BRIGHT SPARKS | GRADE 1-2

Lecture Name	Detailed concepts
Coding Fundamentals - 1	
1 **Coding at Glance- IPO**	IPO - Input, Process, Output using Text based block commands
2 **Sequence**	Order of commands using code.org and puzzle using scriptacademy
3 **Loops**	Concept of Repeat block using puzzles and artist lab in code.org
4 **Nested Loops**	Loop inside loop using artist lab in code.org
5 **Algorithm**	Plan and build a house using artist lab in code.org
6 **Introduction to Play Lab**	Basic Story making and event handling using block commands in code.org
7 **Play Lab using Text based blocks**	Story making and event handling using text based commands in code.org
Checkpoint 1	
8 **Robot Pattern and Fight Against Corona**	Revision of previous classes with one artist lab and one play lab project in code.org
9 **Bug and Debug**	Identify and develop Probelm solving skills using text based commands in code.org
10 **Variables**	How variables are used for storage in computer using scratch - Pen and Brithday Invitation
Animation	
11 **Story Workshop**	Ability to create their own animated story in scratch
12 **Glide in Depth**	Ability to use glide in depth to build their own animated game using scratch
13 **Sprite Lab**	How character and its behaviour work using sprite lab in code.org Time Tavel and Baseball
14 **Ship game**	Revision of previous classes with Ship Game using Sprite lab in code.org and puzzle in blockly.games

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Lecture Name	Detailed concepts

App Designing and Development - 1

	Lecture Name	Detailed concepts
15	App Lab- Flashlight App	Intro to App using Flashlight App with Screen, Buttons and Label using App Lab in code.org
16	More on Variables Birthday Invitation	Ability to Create their own Invitation using Variables Concept in App Lab code.org
17	Calculator	Ability to understand Arithmatic Operation and create Calculator in App Lab code.org
18	Conditionals-Unlock Mobile	Ability to develop Password Checker App with Image, Text_Input, Label and Button using Conditionals (IF_ELSE) in App Lab code.org
19	Multiscreen Navigation	Student daily routine app with Multi Screen, Buttons and Images using App Lab in code.org
20	Mickey Clicker App	Generating Random Number App (RandomNumber, Timeout, Counter Concept) with Multi Screen, Labels, Buttons using App Lab in code.org
21	Marble Blast Game	Pop the Bubble Game with Multi screen, Labels, Buttons, Sound and Images using Conditionals in App Lab code.org
22	Catch-Catch	Catch Game with Multi screen, Labels, Buttons, and Images Set Position and Mouse _Over Concept in App Lab code.org
23	Turtle Programming	Intro to Turtle Programming using Text based commands to create Shapes in App Lab code.org
24	More on Functions	Ability to Define and Call Functions and understand Function parameters using While Loop in App Lab code.org
25	Computer Quiz App	Revision of previous classes and developing Computer Quiz App using Multi screen, Buttons, Labels in App lab in code.org

Game Designing and Development - 1

	Lecture Name	Detailed concepts
26	Game (Loops)	Ability to build basic game using concept of loops in scratch
27	Game (Mouse Pointer)	Ability to build basic game using concept of mouse pointer in scratch
28	Flappy Bird Game and Creating Star war game	Ability to build kid's own flappy game and event handling skills using Flappy Game in code.org Ability to build kid's own star war game and event handling skills using Star war in code.org
29	Minecraft Aqua Adventure-Functions	Solving Minecraft Puzzle and Intro to the concept of Functions in Minecraft using Minecraft in code.org
30	Car Game	Ability to build car game using sprite lab in code.org
31	Maze Game	Ability to develop their own Maze Game using Buttons and Mouse_Move Concept in App Lab code.org

BRIGHT SPARKS GRADE 1-2

Lecture Name	Detailed concepts
32 Conditionals-Video Sensing Game	Ability to develop their own Live Video Sensing Game using Conditionals (IF) in scratch

Artificial Intelligence - 1

Lecture Name	Detailed concepts
33 Artificial Intelligence Greeting Card	Ability to create their own greeting card changing colour effects and music in scratch
34 Artificial Intelligence Musical Lab	Ability to use, change and record music/voice using scratch
35 Artificial Intelligence Dance Party	Ability to build kid's own dance party and event handling skills using Dance party in code.org
36 Artificial Intelligence Chatbot	Intro to Artificial Intelligence with videos and Chatbot activity (Text to Speech concept) in scratch
37 Artificial Intelligence World Map	Ability to understand Artificial Intelligence by developing World Map with Text_Area, Image and Hidden, Move_Over - Hover Concept in App Lab code.org

