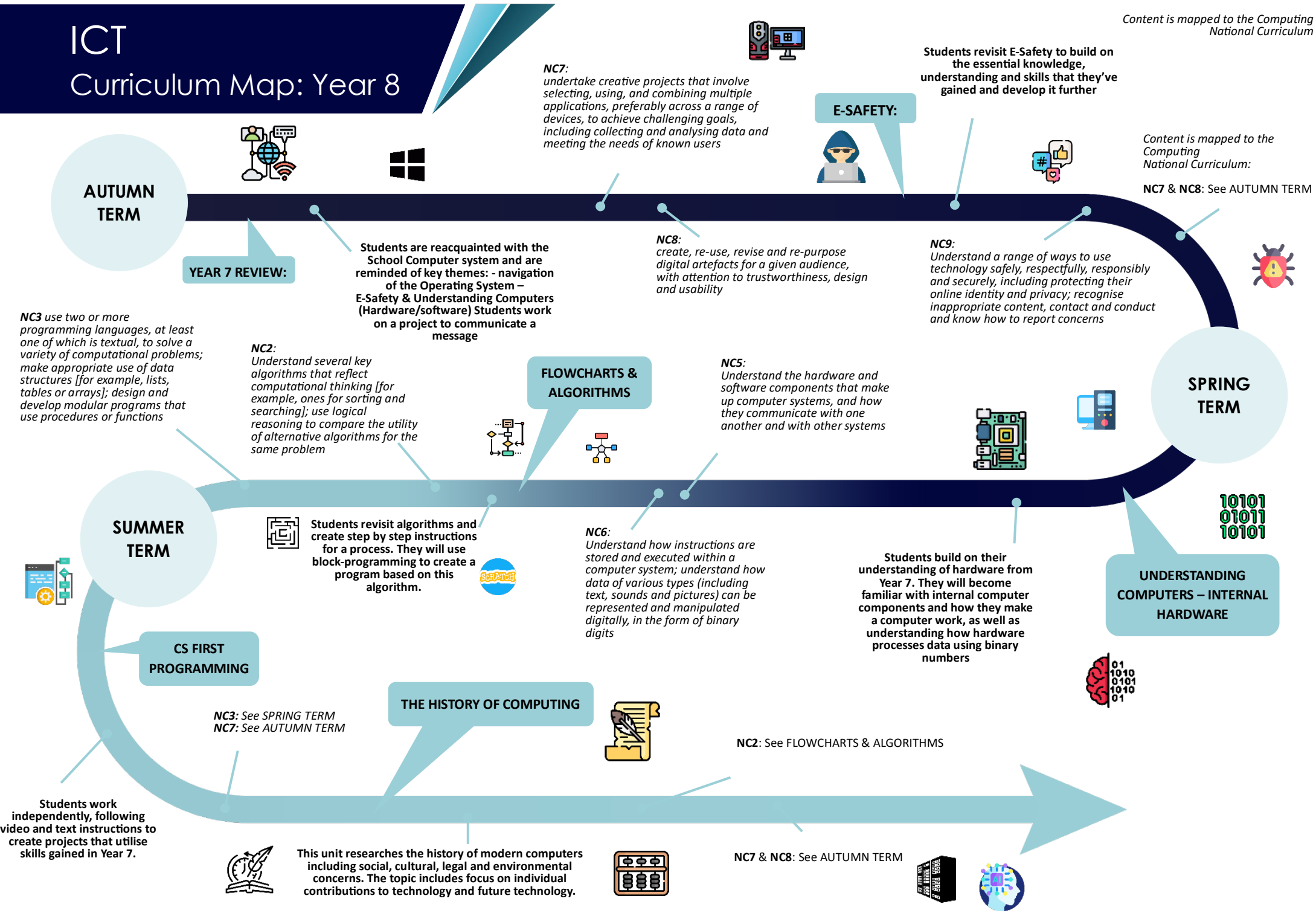


ICT Curriculum Map: Year 8

Content is mapped to the Computing National Curriculum



AUTUMN TERM

YEAR 7 REVIEW:

Students are reacquainted with the School Computer system and are reminded of key themes: - navigation of the Operating System – E-Safety & Understanding Computers (Hardware/software) Students work on a project to communicate a message

NC7: undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users

Students revisit E-Safety to build on the essential knowledge, understanding and skills that they've gained and develop it further

E-SAFETY:

Content is mapped to the Computing National Curriculum:

NC7 & NC8: See AUTUMN TERM

NC3 use two or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions

NC2: Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem

FLOWCHARTS & ALGORITHMS

NC5: Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems

NC9: Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns

SPRING TERM

10101
01011
10101

UNDERSTANDING COMPUTERS – INTERNAL HARDWARE

Students build on their understanding of hardware from Year 7. They will become familiar with internal computer components and how they make a computer work, as well as understanding how hardware processes data using binary numbers

NC6: Understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits

Students revisit algorithms and create step by step instructions for a process. They will use block-programming to create a program based on this algorithm.

SUMMER TERM

CS FIRST PROGRAMMING

NC3: See SPRING TERM
NC7: See AUTUMN TERM

THE HISTORY OF COMPUTING

NC2: See FLOWCHARTS & ALGORITHMS

Students work independently, following video and text instructions to create projects that utilise skills gained in Year 7.

This unit researches the history of modern computers including social, cultural, legal and environmental concerns. The topic includes focus on individual contributions to technology and future technology.

NC7 & NC8: See AUTUMN TERM