

Grade 3			
Session No	Session Topic	Platform Used	Session Coverage
1	What is Coding?	Scratch	1. Understanding the basics and commands of coding. 2. Types of coding
2	How to use Scratch? with Activity (Let's move sprite)	Scratch	1. How to log in into scratch online? 2. Using the editor of scratch, code, script area, blocks palatte 3. Creating first project on "Move a sprite"
3	Activity 2 & 3 ( Code to Say & Let's Glide Sprite)	Scratch	1. How to animate a sprite to say its name. 2. Using multiple types of say blocks. 3. Write a code for Gliding sprite on random position.
4	Changing Costumes Theory	Scratch	1. How changing costumes can make sprite animating. 2. Concept of wait, Repeat and forever
5	Activity - Dancing	Scratch	1. How to dance a sprite by changing costumes in forever loop with wait.
6	Activity - Flying	Scratch	1. Using bird sprite costumes, changes costumes to make sprite flying. 2. learning concept of repetation and wait blocks.
7	Directions and Movements	Scratch	1. Understanding the concept of X and Y grid. 2. Positive and negatives lines in X and Y directions.
8	Activity- Move up, down, left and right using arrow keys	Scratch	1. Writing a code to move any sprite in multiple directions like up, down, left and right.
9	Activity- Animate a name	Scratch	1. Creating a fun activity to animate your name or any movies name. 2. Chnging colors of sprite, size of sprite and turning sprites.
10	Activity- Jump a sprite	Scratch	1. Chnging Y direction of sprite to make it jump. 2. Using same concept to make any game.
11	Activity - Draw with mouse pointer and pen	Scratch	1. Adding Pen extension and understanding all coding blocks like pen up, pendown and erase.
12	What is Artificial Intelligence and its uses?	Scratch	1. What is artificial intelligence. 2. Where AI is used in our daily life.
13	Real Applications of AI around us	Scratch	1. Application of AI like humanoid robots and smart machines.
14	How are AI and Robotics related?	Scratch	1. What all activities robots can do? 2. AI detections , Color detection, Shape detection, Animal detection.
15	Invitation card design	Scratch	1. Creating code for inviting guests in function. 2. Using if else coding blocks. 3. Learn to use when sprite touches block.
16	Healthy and unhealthy food	Scratch	1. Sorting healthy and unhealthy food by adding messages and music. 2. using if and else condition to compare foods.
17	Find the gobo	Scratch	1. How to show and hide sprite at random positions. 2. Adding scores when sprite clicked. 3. Creating a game
18	Astronout on moon	Scratch	1. How to change backdrops using code blocks. 2. Change backdrop when sprites reaches moon. 3. Add code blocks to say.
19	Newton Gravity effect	Scratch	1. How to make apple falling from top to down. 2. Collecting apples to score, Adding variables.
20	Family Tree	Scratch	1. Creating story animation. 2. Adding images in animation.
21	How to grow plant	Scratch	1. Changing size of sprite using code blocks. 2. Understanding the concept of water in agriculture.
22	Lines and polygons	Scratch	1. Adding pen extension, Creating algorithms to draw any shapes. 2. Design a square by putting angle size, and repeat 4 times.
23	Pattern designing	Scratch	1. Design any pattern by playing with repeat numbers and angle values. 2. Using multiple loops, and loops inside loops.
24	Solar system	Scratch	1. Adding images into scratch, Angle of rotation, Drawing roational path. 2. Moving planets in rotational view.
25	Countdown-Animation	Scratch	1. Counting animation, showing 0 to 9 numbers as costumes. 2. Adding music in timer.
26	Make a piano	Scratch	1. Drawing Piano keys using paint sprite tool. 2. Adding music extension. 3. Using "When button pressed" play different musics.

27	Calculator	Scratch	1. Using ask block to ask numbers to be added. 2. Using mathematical operator
28	Clean ocean	Scratch	1. Applying if and else coding concept to sort which item to send into ocean. 2. Add variables to score.
29	Tom and Jerry	Scratch	1. This is story of Tom and jerry, How to use broadcast block in coding.
30	Maze Game	Scratch	1. Drawing backdrop, to make maze of the game. 2. Move sprite using arrow keys. 3. If sprite will reach to the goal then end game.
31	Ping pong game	Scratch	1. Move ball around the window and bounce from edges. 2. Bounce ball back in 90 degrees when hit the paddle. 3. Create a game to score when ball hits paddle.
32	Project	Scratch	Self project

