form elements
17	Form Input Types	Students will learn about the different input types(eg text, text area)
18	Form Elements	Students will learn about the form elements (eg select, input)
19	Frameset	Students will learn to craete the Frames in HTML
20	Webpage no 1	Student have to make their own website based on thier choice
21	webpage no 2	Student have to make their own website based on thier choice
22	Webpage no 3	Student have to make their own website based on thier choice
23	Webpage no 4	Student have to make their own website based on thier choice
24	Culmination	Create your own project



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Coding Syllabus

Grade 8

Programming language: Python

Session No	Topic	Learning Outcome
1	Introduction to python	Students will learn about number and string data types in python
2	List and Tuple datatype	Students will learn about list and tuple data types in python
3	Dictionary and set datatype	Students will learn about dictionary and set data types in python
4	Calculator in python	Students will learn about arithmetic operators and it's types in python
5	Operators in python	Students will learn about logical, identity and membership operators and it's types in python
6	Conditional statements in python	Student will learn about flow control statements in python
7	Looping statements in python	Student will learn about for and while loop statements in python
8	Temperature conversion	Build an app to convert temperature in different unit system
9	Currency exchange rates	Build a game using currency exchange concept
10	Story telling in python	Create your own story using python
11	Text to speech module	Students will learn applications of text to speech module
12	Culmination	Create your own project
13	Rock, paper & scissor game	Build an rock paper scissor game
14	Quadratic equation solver	Build a program in python to find out roots of quadratic equation
15	Guess the number game	Make a interesting game in python
16	Even and odd number	Make a program to check for even and odd number
17	Roman number conversion	Build a program to find out roman equivalent of decimal number
18	Python and math	Build an app to calculate addition of two matrices
19	Python and math	Build an app to calculate multiplication of two matrices
20	Introduction to Artificial intelligence and machine learning	Students will learn about basics of AI & ML
21	AI based text recognition	Build an app to recognize text using cloud data
22	AI based speech recognition	Build an app for speech recognition using AI
23	Projects on Artificial intelligence	Build different projects based on AI and ML technology
24	Culmination	Create your own project



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Coding Syllabus

Grade 9 & 10- Data Science

Programming language: Python & AI ML

Session No	Topic	Learning Outcome
1	Introduction to python	Students will learn about different data types in python
2	Calculator in python	Students will learn about different operators and it's types in python
3	Flow control in python	Student will learn about flow control statements in python
4	Temperature conversion	Build an app to convert temperature in different unit system
5	Currency exchange rates	Build a game using currency exchange concept
6	Story telling in python	Create your own story using python
7	Rock, paper & scissor game	Build an rock paper scissor game
8	Python and math	Build an app to calculate addition of two matrices
9	Introduction to Artificial intelligence and machine learning	Students will learn about basics of AI & ML
10	AI based text recognition	Build an app to recognize text using cloud data
11	AI based speech recognition	Build an app for speech recognition using AI
12	IOT based weather report	Learn the concept of IOT system
13	Introduction to GUI and tkinter	Student will be introduced GUI development
14	Tkinter with python-label, entry box	Learn to add label, text and entry box in app
15	Tkinter with python-button, checkbox	Learn to add button and checkbox in app
16	Tkinter with python-radio button, list	Learn to add radio button and list in app
17	Tkinter with python- message box, dialog box	Build an app with message box or dialog event
18	Geometry management	Build an app with attributes like size, background color, tools
19	Canvas addition	Learn to add canvas in your application to draw different shapes
20	Images and icons	Learn to add images and icons in your app
21	Multiple windows	Learn to add multiple windows in application
22	Temperature conversion app	Build an app in python to covert temperature in different units
23	Square root app	Build a desktop application to find out square root of a number
24	Culmination	Student will make GUI based application