

Key Stage 3 Curriculum Map 2019 - 2020

Term 1

Subject: Computing/Computer Science		Year Group: 8		
Week/Date	Focus/Topic	Objectives	Key Skills	Home Learning/Resources
1 Sept 2 nd -5 th		<ul style="list-style-type: none"> Baseline assessments, curriculum orientation and expectations 		
2 Sept 8 th -12 th		<ul style="list-style-type: none"> Log on details, using the computer system, OneDrive, MS Teams, OneNote and My Learning 		
3 Sept 15 th -19 th	<ul style="list-style-type: none"> Data Representation - How data is represented in computers 	<ul style="list-style-type: none"> Establish how computers use binary to store information 	<ul style="list-style-type: none"> What is information How do 'yes'/'no' answers relate to binary numbers Binary numbers (using dotted cards) Key definitions – bit, byte, etc. Why can we measure memory in this way? 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook Binary cards
4 Sept 22 nd -26 th		<ul style="list-style-type: none"> Model how computers use ASCII to represent text 	<ul style="list-style-type: none"> Character Sets ASCII Unicode extension 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook ASCII table
5 Sept 29 th -Oct 3 rd		<ul style="list-style-type: none"> Theorise how computers represent bitmap images 	<ul style="list-style-type: none"> Pixels Using binary to create black and white bitmaps RGB values and colour depth Metadata 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook www.think-maths.co.uk/spreadsheet
6 Oct 6 th -10 th		<ul style="list-style-type: none"> Discover how computers represent sound waves 	<ul style="list-style-type: none"> Analogue sound waves Sampling Impact of sampling rate 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook Sound representation video Sound sampling online resources

7 Oct 13 th -17 th		<ul style="list-style-type: none"> Examine how computers use binary to run programs 	<ul style="list-style-type: none"> How are instructions programmed Use of machine codes 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook
8 Oct 20 th -24 th	Mid Term Break			
9 Oct 27 th -Oct 31 st	<ul style="list-style-type: none"> Data Representation - How data is represented in computers 	<ul style="list-style-type: none"> Assessment 		
10 Nov 3 rd -7 th	<ul style="list-style-type: none"> Networking Basics 	<ul style="list-style-type: none"> Explain the advantages of using a Network and identify examples of networks 	<ul style="list-style-type: none"> Understand what is a network and network types Explain the differences between each network type Demonstrate an understand of each network topology and their advantages/disadvantages 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook Playdoh and string
11 Nov 10 th -14 th		<ul style="list-style-type: none"> Examine the differences between the internet and WWW, and how they operate 	<ul style="list-style-type: none"> Understand the difference between the internet and WWW. 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook
12 Nov 17 th -21 st		<ul style="list-style-type: none"> Summarise how domain names and IP addresses are linked, and the role of DNS 	<ul style="list-style-type: none"> Understand how a URL is made constructed. What are IP's address and how they work. Understand the roles of the DNS 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook DNS video
13 Nov 24 th -28 th		<ul style="list-style-type: none"> Explore the advantages and limitations of communication over the internet 	<ul style="list-style-type: none"> Knowledge of how the internet is used for communication and transfer of data over large distances VoIP Reasoning for its use including pro's and con's. 	<ul style="list-style-type: none"> My Learning resources Digital worksheets Home learning workbook
14 Dec 1 st -5 th		<ul style="list-style-type: none"> Establish the role of and need for network protocols. 	<ul style="list-style-type: none"> Understand network protocols and why we need them 	

			<ul style="list-style-type: none"> • How is data transferred over a network. • Understand packets and the TCP/IP model • MAC addresses 	
15 Dec 8 th -12 th		<ul style="list-style-type: none"> • Debate the morality of cyber-attacks 	<ul style="list-style-type: none"> • Computer misuse act • The cloud • 	
Winter Break: December 13 th – January 2 nd				