



## 2D ANIMATION AND GAME DESIGN USING JAVASCRIPT

During these classes, the students will explore the drawing commands of JavaScript and create beautiful landscapes and drawings. They will then learn how to create sprites, manipulate their properties and use events to create animations and interactive games.

SESSION	CONCEPT	SKILLS
01	Revisiting The Cartesian Coordinate System	<b>Exploration</b> Explore the JavaScript platform, basic drawing commands.
02	Shapes And Angles	<b>Creativity, Decomposition</b> Create art by superimposing shapes.
03	Adding Colors	<b>Creativity, Decomposition</b> Create colorful art using JavaScript commands.
04	Variables, Random Numbers	<b>Numeracy, Computation</b> Use random numbers to get different outputs.
05	Formative Assessment	<b>Assessment Of Learning</b>
06	Functions In JavaScript	<b>Abstraction</b> Define and use functions specific tasks in their code.
07	Draw Loop And Animations	<b>Generalization, Pattern Recognition</b> Write code to create animated shapes.
08	Counter Pattern And Sprite Animations	<b>Numeracy, Decomposition</b> Use the counter pattern to animate sprites.
09	Conditionals	<b>Logic, Decision Making</b> Use conditionals to control the sprite's behaviour and movements.



10	<b>Formative Assessment</b>	<b>Assessment Of Learning</b>
11	Events With Mouse Click	<b>Logic, Generalization</b> Use mouse events to create a simple clicker game.
12	Events With Keys	<b>Logic, Generalization</b> Use key events to control the sprite using keyboard keys.
13	Upload New Sprites	<b>Creativity</b> Learn how to upload and edit sprites.
14	Create multiple sprites using Arrays	<b>Logic, Generalization</b> Differentiate between variables and arrays. Learn the concept of Arrays to create multiple sprites.
15	Game Design Process	<b>Algorithms, Decomposition</b> Plan the interface, layout and create UI of the game , Add variables to store the game score.
16	Single Player Game Development	<b>Generalization, Persistence</b> Write the UX code for the game.
17	Multi-player Game Development	<b>Generalization, Persistence</b> Plan and create a multi-player game.
18	Platform Jumper Game	<b>Generalization, Persistence</b> Plan and create a platform jumper game.
19	Project Work	<b>Logic, Persistence , Creativity</b> While applying the learned concepts of JavaScript, write code for different levels of the game.
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