













UNIT OVERVIEW: [JavaScript Part 1](#)

Lesson	Course	Exercises	Objectives	Progression Pathways	Time (min)
1	1. Getting Started with Programming	1 - 11	<ul style="list-style-type: none"> Understand what JavaScript is and what its used for Understand and create comments Demonstrate basic mathematical operations Understand and create confirm and prompt dialogs Understand data types in JavaScript: strings, numbers and Booleans 	L1 programming L1 algorithms L2 data	20
2	1. Getting Started with Programming	12 - 20	<ul style="list-style-type: none"> Demonstrate console.log and recognise comparison operators ('<', '>', '==', '!==') Understand and construct if / else statements using comparison operators Understand and practice debugging Review data types, comparators, if / else statements and maths operations Understand and implement modulo (%) using an if / else statement 	L2/4 programming L3 algorithms	20
3	1. Getting Started with Programming	21 - 28	<ul style="list-style-type: none"> Understand and practice implementing the substring keyword Understand and practice using variables Review variables and manipulation of numbers & strings Practice using variables in if / else statements 	L3/5 programming 	20
4	2.Choose Your Own Adventure	1 - 7	<ul style="list-style-type: none"> Plenary activity synthesising Module 1: Getting started with programming Assign prompt to a variable, construct if / else statements with comparison operators and use console.log 	L3 programming L4 algorithms 	30
5	3. Introductions to Functions in JS	1 - 8	<ul style="list-style-type: none"> Understand what a function does and how it works Practice creating and debugging functions Recognise and implement the return keyword 	L2/6 programming L6 algorithms 	20
6	3. Introductions to Functions in JS	9 - 13	<ul style="list-style-type: none"> Recognise and implement functions with more than one parameter Understand and Evaluate Global and local variables Practice functions with if / else statements 	L6/7 programming 	15
7	4. Build "Rock, Paper, Scissors"	1 - 9	<ul style="list-style-type: none"> Plenary activity synthesising Module 3: Introductions to functions in JS Understand and implement Math.random() method and use else / if statement Create functions using multiple if / else statements Extension: Improve game with the skills previously acquired 	L4 algorithms L5/6 programming 	20
8	5. Introduction to 'For' Loops	1 - 8	<ul style="list-style-type: none"> Understand 'for' loops, how they are helpful and the general syntax Understand how to initiate, control and end a for loop Practice a 'for' loop counting down 	L4 algorithms 	20












UNIT OVERVIEW: [JavaScript Part 2](#)

Lesson	Course	Exercises	Objectives	Progression Pathways	Time (min)
9	5. Introduction to 'For' Loops	9 - 13	<ul style="list-style-type: none"> Understand what an array is and how to create one Understand how to access an element of an array Practice creating and accessing all elements of an array using a for loop 	L2/6 data L6 programming	20
10	6. Search Text For Your Name	1 - 7	<ul style="list-style-type: none"> Plenary exercise synthesising Module 5: Introduction to 'For' Loops Recognise and implement text wrapping and the .push() method for arrays Create a searching program using for loops, if statements and console.log Extension: Fix problems highlighted 	L2 algorithms L2 programming L3/4 data	20
11	7. Introduction to 'While' Loops in JS	1 - 11	<ul style="list-style-type: none"> Understand what a 'while loop is useful for and general syntax Recognise infinite 'while' loops and the use of Booleans Compare and evaluate 'while' and 'for' loops Understand and implement a do / while loop Practice all types of loops 	L4/8 programming	20
12	8. Dragon Slayer	1 - 6	<ul style="list-style-type: none"> Plenary activity synthesising Module 7: Introduction to 'While' loops in JS Create an interactive game, implement the math.floor method Use a while loop and multiple if / else statements Extension: Improve game and develop console.log statement 	L3 algorithms L4/L6 programming	30
13	7. More on Control Flow in JS	1 - 9	<ul style="list-style-type: none"> Review if / else statements and for and while loops Understand and implement the isNaN method Understand and implement a switch statement, adding cases and a default 	L4/5 algorithms	20
14	7. More on Control Flow in JS	10 - 14	<ul style="list-style-type: none"> Understand and implement the 'And', 'Or', and 'Not' logical operators 	L5 programming	15
15	8. Choosing Your Own adventure 2	1 - 6	<ul style="list-style-type: none"> Plenary activity synthesising Module 7: More on Control Flow in JS Understand and use .toUpperCase() and .toLowerCase() Implement a switch statement, if / else statements and logical operators Extension: Add further cases to expand game 	L5 algorithms L5 programming	20
16	9. Arrays and Objects in JS	1 - 8	<ul style="list-style-type: none"> Review arrays and practice looping through elements of arrays Recognise a heterogeneous, two dimensional and jagged arrays 	L5 algorithms L5/8 programming	20

