

Computing YEAR 8 Curriculum

YEAR 8 Curriculum Intent:

To develop students' knowledge, skills and understanding through exposure to key computational concepts. The Year 8 Computing curriculum has been designed to ensure learners are reminded about key Computing concepts to stay safe online, develop problem solving skills through the introduction to text-based programming in Python and HTML. Students develop skills in the use of ICT skills through the creation of scalable vector graphics and website development.

Through practical exercises students develop into resilient learners who are able to effectively solve problems and recover from mistakes.

	Autumn Term	Spring Term	Summer Term
Topics (with Curriculum links)	Digital Citizenship - Digital Literacy Computational thinking / Bebras Challenge - Computer Science Vector Graphics - IT	Vector Graphics - IT Python Programming (input, output, selection, iteration) - Computer Science	Computing Systems (hardware & software) - Computer Science Developing for the Web (HTML & CSS coding) - Computer Science, IT
Cross-curricular links	Technology, Maths – Problem solving, analysis of tasks and breaking down into smaller parts	Art, Technology – creation of digital and Vector based graphics	Art – design and layout along with the use of colour
Interleaving of skills	Problem solving through online competition Introduced in year 7. Repeated in years 9, 10 Vector graphics unit developing skills revisited in year 9 and then integral to KS4 vocational ICT course Years 7 – 9 start with unit focused on the safe use of technology in the modern world	Developing skills developed from y7 first in block coding and then basic copying of python blocks for Micro:bit to understanding how blocks work Vector graphics unit developing skills revisited in year 9 and then integral to KS4 vocational ICT course	Developing an understanding of how a computer system works that will flow through to GCSE Development of basic webpages with simple HTML tags and improving appearance with CSS
Literacy	Disciplinary literacy and key terms are identified with lesson resources and referred to with the lesson objectives. There is extensive use of subject specific vocabulary.		
	Key Words: Browsers, Search Engines, respect, Abstraction, Decomposition, pattern recognition, algorithms, vector, raster, node,	Key Words: Abstraction, Decomposition, pattern recognition, algorithms, sequence, selection, iteration, vector, raster, node,	Key Words: hardware, software, input, output, process, binary, logic, webpage, html, cascading style sheet,
Numeracy	Algorithm development	Algorithm development Using the computer as a calculator, programmed in Python language	Binary system, logic
Cultural capital	Embed aspects of "Project Evolve" online safety resources into Digital Literacy curriculum	The use and benefit of technology in society as a whole.	An understanding of how webpages / websites have developed from the first website by Tim Berners Lee
Linking Curriculum to Careers	Transferable skills: Problem solving, identification of steps to solve problems, resilience, working safely in the online world	Transferable skills: Problem solving, identification of steps to solve problems, resilience, Graphic design, importance of design and developing a product from initial concept	Transferable skills: Problem solving, identification of steps to solve problems, testing solutions, evaluation of success
Assessment	Google form end of topic KMP – Digital Citizenship National Bebras Challenge Computational Thinking	Google form end of topic KMP – Vector Graphics, intro to Python programming Peer assessed with rubric mini project – Vector graphics	Google form end of topic KMP – Computing Systems, Developing for the web Peer assessed with rubric mini project – Web development