KS2	Year 3	Year 4	Year 5	Year 6
Computer Science **Hardware**	• I can understand what the different components of a computer do and how they work together (U3: L1, L2, L3, L4, L5) • I can compare different types of computers (U3: L1, L2, L3, L4, L5) • I can explain what a server does (U1: L2)		• I can explain how external devices can be programmed by a separate computer (U3: L3) • I can explain the differences between ROM and RAM (U3: L3)	• I can research the history of computers and how they have evolved over time including historical figures (U1: L3, L4) (U4) • I can design a computer of the future (U4). • I can understand that corruption can happen within data during transfer (downloading, installation, copying and updating files). (Teacher assess through cross-curricular subjects).
Computer Science **Networks and data representation**	• I can explain what a network is and its multiple purposes and services (U1: L1) • I can identify the key components within a network and recognise its links with the internet (U1: L1) • I can explain how data is transferred (U1: L2) • I can begin to explain what the		• I can expand my vocabulary based on data and transmit (U3: L2) • I understand how the data for digital images can be compressed. • I can understand simple binary addition when computers transfer data (U3: L2, L4, L5)	

	internet is and how it is connected to a router (U1: L3, L4) • I can suggest which websites will have more/less jumps (U1: L4) • I can understand that websites and videos are files that are shared from one computer to another (U1: L3) • I can understand the role of packets. (U1: L5)			
Computer Science **Computational thinking**	• I can use decomposition to explain the parts of a laptop computer (U3: L3) • I can use decomposition to explore the code behind an animation (U2: L3, L5) • I can use logical reasoning to explain how simple algorithms work and their purpose (U2: L1, L4, L5)	• I can use decomposition to understand the purpose of a script of code (U4: L1, L2 • I can use abstractions to identify the important parts when completing both plugged and unplugged activities (U4: L1, L3, L4, L5).		• I can decompose a program into an algorithm (U2: L5) • I can write increasingly complex algorithms for a purpose (U2: L5)

	• I can form an algorithm independently (U2: L3, L4, L5)			
Computer Science **Programming**	• I can use repetition in program (U2: L2, L4) • I can incorporate loops to make code more efficient (U2: L2, L4) • I can use debugging code to justify what is wrong and how it can be corrected (U2: L4)	• I can code a simple game (U2: L1, L2, L3, L4, L5) • I can incorporate variables to make code more efficient (U2: L1, L2, L3, L4, L5) • I can remix existing code (U2: L1, L2, L3, L4, L5) • I can understand that websites can be altered by exploring the code beneath the site and are built using different programming languages (U3: L1, L2, L3, L4, L5)	• I can program an animation (U2: L2, L3, L4, L5) • I can begin to use nested loops (U2: L2, L3, L4, L5) • I can debug my own code (U2: L2, L3, L4, L5). • I can use a range of programming commands (U2: L2, L4, :5) • I can use repetition within a program (U2: L4, L5)	• I can program using the language Python (U2) • I can amend code within a live scenario (U2) • I can change a program to personalise it (U2) • I can use a nested loop (U2)
Information Technology **Using Software**	• I can use photographs and video recording to tell a story. • I can use software to edit and enhance my video (by adding	• I can build a web page with a purpose and create content for it using links and multiple pages Teacher assess	• I can use software programmes to create music (Sonic Pi/Scratch). (U2: L1, L2, L3, L4, L5) • I can use video editing/animation software to animate	• I can use search and word processing skills to create a presentation (U1: L5) (U4) • I can plan, record and edit a radio play (U4)

	music, sounds and text on screen with transitions). *Teacher assess through cross- curricular subjects. *KAPOW website are missing this page of lesson plans.	through cross-curricular subjects. • I can use Google online software to create simple documents, presentations, forms and spreadsheets (U1: L3, L4, L5)	Teacher assess through cross- curricular subjects.	• I can create a video advert using music, voiceovers, sound, text and transitions. (Teacher assess through cross-curricular subjects).
Information Technology **Using email and the internet and digital literacy.** **Safer Internet Day - Tuesday 8th February 2022**	• I can log in and out of an email account. • I can write an email including an attachment. • I can reply to an email. • I can identify when an email may not be genuine. • I can identify how I can be a responsible digital citizen. • I can identify how to stay safe online. • I can identify what cyberbullying is. Teacher assess through cross- curricular subjects.	• I can understand that information on the internets is not all grounded in fact (U3: L4) • I can identify how I can be a responsible digital citizen (Teacher assess through cross- curricular subjects) • I can identify how to stay safe online (Teacher assess through cross-curricular subjects). • I can identify what cyberbullying is (Teacher assess through cross-	• I can understand how apps can access our personal information and how to alter the permissions (U4) • I can consider the effects of screen-time on physical and mental wellbeing (U4) • I can identify how I can be a responsible digital citizen (U4) • I can identify how to stay safe online (U4) • I can identify what cyberbullying is (U4). • I can develop my searching skills to help find relevant information on the internet (U1:L1, L3)	• I can identify how I can be a responsible digital citizen. • I can identify how to stay safe online. • I can identify what cyberbullying is. • I can understand my digital footprint and online reputation and future implications they may have. Teacher assess through cross-curricular subjects. • I understand the importance of having a secure password (U1: L2)

		curricular subjects).	• I can explain how search engines work (U1:L1, L3) • I can suggest ways of checking a website's validity (U1:L2, L4) • I can explain why some results come before others when searching (U1:L5)	
Information Technology **Using data**	• I can use vocabulary linked with databases (field, record, and data). • I can sort and filter databases to easily retrieve information. Teacher assess through cross- curricular subjects.	• I can create and interpret charts and graphs to understand data. (Teacher assess through cross-curricular subjects).	• I can understand how data is collected (U3: L1)	• I can understand and identify the uses of barcodes, QR codes and RFID (U3) • I can gather and analyse data (U3) • I can create formulas within spreadsheets (U3)
Information Technology **Wider use of technology**	• I can understand the purpose of emails. Teacher assess through cross- curricular subjects.	• I can recognise how social media platforms are used to interact safely Teacher assess through cross-curricular subjects. • I can understand that software can be used collaboratively online to work as a team (U1: L1)		

		• I can use word processing software to make suggestions or comments on someone's work (U1: L2)		

https://www.kapowprimary.com/subjects/computing/upper-key-stage-2/year-6/history-of-computers/history-of-computers-2/ Year 6 Unit 4