App Design and Development - 2

Lecture Name	Detailed concepts
38 Radio Button	Ability to develop Animal-Bird App using Radio Button
39 Checkbox	Ability to develop Ice Cream Ordering App using Checkbox
40 Slider	Ability to develop Art Gallery App using Slider
41 Image Recognizer	Ability to develop Image Recognizer App in thunkable
42 Translator Part 1	Ability to develop Translator App using and Translator and Text to Speech - Part 1
43 Translator Part 2	Ability to develop Translator App using and Translator and Text to Speech - Part 2

Checkpoint 2

Lecture Name	Detailed concepts
44 Translator Part 3	Ability to develop Translator App using and Translator and Text to Speech - Part 3
45 Dropdown	Ability to develop Museum Ticket Generator App using Dropdown

BRIGHT SPARKS GRADE 1-2

Lecture Name	Detailed concepts
Game Design and Development -2	
46 Intro to Game Lab	Intro to Game Lab using Shapes
47 Motion Control	Ability to develop game using direction keys
48 "STEM"	Ability to develop Sun Rise and Set using Physics concepts
49 Mouse events	Ability to develop Game using Mouse Events
50 Collision	Ability to develop Collision detection game
51 Collision Game	Ability to develop their own game using collision
52 Racing Athlete - Part 1	Ability to develop Never Ending Game - Part 1
53 Racing Athlete - Part 2	Ability to develop Never Ending Game - Part 2
54 Racing Athlete - Part 3	Ability to develop Never Ending Game - Part 3
Coding Fundamentals - 2	
55 Boolean Expressions	Depth of Conditionals and Boolean Expression
56 Grading App using Boolean Expressions	Ability to develop Grading App using Boolean Expression
57 Underwater scene using functions	Creating Art using Functions
58 Datatypes	What is DataType and My Small Resume App using Strings
59 Intro to Data Structures	What are Data Structures
60 For Loop	Ability to develop App using For loop in depth in App Lab
61 Control Time - Timed Loop	Ability to develop App using Timed loop in App Lab
62 Process Array Using For Loop	Ability to develop App with Array using For Loop in App Lab

BRIGHT SPARKS GRADE 1-2

Lecture Name	Detailed concepts
63 Process Array Using For Loop	Ability to develop App with Array using For Loop in App Lab
64 Play & Study App	Ability to develop Play and Study App with Array using For Loop in App Lab

DataBase

Lecture Name	Detailed concepts
65 Intro to DataBase - Create & Delete	Ability to Create and Delete Database in App Lab
66 My Diary App - Insert Records	Ability to develop "My Diary App" using Insert Records in App Lab
67 DataBase - Update and Read	Ability to Update and Read Database in App Lab
68 My Diary App - View & Delete	Ability to View and Delete "My Diary App" in App Lab
69 My Diary App - View & Delete	Ability to View and Delete "My Diary App" in App Lab

Web Development

Lecture Name	Detailed concepts
70 Intro to HTML & HTML Headings	Ability to understand HTML and it's Heading with mini project
71 HTML List	Ability to understand HTML and it's List with mini project
72 Intellectual property & Images	Ability to understand HTML and it's Intellectual property, Images with mini project
73 Styling Text with CSS	Ability to understand Styling Text with CSS with mini project
74 Styling Eelments with CSS & Colour and Classes	Ability to understand Styling Elements with CSS and Colour, Classes
75 Web Page using HTML & CSS	Ability to develop their own Web Page using HTML & CSS

Artificial Intelligence - 2

Lecture Name	Detailed concepts
76 Machine Learning Face Lock	Intro to Machine Learning with videos and developing Face Lock Application with Image Recognition in scratch

Lecture Name		Detailed concepts
77	Machine Learning Secret Code	Ability to understand Machine Learning by developing Secret Code Application with Voice Recognition (Only the recorded voice will act as secret code, others voice will not be recognised) in scratch
78	Machine Learning Tourist Info- Part 1	Ability to understand Machine Learning with little complex activity - Tourist Info using Prompt and Conditionals Blocks in scratch - Part 1
79	Machine Learning Tourist Info- Part 2	Ability to understand Machine Learning with little complex activity - Tourist Info using Prompt and Conditionals Blocks in scratch - Part 2

Checkpoint 3

| 80 | Intro to Robotics | What is a Robot, Different Types of Robots and Recognition of the same |

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