## **Class Plan ( JS - Variables and data types)**

### **Digital Excellence Program – Sample Class Plan**

**Topic: JS - Variables and data types.**

| **Time Slot** | **Activity** | **Description** |
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| **First 5 minutes** | **Warm-up & Reflection** | * Reflection on variables introduced in the last class.   + What are variables and why do we need them? |
| **30 minutes** | **Core Concept Explanation** | **Let Keyword**  * Introduction to let * Variable declaration * undefined value when a variable is declared but not initialized * Variable initialization * Difference between undefined and not defined * Declaring and initialising multiple variables at once  **Variable Naming Rules**  * CamelCase convention * Intuitive and meaningful names * Avoid JavaScript reserved keywords * Case sensitivity  **Var Keyword**  * Introduction to var * Demonstrate how var allows redeclaration * Why let is preferred over var   **Variable data types**  Overview of all JavaScript data types:   * Number * String * Boolean * Null * Undefined * Object * Array * Symbol (mention briefly) * BigInt (mention briefly)   Using the typeof operator to check data types  **Const keyword**   * Introduction to const * Must be declared and initialized at the same time * Cannot be reassigned once defined * Use case: values that should never change (e.g., const PI = 3.14;)  **Type Conversion *(Optional if time permits)***  * Implicit and explicit type conversion * Mention coercion in expressions like "5" - 2, "5" + 2   Note: scoping differences between let, const and var put on hold until functions are introduced. |
| **30 minutes** | **Activity** | **✍️ Part A – Variable Creation** Students will:   1. Declare 3 variables to describe themselves (e.g., name, age, city) 2. Share screen and explain to the class 3. Reinforces syntax and naming conventions  **🐛 Part B – Debug the Code** Students will identify and fix syntax issues in the following:  let name = Hyderabad; //missing quotes  let bioAge = "35"; //number in quotes  let isMarried = Yes; //upper case for boolean  let scores = "78, 82, 90"; //should be an array  let info = {city: Hyderabad, country: "Pakistan"}; //missing quotes  **Part C - Predict the Output**  console.log("4" + 3);  console.log("4" - 3);  console.log("6" \* "2");  console.log(8 + "2");  console.log("10" / "2");  console.log("5" + "5"); |
| **10 minutes** | **Class Wrap-up** | Recap of key concepts. Five questions to check their understanding:   1. Can you explain the difference between var, let, and const? (When would you use each one?) 2. Can you identify the data types of the following values? 42, "hello", true, null, undefined 3. What will be the output and type of this code? let name; console.log(typeof name) 4. Can you reassign values to let and const variables? (Try writing code examples to test it) 5. Can you declare and log a variable of each of the following types? ○ Number ○ String ○ Boolean |

### **References & Notes for CSS Function**

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#### **Core Concept Explanation**

**References:**

* [Storing the Information you need - CSS variables](https://developer.mozilla.org/en-US/docs/Learn_web_development/Core/Scripting/Variables)
* [JS Data types](https://www.w3schools.com/js/js_datatypes.asp)