












Overview Computing Year 6

-Computational Thinking

-Digital Literacy and Online Safety

-Computers and Hardware

	Autumn Term		Spring Term		Summer Term	
Big Question	Have we lost our way with the world?		War- What is it good for?		How has the past shaped the future?	
Other Subject links	The Titanic/Map work & human Geography		World War 2/Countries & land use		Shang Dynasty from China/Physical Geography	
	Autumn 1 Code.Org CS Fundamentals Course E (Lessons 1,2,3,8,9,10) 	Autumn 2 Big Data 1  	Spring 1 Bletchley Park 1  	Spring 2 Bletchley Park 2  	Summer 1 Big Data 2 	Summer 2 Skills Showcase   
National Curriculum	-Design, write and debug programs that accomplish specific goals. -Use sequence, selection, and repetition in programs. -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	-Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration.	-Solve problems by decomposing them into smaller parts. -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	-Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting,	-Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and	-Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. -Use sequence, selection, and repetition in www.dadstout.

				analysing, evaluating and presenting data and information.	presenting data and information. -Understand computer networks including the internet, how they can provide multiple services, such as the world-wide web, and the opportunities they offer for communication and collaboration.	-Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.
Knowledge	<p>Identify ways in which media can shape ideas about gender.</p> <p>Identify messages about gender roles and make judgements based on them.</p> <p>Explain and challenge why it is important to reject inappropriate messages about gender online.</p> <p>Explain issues online that might make me, or others feel sad, worried, uncomfortable, or frightened.</p>	<p>Know examples of how we might get help, both on and offline and explain why we should keep asking for help until we get it.</p> <p>Know how to support others (including those who are having difficulties) online.</p> <p>Explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming).</p>	<p>Explain how developing an online reputation will allow other people to form an opinion of me.</p> <p>Know some simple ways that help build a positive online reputation.</p> <p>Know how to use search technologies effectively.</p> <p>Explain how search engines work and how results are selected and ranked.</p> <p>Know how to make references to and acknowledge sources used from the internet</p>	<p>Know ways of reporting problems online for both myself and my friends.</p> <p>Know how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help me.</p> <p>Identify a range of ways to report concerns both in school and at home about online bullying.</p> <p>Know how to identify, flag and report inappropriate content.</p>	<p>Know simple ways to increase privacy on apps and services that provide privacy settings.</p> <p>Know ways in which some online content targets people to gain money or information illegally and know strategies to help identify this content e.g. scams, phishing.</p> <p>Know the history of computers and how they have evolved over time.</p>	<p>Explain how and why some people may present 'opinions' as 'facts'.</p> <p>Know the history of computers and how they have evolved over time.</p> <p>Identify barcodes, QR codes and RFID and devices that can scan and read these.</p> <p>Know that corruption can happen within data during transfer (for example when</p>

	<p>Know the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting').</p> <p>Know the strategies we would apply to be discerning in evaluating digital content.</p> <p>Know how to decompose a program into an algorithm.</p> <p>Know to write increasingly complex algorithms for a purpose.</p> <p>Know how to debug quickly and effectively to make a program more efficient.</p> <p>Know how to use and adapt nested loops.</p> <p>Know how to change a program to personalise it.</p> <p>Know how to alter a website's code to create changes.</p>	<p>Know how to decompose a program into an algorithm.</p> <p>Know to write increasingly complex algorithms for a purpose.</p> <p>Know how to debug quickly and effectively to make a program more efficient.</p> <p>Know how to use and adapt nested loops.</p> <p>Know how to change a program to personalise it.</p> <p>Know how to alter a website's code to create changes.</p>	<p>Identify barcodes, QR codes and RFID and devices that can scan and read these.</p>	<p>Know how to use search technologies effectively.</p> <p>Explain how search engines work and how results are selected and ranked.</p> <p>Know how to make references to and acknowledge sources used from the internet</p>	<p>Identify barcodes, QR codes and RFID and devices that can scan and read these.</p> <p>Know that corruption can happen within data during transfer (for example when downloading, installing, copying and updating files.)</p> <p>Know and understand that computer networks provide multiple services.</p> <p>Know how to use word processing skills to create a presentation.</p> <p>Know how to create and edit sound recordings and video for a specific purpose.</p> <p>Know how to use 3D design software e.g. TinkerCAD. To design a product.</p> <p>Know how create a website with embedded links and multiple pages.</p> <p>Know what is meant by the term "Big Data".</p>	<p>downloading, installing, copying and updating files.)</p> <p>Know and understand that computer networks provide multiple services.</p> <p>Know how to use word processing skills to create a presentation.</p> <p>Know how to create and edit sound recordings and video for a specific purpose.</p> <p>Know how to use 3D design software e.g. TinkerCAD. To design a product.</p> <p>Know how create a website with embedded links and multiple pages.</p> <p>Know what is meant by the term "Big Data".</p>
Skills	<p>a) I can explain how an algorithm works.</p> <p>b) I can detect errors in a program and correct them.</p> <p>c) I can use ICT program to control a number of events.</p>	<p>a) I can collect live data using data logging equipment.</p> <p>b) I can identify data error, patterns and sequences.</p>	<p>a) I can create a sophisticated multimedia presentation.</p> <p>b) I can confidently choose the correct page set up options when creating a document.</p>	<p>a) I can explore the menu options and experiment with images (colour effects, options, snap to grid, grid settings etc.)</p>	<p>a) I can collect live data using data logging equipment.</p> <p>b) I can identify data error, patterns and sequences.</p>	<p>a) I can use a search engine using keywords searches.</p> <p>b) I can use complex searches using such as</p>

	<p>d) I can explore "what if" questions by planning different scenarios for controlled devices.</p> <p>e) I can check and refine a series of instructions.</p>	c) I can create my own databases and present information.	<p>c) I can confidently use text formatting tools, including heading and body text.</p> <p>d) I can make an information poster using my graphics skills to good effect.</p>	<p>b) I can add special effects to alter the appearance of a graphic.</p> <p>c) I can "save as" gif or jpeg wherever possible to make the files size smaller.</p> <p>d) I can make an information poster using my graphics skills to good effect.</p>	c) I can create my own databases and present information.	"+" "OR" "Find the phrase"
Vocabulary	Gender roles, influence, manipulation, persuasion, algorithm, code, computer command, decompose, loop, nested loop, remix, script libraries, variable	Screen grab, impulsive, flaming, live streaming, barcodes, QR codes, RFID, contactless, data privacy, brand, encrypt, infrared waves, NFC, transmission, signal	Cipher, invention, trial and error, encrypt password managers, chip and pin, encrypt, password	Screen grab, URL, profile byte, CPU, operating system, RAM, ROM, radio waves	Scams, phishing, big Data, bluetooth, corrupt, digital revolution, GPS, QR Code, SIM, simulation	Advertising, algorithm, bug, ad targeting, components, input, invention, output, variable, code
Computer program/s and/or devices needed	<p>Code.org website</p> <p>iPads/Computers</p>	<p>Range of infrared devices</p> <p>Batteries</p> <p>iPads/Computers</p>	<p>Computers</p> <p>Padlocks</p>	<p>iPads/Computers</p> <p>Headphones</p> <p>Smartphone (example)</p> <p>Micro SD card</p>		