Grade 4			
Session No	Session Topic	Platform Used	Session Coverage
1	Getting Started with Coding	Scratch	1. Start working on scratch and get a first-hand experience of basic coding
2	Basic Commands on Movement and Appearance	Scratch	1. How to move and interact with sprite characters in Scratch 2. How to change costume and appearance to animate characters in Scratch
3	Basic Commands on Direction and Position	Scratch	1. Learn how to turn object/characters in scratch using blocks of code 2. How to make sprites move and teleport on the stage.
4	Algorithms	Scratch	1. Learn the definition and the basic concept of Algorithm. 2. Discover real-life examples of algorithms in everyday tasks.
5	Activity : Draw a square	Scratch	1. Learn how to move and turn sprite on a decided path. 2. Learn about shapes and how you can draw them in scratch.
6	What is Message? Launch a rocket with a button click	Scratch	1. Learn how to leave messages for your code that can be executed on specific conditions in Scratch. 2. Learn how to automate processes in your code/animation/game.
7	How we talk? Talking in the Aquarium	Scratch	1. Learn how to use the speech commands in scratch. Include dialogues in your animations.
8	How to draw a sprite or its costume?	Scratch	1. Learn to use the in-built editor to paint/edit new sprites or modify existing sprites and costumes
9	Activity - Make a Piano	Scratch	1. Learn to use sounds and assign them to specific sprites in your code. 2. Learn to draw your own new sprites to use in projects.
10	What is a Variable and defining a variable	Scratch	1. Learn to use variables and assign values to them.
11	Activity Hide and Seek game	Scratch	1. Learn showing and hiding a sprite using code to make animations, games etc.
12	Artificial Intelligence	AI connect	1. Familiarise yourself with Artificial Intelligence and its features.
13	Applications of AI	AI connect	1. Learn how to use AI for problem solving and learn about the places where its used.
14	AI Connect	AI connect	1. Introduction to the new platform that uses block coding for coding.
15	Using AI Connect Editor	AI connect	1. Familiarise yourself with AIConnect interface, command placement etc.
16	Turtle	AI connect	1. Learn about the Turtle in AI connect. Learn how you can give commands to the turtle and draw using it on the stage.
17	Activity Draw a line	AI connect	1. Learn to use the turtle and draw a straight line on the screen using only code.
18	Angle and Activity : Triangle	AI connect	1. Learn how to turn a turtle on the screen to draw lines on different angles. 2. Learn how to draw a triangle using a turtle.
19	Activity Square and Activity 'L' and 'T'	AI connect	1. Learn how to use the turtle commands to draw various shapes and alphabets.
20	Fun with Designs and Activity : Half Moon	AI connect	Learn how to use turtle to draw curves and circle in AIConnect.
21	Activity: Archery Target	AI connect	Learn to use timer, keeping score, positioning the characters by completing this activity.
22	Design Sun	AI connect	Drawing circles, choosing background, moving objects
23	Country Flag designing(Italy)	AI connect	Learn to use shapes, colours and turtle to design a flag.
24	Stick Figure	AI connect	Learn to animate shapes and lines for games and animations
25	Hazardous Sign	AI connect	Learn to use shapes and colours to make real-life warning signals or instructions
26	Smiley Face	AI connect	Use shapes and colours to draw a smiling face on the screen.
27	Panda	AI connect	Learn to draw circles at specific points.
28	Indian flag	AI connect	Learn to make an Indian flag using various shapes and colours in AIConnect.
29	Design Snowman	AI connect	Draw a Snowman using only circles and straight lines in AI-Connect
30	Snowflake	AI connect	Draw a snowflake using the turtle in AIConnect
31	Make your own car	AI connect	Select a background, use shapes and colours to draw your own car.
32	Project	AI connect	Self-project

