8th standard			
S.No	**Topic**	**Subtopic**	**Detail/Content**
Physical programming course will be taught to 8th std students. This will be taught using Code.org's Physical Programming using Adafruit Circuit Playground Express. This will also require the children to become familiar with their AppLab environment.			
1	Programming	1.1) Text based programming	Students should be comfortable switching between block based and text based programming.
		1.2) Synchronous and Asynchronous functions	Understand how event handlers and call backs work asynchronously.
		1.3) Context and state handling	Understand how to handle context and states in a program and from within multiple asynchronous event handlers
		1.4) Debugging and Error handling	Identify different types of errors and handle them
		1.5) Function	A function is a reusable block of self-contained code designed to perform a specific task
2	UI Elements	2.1) Button	Various input elements available in Code.org"s app lab.
		2.2) Radio button	
		2.3) Text input	
		2.4) Dropdown	
		2.5) Check box	
		2.6) Slider	
		2.7) Image, Canvas, Screen	Various output elements available in Code.org"s app lab.
3	Controller	3.1)Left and right button	Left and Right button(input from your Circuit Playground
		3.2) Toggle switch	The toggle switch flips between two positions: open and close
4	Sensor	4.1) Soundsensor	Soundsensor allows you to get the current sound sensor reading,
		4.2) Lightsensor	Lightsensor allows you to get the current light sensor reading,
		4.3) Tempsensor	Tempsensor allows you to get the current Tempsensor reading,
		4.4) Accelerometer	Accelerometer, Which can detect the position and rotation of the circuit playground,
5	Actuator	5.1) Led	LED lights shows output through pulse and blink
		5.2) Buzzer sounds	Sound comes as an output
		5.3) Servo Motors	If time permits they will also understand how to operate motors.
6	AI Literacy	6.1) Using AI tools	Exploring AI tools for creative content generation and their application in digital projects.
		6.2) Using AI for coding	Understanding how AI-assisted coding tools can support program development through code generation, code explanation, error detection and debugging.