Scope and Sequence Document for: Year 9 Computer Science

Year:	Year 9 2023-2024	
Tutor	Ruth Benjamin Marvin	
Tutor Profile:	BSc (hons), MBA (Lond), PGCE (Sussex University)	
Resources required:	Login credentials for www.testandtrack.io (provided by tutor). Login credentials for the Learning Portal > moodle.immanuelonlineschool.com (Year 9 CS)	

*A = Assignment due before next lesson
*SE = Suggested extra work
Note: All Lesson Tests must be completed as part of the lesson prep. Tests are auto-marking with instant feedback.

Lesson No.	NSW week No.	Week beginning Monday the:	Contents of study
1	1	04/09/23	**Topic 1: Introduction to Machine Learning and Artificial Intelligence**
2	2	11/09/23	Creating your own self-learning chatbot + *Lesson Test*
3	3	18/09/23	Elon Musk for the day – create a self-driving car simulation. + *Lesson Test*
4	4	25/09/23	Using AI to make predictions. + *Lesson Test*
5	5	02/10/23	Google's teachable machine + *Lesson Test*
6	6	09/10/23	Reflecting on Artificial Intelligence + *Lesson Test*
A1			***Assignment Due before next lesson.***
SE			***Scroll down to the bottom of the Course and complete the year 8 (four lesson series) Python Programming lessons. Before we start this series, it would be essential for you to know the basics of Python programming and how to construct simple programs.***
7	7	16/10/23	**Topic 2: Python Programming -Create Python programs**
	8	23/10/23	Half Term
8	9	30/10/23	Creating a Quizzing App in Python + *Lesson Test*
9	10	06/11/23	Create a personality predictor app. + *Lesson Test*
10	11	13/11/23	Create a crazy username creator app. + *Lesson Test*
11	12	20/11/23	Create an amazing votes counter app. + *Lesson Test*
12	13	27/11/23	Create your own mini app / submit your apps. + *Lesson Test*
A2			**Assignment Due before next lesson.**
SE			***Scroll down to the bottom of the Course and complete the year 8 lessons on Data Representation. Before we start this series, it is useful for you to know what Binary is and how to convert from Binary to Decimal.***
13	14	04/12/2023	**Topic 3: Data Representation - Representing text (ASCII, EBDIC, UNICODE)** + *Lesson Test*

14	15	11/12/2023	Representing Images + *Lesson Test*
	16	18/12/2023	Christmas Holiday
	17	25/12/2023	Christmas Holiday
	18	01/01/2024	Christmas Holiday
15	19	08/01/2024	Representing Sound + *Lesson Test*
16	20	15/01/2024	Hexadecimal – base 16 Number System (conversions) + *Lesson Test*
17	21	22/01/2024	How we get Computer Memory + *Lesson Test*
18	22	29/01/2024	Compression + *Lesson Test*
A3			**Assignment Due before next lesson.**
19	23	05/02/2024	**Topic 4: Introducing Networks and Network Topologies** + *Lesson Test*
20	24	12/02/2024	Exploring the Internet – History and Structure + *Lesson Test*
	25	19/02/2024	Half Term
21	26	26/02/2024	Circuit vs Packet Switching + *Lesson Test*
22	27	04/03/2024	Wireless Networks + *Lesson Test*
23	28	11/03/2024	Performance of Networks + *Lesson Test*
24	29	18/03/2024	Network Types – LAN/WAN/Client Server / Peer to Peer + *Lesson Test*
A4			**Assignment Due before next lesson.**
25	30	25/03/2024	Introduction to the CPU + *Lesson Test*
	31	01/04/2024	Easter Holiday
	32	08/04/2024	Easter Holiday
	33	15/04/2024	Easter Holiday
26	34	22/04/2024	CPU Performance + *Lesson Test*
27	35	29/04/2024	Fetch Decode Execute Cycle + *Lesson Test*
28	36	06/05/2024	Jon Von Neumann and Systems Architecture + *Lesson Test*
29	37	13/05/2024	Exploring the Central Processing Unit + *Lesson Test*
30	38	20/05/2024	Input, Output, Data Processing, Data Bus + *Lesson Test*
A5			**Assignment Due before next lesson.**
	39	27/05/2024	Half Term
31	40	03/06/2024	Introducing Boolean Logic + *Lesson Test*
32	41	10/06/2024	Truth Tables and Logic Circuits + *Lesson Test*
33	42	17/06/2024	Logic Gates + *Lesson Test*
A6			**Assignment Due before next lesson.**
34	43	24/06/2024	Truth Tables and Predicting Output + *Lesson Test*