

## Year 8 - Computing - Learning Journey 2018-2019

Week	Date	Topic Key constructs that we cover	What we will learn about each week	Assessment	
1	03.09.18	<b>8.1 Computers in Control</b> Computers & Systems	Embedded computers that control everyday systems. Scenarios where they are used.	Comparison between smartphone, console and PC – similarities & differences.	
2	10.09.18		Examples of embedded systems, describing their inputs, decisions, outputs.		
3	17.09.18	<b>8.2 Common peripheral devices</b> Hardware Data Representation	Common input, output, storage & communication devices.		
4	24.09.18		Comparison between storage methods: optical disks, hard disk drives, solid-state flash memory.		
5	01.10.18	<b>8.3 Parts inside a computer</b> Processors & Processing	CPU and RAM. Clock Speed and word-size. Graphics and network cards.		
6	08.10.18		Comparison between smartphone, console and personal computer.		
7	15.10.18	<b>Assessment &amp; RAP</b>	Simple written test: Key components and peripherals.		
H/T					
8	29.10.18	<b>8.4 Software</b> Software Computers & Systems	Recap what software means. Broad types of software. Common features of operating systems. Different kinds of operating systems.	"Digital Decay" word-processed document.	
9	05.11.18		Different kinds of software applications & utilities.		
10	12.11.18		Comparison of mobile and desktop operating systems.		
11	19.11.18	<b>8.5 Files Types &amp; Compression</b> Data Representation	Common file types for different kinds of data/application. Overview of compression and compressed files.		
12	26.11.18	<b>8.6 Keeping Documents Safe</b> Data Representation Hardware	Lifetime, management & safety of documents/data.		
13	03.12.18		Digital Decay Project: Keeping important data safe and usable.		
14	10.12.18		Digital Decay project continued.		
15	17.12.18	<b>Assessment task and RAP</b>	Assessed task: Identify file-types and compression for common scenarios.		
XMAS					
16	07.01.19	<b>8.7 Communication &amp; Networks</b> Internet & Web Security & safety	Data Packets and Addresses. Breaking data into packets and labelling. Routes that packets can take through networks. Order of arrival. Requesting missing packets.	Written task: breaking data into packets & reconstructing.	
17	14.01.19		Protecting Data From Interception: Encryption. Preventing data from entering/leaving a network without permission: Firewalls.		
18	21.01.19	<b>8.8 Computational Thinking</b> Problem solving & Algorithms Testing & Robustness	Breaking problems down using decomposition. Identifying sub-tasks and isolating important details using abstraction.	Algorithm for making cup of tea.	
19	28.01.19		Decomposing problems and expressing solutions as flowcharts: Linear Search.		
20	04.02.19		Decomposing Rock-Paper-Scissors game.		
21	11.02.19	<b>RAP</b>	Packets and algorithm tasks.		
H/T					
22	25.02.19	<b>8.9 Developing Computer Programs</b> Writing Programs & Techniques Testing & Robustness Data Representation	Recap of simple programming constructs: assignment, IF, FOR, WHILE. Simple spiral program. Customising program by changing parameters & values.	Airport search program.	
23	04.03.19		Programs that search through 1D arrays using FOR and WHILE loop.		
24	11.03.19		Searching more effectively through data.		
25	18.03.19		Validating input data and making decisions about it.		
26	25.03.19		Counting things that happen.		
27	01.04.19	<b>Assessment task and RAP</b>	Airport and Rock-Paper-Scissors programs.		
EASTER					
28	22.04.18	<b>8.10 Vector Graphics</b> Presenting Data	Concept of scalable graphics/how different from bitmap. Simple lines and shapes, styles.	"Map of South-West" interactive webpage.	
29	29.04.18		Curved arcs. Changing curvature using handles. Using glyph symbols.		
30	06.05.18	<b>8.11 Creating Web-Sites</b> Internet & Web Presenting Data Data Representation	Recap of HTML to create pages & design choices. CSS to improve design of a page.		
31	13.05.18		Creating consistent web-content with hotspots & hyper-links.		
32	20.05.18		Testing & refining webpages.		
H/T					
33	03.06.18	<b>Revision</b>	Hardware components, operating systems, applications & utilities, networks.		
34	10.06.18		Algorithms, flowcharts and programming recap.		
35	17.06.19	<b>End Of Year Exam</b>			
36	24.06.19	<b>8.12 Laws &amp; Issues Surrounding Tech</b> Computers & Systems Security & safety	Netiquette, copyright and permissions.	Written task: Laws that affect use of technology.	
37	01.07.19		Data Protection.		
38	08.07.19		Computer Misuse.		
39	15.07.19	<b>Activities week</b>			

## Year 8 – Computing - Progress Tracker

<b>FLIGHT PATH STICKER</b>	<b>Overview of exam Breakdown of exams, length and weighting</b>
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Date	Assessment	Flightpath Grade	Action (s) to make progress
	Comparison between smartphone, console and PC – similarities & differences.		
	“Digital Decay” word-processed document.		
	Written task: breaking data into packets & reconstructing.		
	Algorithm for making cup of tea.		
	Airport search program.		
	“Map of South-West” interactive web-page.		
	Written task: Laws that affect use of technology.		