UNIT OVERVIEW: [JavaScript Part 3](#)

Lesson	Course	Exercises	Objectives	Progression Pathways	Time (min)
17	9. Arrays and Objects in JS	9 – 17	<ul style="list-style-type: none"> Understand what objects are and compare the syntax for the two notations of declaring objects Practice creating a heterogeneous and multidimensional array with an object Practice creating and editing objects 	L5/8 programming   	20
18	10. Contact List	1 – 8	<ul style="list-style-type: none"> Plenary activity synthesising Module 11: Arrays and Objects in JS Create objects within objects with various types of properties Implement a for / in loop to search properties of object Recognise and implement conventional formatting 	L5 algorithms L8 programming   	20
19	11. Introduction to Objects I	1 – 12	<ul style="list-style-type: none"> Review data types, comparator, arrays, functions and switch statements Practice nested conditional in a for loop Review and practice creating objects in literal and constructor notation Review and practice accessing properties using dot and bracket notation 	L4 algorithms L6 data  	20
20	11. Introduction to Objects I	13 – 19	<ul style="list-style-type: none"> Understand what a method is and practice creating methods Understand the 'this' keyword and how a method can be called by multiple objects Practice creating methods that are called by multiple objects 	L6/7 programming    	30
21	11. Introduction to Objects I	20 – 25	<ul style="list-style-type: none"> Understand and create custom & method constructors Practice constructors 	L6 programming  	20
22	11. Introduction to Objects I	26 – 33	<ul style="list-style-type: none"> Recognise an array of objects Understand how objects can be passed into functions Review creating objects, custom constructors and methods 	L6 programming 	15
23	12. Building an Address Book	1 – 6	<ul style="list-style-type: none"> Plenary activity synthesising Module 12: Introduction to Objects I Practice creating and storing objects in arrays Create a function to access properties of objects Create a for loop to call a property for all objects in the array Create a function to search for a property of an array of object and add objects 	L8 programming  	20
24	13. Introduction to Objects II	1 – 10	<ul style="list-style-type: none"> Review literal and constructor notation for object and methods Review the 'this' keyword and calling a property value using bracket notation Understand the 'typeof' and "hasOwnProperty" keywords Review a for / in loop with bracket notation 	L5 algorithms 	20

UNIT OVERVIEW: [JavaScript Part 4](#)

Lesson	Course	Exercises	Objectives	Progression Pathways	Time (min)
25	13. Introduction to Objects II	11 – 21	<ul style="list-style-type: none"> Understand what a class is and why it is useful Understand what a prototype is and how the keyword can be used to add methods to a predefined class Understand inheritance and recognise what it does Implement prototype keyword to add methods to classes 	L8 programming  	20
26	13. Introduction to Objects II	22 – 26	<ul style="list-style-type: none"> Understand what a public property and private variable is Understand how to access a private variable using a public method Understand how to call a private method using a public method 	L7 programming  	20
27	13. Introduction to Objects II	27 – 30	<ul style="list-style-type: none"> Practice using for / in loop and typeof keyword Practice using prototype to add a method to a class Recognise that all objects have 'hasOwnProperty' as a property Compare private and public properties 	L5 algorithms L7/8 programming   	20
28	14. Building a Cash Register	1 – 7	<ul style="list-style-type: none"> Plenary activity synthesising Module 14: Introduction to Objects II Practice custom constructors, calling methods in an object and recognise that method can be used to call another method Add functionality to methods that allow the void of transactions and quantities of products 	L8 hardware    	30

Computational thinking concepts:  - Abstraction  - Generalisation  - Algorithms  - Evaluation  - Decomposition