Grade 5			
Session No	Session Topic	Platform Used	Session Coverage
1	What is coding? and how to start.	Scratch	1. Start working on scratch and get a first-hand experience of basic coding.
2	Basic Commands to understand (Direction & Position)	Scratch	1. Learn how to turn object/characters in scratch using blocks of code 2. How to make sprites move and teleport on the stage.
3	Repeation and repeat block	Scratch	1. What is repeation? And how it is useful in programming. 2. Repeat and repeat until blocks an dtheir used cases.
4	Forever and repeat until, wait	Scratch	1. What is difference between repeat and forever? 2. Why we use wait block in coding,.
5	Sensing	Scratch	1. What is sensing and how many blocks are there in category? 2. How to sense touching sprite and touching color.
6	Activity: Apple catching game	Scratch	1. Falling apple from top to down from random positions. 2. Add sensing blocks to sense touching color or bowl. 3. Adding scores on how many apples collected.
7	Coditional Coding	Scratch	1. Learning about conditional concepts like IF and IF ELSE.
8	Wait untill	Scratch	1. How to make code wait until and unless specific condition is met.
9	Drawing backdrops	Scratch	1. Using features of drawing backdrops, like shapes, brushes changes in colors and reshaping tool.
10	Activity : Drawing a simple Backdrop	Scratch	1. How to make stones and grasses backdrops by changing brush colors and gradient effect.
11	Activity : Maze Game	Scratch	1. Drawing backdrop, to make maze of the game. 2. Move sprite using arrow keys. 3. If sprite will reach to the goal then end game.
12	AI in everyday life	AI Connect	1. Familiarise yourself with Artificial Intelligence and its features.
13	What is AI connect?	AI Connect	1. How to work on AI connect platform, Creating projects then creating activities. 2. Creating variables
14	What is turtle?	AI Connect	1. Turtle blocks like moving turtle, shape sof turtle, turning a turtle and size of turtle. 2. How to change color of the turtle.
15	Values and Types of Values	AI Connect	1. What is a variable and how to store data into variable. 2. How many types of data are there. like int , float, boolean and char
16	Conversion blocks	AI Connect	1. Conversion of data into integer, float and boolean and char as per the code you have to perform.
17	Math Operators	AI Connect	1. How to use mathematical/ Airthmatic operator. 2. Addition, subtraction, multiplication and division.
18	Activity 1: Write a code to evaluate: 10+45, Activity 2: Write a code to evaluate: (4+6) X (5+8) , Evaluate	AI Connect	1. Evaluating mathematical expressions using code.
19	Loops	AI Connect	1. Learning concept of loop, like for loop, while loop. 2. Visulaizing how mnay times a code will work.
20	Activity: Print table of 7	AI Connect	1. Declaring a variable and using for loop to print table of 7. 2. Multiplying number with 7 ten times.
21	Solving word problems with Code Problem - 1 - Pizza cost	AI Connect	1. Applying mathematical formulas to calculate total bill of pizzas.
22	Solving word problems with Code Pencil distribution, akash Money save	AI Connect	1. Using dividion arithmetic operator to divide pencils equally.
23	hexagon dot corner	AI Connect	1. Applying turtle concept along with loops to draw a hexagon. 2. Draw a dot on each side use dor formula.
24	Design olympic logo	AI Connect	1. How to darw circle with outline, moving steps and turning angles. 2. Repeat the task using loop and change turtle colors.

25	Design bot head	AI Connect	1. Use creativity to draw bot head using position of X and Y grid.
26	Design Quiz with 3 question	AI Connect	1. Read inputs from user and compare if answer is correct or not.
27	Supermarket round off	AI Connect	1. Using round up and round down functions to calculate and roundoff the total bill.
28	Data handelling using graphs	AI Connect	1. Plotting bar graph and pie graph using coding function and data provided.
29	MISSISSIPI	AI Connect	1. How to work on string an dcount the number of repeatations.
30	Place value system	AI Connect	1. Understanding place value of th enumber for ones, tens, hundreds, and thousands.
31	Solve maths word problem using code	AI Connect	2. Solve a real life based word problem using mathematical blocks.
32	Project	AI Connect	Self project

