

Year 9 - Computing - Learning Journey 2018-2019

Week	Date	Topic Key cons that we cover	What we will learn about each week	Assessment	
1	03.09.18	9.1 How Computers Represent Data Data Representation Computers & Systems	Recap: Representing integers as binary. Create spreadsheet to convert denary to binary. How no. of bits affects range.	Translating a piece of text to ASCII, then binary.	
2	10.09.18		Character symbols & codes. Different character sets. Program to convert text to codes.		
3	17.09.18		Recap monochrome bitmaps. Resolution & bit-depth. 2-bit colour and beyond. Calculating amount of data to store a bitmap.	Representing an 8x8 bitmap using bit-depth of 2 or more.	
4	24.09.18		Hexadecimal. 24-bit RGB colours. Run-length compression of bitmaps. Meta-data stored in image files.		
5	01.10.18		Recording audio. Sample size & rate. Size of audio files & compression. Meta-data stored in audio files.		
6	08.10.18		Difference between bitmap & vector graphics. Representing video. Frame-rate. Finishing & printing work.		
7	15.10.18	Assessment & RAP	<i>Simple written test:</i>		
H/T					
8	29.10.18	9.2 Creating web-sites using HTML & CSS Internet & the Web Data Representation	Recap HTML tags. Page attributes. Creating simple tables. Cell formats. Merging table cells.	Finished website.	
9	05.11.18		Adding hyper-links and pop-up hints.		
10	12.11.18		Navigation bars & buttons. Embedding audio & video in pages. Using CSS to set style of elements in pages.		
11	19.11.18		Preparing images for the web: resizing, RGB, resolution. Preparing images: Selecting parts. Image maps and hyperlinks.		
12	26.11.18		Project: Create website with navigation from list of themes.		
13	03.12.18				
14	10.12.18				
15	17.12.18	Assessment task and RAP	Assessed task:		
XMAS					
16	07.01.19	9.3 Algorithms & Pseudo-Code Problem Solving & Algorithms Data Representation	Following & tracing Pseudo-Code algorithms: Linear Search and Bubble Sort.	Pseudo-code for Caesar Cipher encoding / decoding.	
17	14.01.19		Decompose speed, distance & time calculations. Adding validation to pseudo-code.		
18	21.01.19		Decompose problem of a falling object: calculations, variables & constants involved.		
19	28.01.19		Decompose problem of encoding/decoding text using Caesar Cipher. Testing pseudo-code works.		
20	04.02.19		Decompose problem and create pseudo-code for Hangman game.		
21	11.02.19	RAP			
H/T					
22	25.02.19	9.4 Developing Programs Problem Solving & Algorithms Writing Programs & Techniques Testing & Robustness Data Representation	Decompose problem & create program for a simple calculator that covers + - * / Flow-chart and program making use of data entry & simple operations.	Finished Caesar Cipher program.	
23	04.03.19		Add further operations e.g. ^ powers and validate inputs. Final testing.		
24	11.03.19		Substrings: Extracting characters from text. Caesar Cipher program: Encrypt and decrypt.		
25	18.03.19		Program to encode text as Morse using 1D array.		
26	25.03.19		Storing timetable data in 2D array. Searching for data in an array.		
27	01.04.19	Assessment task and RAP			
EASTER					
28	22.04.18	Revision			
29	29.04.18	End Of Year Exam			
30	06.05.18	9.5 Files, Data Storage & Compression Computers & Systems Data Representation Internet & the Web	Types of storage: magnetic, optical, solid-state, cloud. Recap of HTML to create pages & design choices.	Finished storage and file-types webpage.	
31	13.05.18		Different types of file and their content e.g. text, audio, video. CSS to improve design of a page.		
32	20.05.18		Compressed files.		
H/T					
33	03.06.18	9.6 Social, Ethical, Legal & Environmental Issues Computers & Systems Data Representation Internet & the Web	Upgrading & disposal of hardware, hazardous tech.	Written task: Laws that affect use of technology.	
34	10.06.18		The challenge of recycling.		
35	17.06.19		Use of data: dumping devices, theft, losing media and leaking data.		
36	24.06.19		Laws that affect us: Computer Misuse Act.		
37	01.07.19		Laws that affect us: Copyright & Creative Commons Licensing.		
38	08.07.19		Laws that affect us: Data Protection Act and GDPR.		
39	15.07.19	Activities week			

Year 9 – Computing - Progress Tracker

FLIGHT PATH STICKER	Overview of exam Breakdown of exams, length and weighting
----------------------------	--

Date	Assessment	Flightpath Grade	Action (s) to make progress
	Translating a piece of text to ASCII, then binary.		
	Representing an 8x8 bitmap using bit-depth of 2 or more.		
	Website project.		
	Pseudo-code for Caesar Cipher encoding / decoding.		
	Caesar Cipher program.		
	Finished storage and file-types webpage.		
	Written task: Laws that affect use of technology.		