

Tiverton High School Year 8 Computing - Learning Journey 2020-2021

Week	Date	Key constructs that we cover in each unit	Details of what we will learn about each week	Assessment
1	07.09.20	Unit 8-1 Parts of a computer system KC-1 Environmental issues of upgrading hardware KC-3 Parts inside a computer KC-3 Peripheral devices	Common input, output, storage & communication devices.	Comparison between smartphone, console and PC – similarities & differences.
2	14.09.20		Comparison between storage methods: optical disks, hard disk drives, solid-state flash memory.	
3	21.09.20		CPU and RAM. Clock Speed and word-size. Graphics and network cards.	
4	28.09.20		Comparison between smartphone, console and personal computer.	
5	05.10.20	Unit 8-2 Computers in control KC-1 Safety, security, privacy KC-3 Computers & Systems	Embedded computers that control everyday systems. Scenarios where they are used.	
6	12.10.20		Examples of embedded systems, describing their inputs, decisions, outputs.	
7	19.10.20	RAP		
Half Term				
8	02.11.20	Unit 8-3 Software KC-3 Software	Recap what software means. Broad types of software. Common features of operating systems. Different kinds of operating systems.	"Digital Decay" word-processed document.
9	09.11.20		Different kinds of software applications & utilities.	
10	16.11.20		Comparison of mobile and desktop operating systems.	
11	23.11.20	Unit 8-4 Working with files KC-3 Peripheral devices KC-5 File-types and compression	Common file types for different kinds of data/application. Overview of compression and compressed files.	
12	30.11.20		Lifetime, management & safety of documents/data.	
13	07.12.20		Digital Decay Project: Keeping important data safe and usable.	
14	14.12.20		Finish Digital Decay project and RAP .	
Christmas				
15	04.01.21	Unit 8-5 Communication and networks KC-1 Safety and security KC-4 Internet and the web	Data Packets and Addresses. Breaking data into packets and labelling. Routes that packets can take through networks. Order of arrival. Requesting missing packets.	Decomposition and algorithm for "Rock Paper Scissors" game.
16	11.01.21		Protecting Data From Interception: Encryption. Preventing data from entering/leaving a network without permission: Firewalls.	
17	18.01.21	Unit 8-6 Problem solving and computational thinking KC-6 Decomposition of problems KC-6 Expressing solutions using flowcharts	Breaking problems down using decomposition. Identifying sub-tasks and isolating important details using abstraction.	
18	25.01.21		Decomposing problems and expressing solutions as flowcharts: Linear Search.	
19	01.02.21		Decomposing Rock-Paper-Scissors game.	
20	08.02.21	RAP		
Half Term				
21	22.02.21	Unit 8-7 Developing computer programs KC-5 Representing data in arrays KC-6 Programming techniques KC-6 Testing and robustness	Recap of simple programming constructs: assignment, IF, FOR, WHILE. Geometric drawing programs. Customising code by changing parameters & values.	Airport search program.
22	01.03.21		Programs that search through 1D arrays using FOR and WHILE loop.	
23	08.03.21		Searching more effectively through data.	
24	15.03.21		Validating input data and making decisions about it.	
25	22.03.21		Counting things that happen.	
26 (1/2 wk)	29.03.21		Finishing programs and RAP .	
Easter				
27	19.04.21	Unit 8-8 Web graphics KC-2 Presenting data KC-4 Internet and the web KC-5 File-types and compression KC-6 Abstracting key information	Concept of scalable graphics/how different from bitmap. Drawing simple lines and shapes, applying styles.	"Map of South-West" interactive webpage.
28	26.04.21		Drawing curved lines/arcs. Changing curvature using handles.	
29	04.05.21		Using glyph symbols and adding useful text annotations to a vector graphic.	
30	10.05.21		Recap of HTML to create pages & design choices. CSS to improve design of a page.	
31	17.05.21		Suitable file formats for images on web pages. Creating hot-spot hyperlinks on parts of an image, Adding pop-up "title" attributes for accessibility.	
32	24.05.21	End of Year Exam Preparation		
Half Term				
33	07.06.21	End of Year Exam Preparation		
34	14.06.21	End Of Year Exam		
35	21.06.21	End Of Year Exam		
36	28.06.21	RAP		
37	05.07.21	End Of Year Exam RAP		
38	12.07.21	Development day / Activities week		
39	19.07.21	Development day / Activities week		