**Grade 6**

Session No	Session Topic	Platform Used	Session Coverage
1	Introduction to Arcade	Arcade	How to open Arcade and its interface?
2	Performing Maths	Arcade	Perform Modulus operation on two variables.
3	The Remainder problem	Arcade	Use Nested conditional statements to check if a
4	Odd or Even	Arcade	Make a program that can tell if a number is odd or
5	Chase the Banana	Arcade	Make a program that lets you control a character.
6	Squares and Cubes	Arcade	Create a program to display the square of numbers 1
7	Squares and Rectangles	Arcade	Use code to draw a rectangle.
8	The Number Wizard	Arcade	Create a calculator in Arcade.
9	Division test	Arcade	Check if a number is divisible by 7 or 9 or both 7 and 9.
10	Make a Cuboid	Arcade	Calculate the volume of a Cuboid
11	Integer reversed	Arcade	To print the reverse of an integer.
12	Divided by 3	Arcade	To print numbers divisible by 3, from 1 to 100.
13	Heron's triangle	Arcade	To find the area of a triangle using the Heron's
14	Eat and grow game	Arcade	Eat and level up.
15	Flowchart	AI Connect	Different symbol of flowchart
16	Activity : Profit and loss	AI Connect	Use of Mathematical Operation calculating profit and loss
17	Basics of AI Connect	AI Connect	Exploring different blocks
18	Variables	AI Connect	Variables and Its use Assigning Values
19	Data-types and conversion	AI Connect	Data types and Its Use How to do type casting
20	Input and Output Operations	AI Connect	Displaying Output in console Screen Taking Input from user
21	Maths with Coding	AI Connect	Implementing Mathematical concept
22	Activity Find greatest number out of 3 random numbers	AI Connect	Use of Nested if else checking the condition
23	Angles	AI Connect	Use of Comparison operator
24	Activity Code to determine Acute, Right or Obtuse angles	AI Connect	How to add multiple condition Mentioning all the condition
25	Science with Coding	AI Connect	How coding is used to create certain applications, softwares, etc
26	Activity: Find total distance covered	AI Connect	Relationship between speed & distance Use of Mathematical Operation
27	Activity : Calculate electricity bill	AI Connect	Creating a logic for different units Use of AND operator
28	Science with Coding, Activity: Code to display the room temperature	AI Connect	Condition for different temperature value Use of If elif else condition
29	Activity : Code to detect the pH value of a solution to be either Acidic, Base or Neutral	AI Connect	Integrating Science concepts with Coding Use of if else condition Use of comparative operators
30	Artificial Intelligence	AI Connect	Introduction to Human Intelligence Introduction to Artificial Intelligence Applications of Artificial Intelligence in real life
31	Machine Learning	AI Connect	Introduction to Machine Learning Advantages and disadvantages of machine learning Applications of machine learning
32	Activity: Code to detect up/down	AI Connect	Performing a machine learning activity Training a machine learning model Testing a machine learning model
33	Project	AI Connect	Self project

**Grade 7**

Session No	Session Topic	Platform Used	Session Coverage
1	Introduction to Arcade	Arcade	How to open Arcade and its interface?
2	Performing Maths	Arcade	Perform Modulus operation on two variables.
3	The Remainder problem	Arcade	Use Nested conditional statements to check if a
4	Odd or Even	Arcade	Make a program that can tell if a number is odd or
5	Chase the Banana	Arcade	Make a program that lets you control a character.
6	Squares and Cubes	Arcade	Create a program to display the square of numbers 1
7	Squares and Rectangles	Arcade	Use code to draw a rectangle.
8	The Number Wizard	Arcade	Create a calculator in Arcade.
9	Division test	Arcade	Check if a number is divisible by 7 or 9 or both 7 and 9.
10	Make a Cuboid	Arcade	Calculate the volume of a Cuboid
11	Integer reversed	Arcade	To print the reverse of an integer.
12	Divided by 3	Arcade	To print numbers divisible by 3, from 1 to 100.
13	Heron's triangle	Arcade	To find the area of a triangle using the Heron's
14	Eat and grow game	Arcade	Eat and level up.
15	Flowchart	AI Connect	Different symbol of flowchart
16	Activity : Profit and loss	AI Connect	Use of Mathematical Operation calculating profit and loss
17	Basics of AI Connect	AI Connect	Exploring different blocks
18	Variables	AI Connect	Variables and Its use Assigning Values
19	Data-types and conversion	AI Connect	Data types and Its Use How to do type casting
20	Input and Output Operations	AI Connect	Displaying Output in console Screen Taking Input from user
21	Maths with Coding	AI Connect	Implementing Mathematical concept
22	Activity Find greatest number out of 3 random numbers	AI Connect	Use of Nested if else checking the condition
23	Angles	AI Connect	Use of Comparison operator
24	Activity Code to determine Acute, Right or Obtuse angles	AI Connect	How to add multiple condition Mentioning all the condition
25	Science with Coding	AI Connect	How coding is used to create certain applications, softwares, etc
26	Activity: Find total distance covered	AI Connect	Relationship between speed & distance Use of Mathematical Operation
27	Activity : Calculate electricity bill	AI Connect	Creating a logic for different units Use of AND operator
28	Science with Coding, Activity: Code to display the room temperature	AI Connect	Condition for different temperature value Use of If elif else condition
29	Activity : Code to detect the pH value of a solution to be either Acidic, Base or Neutral	AI Connect	Integrating Science concepts with Coding Use of if else condition Use of comparative operators
30	Artificial Intelligence	AI Connect	Introduction to Human Intelligence Introduction to Artificial Intelligence Applications of Artificial Intelligence in real life
31	Machine Learning	AI Connect	Introduction to Machine Learning Advantages and disadvantages of machine learning Applications of machine learning
32	Activity: Code to detect up/down	AI Connect	Performing a machine learning activity Training a machine learning model Testing a machine learning model
33	Project	AI Connect	Self project

