## **Class Plan ( JS - Arithmetic, Comparison, Logical & Assignment Operators)**

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

**Topic: JS - Arithmetic, Comparison, Logical & Assignment Operators.**

**Optional Extension: Shift and Bitwise Operators (if time permits)**

| **Time Slot** | **Activity** | **Description** |
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| **First 5 minutes** | **Warm-up & Reflection** | * Reflection on type conversion introduced in the last class.   + What is the difference between implicit type conversion and explicit type conversion?   + Example a scenario which would lead to a string conversion and one which would lead to number conversion.   + What would be the result of console.log(“52”+2+3)? And why? |
| **30 minutes** | **Core Concept Explanation** | **Arithmetic Operators**  * **Operators**: +, -, \*, /, %, \*\* * Use them to perform basic mathematical operations.   **Comparison Operators**  * **Operators**: ==, ===, !=, !==, >, <, >=, <= * Used to **compare two values** and return a boolean. * Show **loose vs strict equality** with type coercion. Explain why we prefer ===. * **Highlight Gotchas:**   + **"5" < 6 is true because of coercion**   + **x < "hello" is false due to NaN behind the scenes** * Introduction to NaN   **Logical Operators**  * **Operators**: &&, ||, ! * Use when combining conditions. * Explain **truthy/falsy** values * Introduce short-ciruiting   **Assignment Operators**   * **Operators**: =, +=, -=, \*=, /=, %=, \*\*= * These modify and reassign values to the same variable. |
| **30 minutes** | **Activity** | **Guess the Output** console.log("5" - 2); // ?  console.log("5" + 2); // ?  console.log("5" \* "2"); // ?  console.log(null == 0); // ?  console.log(undefined == null); // ?  console.log(NaN == NaN); // ?  console.log(x == "six"); |
| **10 minutes** | **Class Wrap-up** | Recap of key concepts. Five questions to check their understanding:   1. What’s the difference between == and ===? 2. What will this output? "5" - 2 3. What does !false return? 4. If let score = 10; what is score \*= 2? 5. Why does console.log(NaN === NaN) return false? |

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

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#### **Core Concept Explanation**

**References:**

* [Comparison and Logical Operators](https://www.w3schools.com/js/js_comparisons.asp)
* [Arithmetic Operators](https://www.w3schools.com/js/js_arithmetic.asp)
* [Assignment Operators](https://www.w3schools.com/js/js_assignment.asp)