**Class Plan – JS Arrays**

**Digital Excellence Program – Sample Class Plan**

**Topic: JavaScript – Arrays**

| **Time Slot** | **Activity** | **Description** |
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| **First 5 minutes** | Warm-up: Why Arrays? | Ask students how they would store marks for 5 subjects.  Write an example with multiple variables.  let m1 = 87, m2 = 91, m3 = 74, m4 = 66, m5 = 88;  Ask:   * Is this efficient? * How will you loop through them?   Then write:  Const Marks = [87,91,74,6,88]  ^^This is an **array** — a way to store multiple values in a single variable!  Introduce array syntax and explain the benefits of using arrays. |
| **30 minutes** | Core Concept Explanation – Basic syntax and first task | Show various ways to declare an array - using literal syntax with square brackets and using new Array constructor.  Example: let fruits = ['apple', 'banana', 'mango'];  Students try similar example: let colors = ['red', 'green', 'blue'];  Explain flat arrays vs nested (2D, 3D, etc).  Practice accessing nested elements and using the .length property. |
| **60 minutes** | Introduce array methods, looping through array and copy by reference vs value through Activity | 1. Push 2. Unshift 3. Pop 4. Shift 5. Slice and splice 6. Fill and filter 7. Loop through 1D, 2D and 3D arrays. 8. Explain difference between 9. Explain how non primitive data types are copied by reference. 10. All the examples are present in micro projects document |
| **5 minutes** | Class Wrap-up | - Quick oral quiz:   * What is the index of the first element in an array? * What is the difference between slice and splice? * If you do let arr = [1, 2, 3]; arr[1] = 4;, what will be the new array and why? * How would you access the number 200 in the array let arr = [10, [20, 30], [40, 50, [100, 200]]]? * How do you flatten a nested array like [[1, 2], [3, 4], [5, 6]] to [1, 2, 3, 4, 5, 6]? |

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## **References for Class:**

* [JS Arrays](https://www.w3schools.com/js/js_arrays.asp)