Grade 8			
Session No	Session Topic	Platform Used	Session Coverage
1	Introduction to Arcade	Arcade	How to open Arcade and its interface? How to display a message in Arcade? Create a variable and assign it a value.
2	Performing Maths	Arcade	Perform Modulus operation on two variables.
3	The Remainder problem	Arcade	Use Nested conditional statements to check if a
4	Odd or Even	Arcade	Make a program that can tell if a number is odd or
5	Chase the Banana	Arcade	Make a program that lets you control a character.
6	Squares and Cubes	Arcade	Create a program to display the square of numbers 1
7	Squares and Rectangles	Arcade	Use code to draw a rectangle.
8	Functions in Arcade	Arcade	Calling a function with a single parameter.
9	Arrays in Arcade	Arcade	Learn to create an Array in arcade.
10	The Number Wizard	Arcade	Create a calculator in Arcade.
11	Division test	Arcade	Check if a number is divisible by 7 or 9 or both 7 and
12	Make a Cuboid	Arcade	Calculate the volume of a Cuboid
13	Sort in the bubble	Arcade	Implementing the bubble sort in Arcade.
14	Integer reversed	Arcade	To print the reverse of an integer.
15	Divided by 3	Arcade	To print numbers divisible by 3, from 1 to 100.
16	Heron's triangle	Arcade	To find the area of a triangle using the Heron's
17	Eat and grow game	Arcade	Eat and level up.
18	Basics of Python	AI connect	Steps of Developing AI Hands-on activities on your own
19	Examples (1 to 7)	AI connect	
20	Statements in Python	AI connect	
21	Loops	AI connect	
22	Python Lists	AI connect	
23	Tuples	AI connect	
24	Unit Activity -Python	AI connect	Getting Started with Practical Application of AI
25	Demo projects - 1	AI connect	Real-time activities on AI
26	Demo projects - 2	AI connect	
27	Demo projects - 3	AI connect	
28	Demo projects - 4	AI connect	
29	Demo projects - 5	AI connect	
30	Demo projects - 6	AI connect	
31	Fun with python	AI connect	Some python activities for fun
32	Python quiz	AI connect	Assessment for Analyzing Progress
33	Project	AI connect	Project around the learning across the year



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Grade 9			
Session No	Session Topic	Platform Used	Session Coverage
1	What is AI?	AI connect	To Identify & Appreciate AI & application
2	Classification of AI	AI connect	
3	AI domain and Human-Machine interaction	AI connect	Introduction to Data Activity: Rock Paper Scissor Game Introduction to Natural Language Activity: Mystery Animal
4	Introduction to Computer Vision and Activity	AI connect	Introduction to Computer Vision Activity: Scavenger Hunt
5	Introduction to Smart Cities	AI connect	Learners relate to application of AI in their daily life.
6	Introduction to Smart School	AI connect	
7	Introduction to Smart Homes	AI connect	
8	Unit Activity -2 Story writing and floor planning	AI connect	Examine,Reflect skills for futuristic opportunities.
9	Sustainable Development Goals	AI connect	Understand the impact of AI on Sustainable Development
10	Unit Activity -3 Go Goals Board Game	AI connect	To gain understanding on social issues using a Board Game
11	Applications of AI in various fields	AI connect	Real World Artificial Intelligence Applications in various sectors
12	Careers in AI	AI connect	Career oppurtunities around AI
13	Unit Activity -4 Job Ad creating activity	AI connect	To Gain Awareness around AI Bias and AI Access
14	Ethical Concers related to AI	AI connect	
15	Unit Activity -5 Identifying ethical and privacy Concerns	AI connect	To understand and reflect ethical issues around AI
16	Neural Networks	AI connect	
17	Basics of Python	AI connect	Steps of Developing AI Hands-on activities on your own
18	Examples (1 to 7)	AI connect	
19	Statements in Python	AI connect	
20	Loops	AI connect	
21	Python Lists	AI connect	
22	Tuples	AI connect	
23	Unit Activity -Python practicals	AI connect	Getting Started with Practical Application of AI
24	Demo projects - 1	AI connect	Real-time activities on AI
25	Demo projects - 2	AI connect	
26	Demo projects - 3	AI connect	
27	Demo projects - 4	AI connect	
28	Demo projects - 5	AI connect	
29	Demo projects - 6	AI connect	
30	Fun with python	AI connect	Some python activities for fun
31	Python quiz	AI connect	Assessment for Analyzing Progress
32	Neural Networks		Introduction to Neural Networks
33	Project	AI connect	Project around the learning across the year