



Year 9 Computer Science ALL

Acting Subject Leader: Mr Mark Finch

Year 9 Computer Science aims to engage, endeavour and excel all by building students programming skills and better understanding computing concepts which have been introduced in Year 7 and 8. The block and basic text programming is extended to Python text-based programming. Binary conversion and addition is developed to data representation of images, colour, sound & compression.

Topics to be covered in Year 9

	Term 1	Term 2	Term 3
Topics to be covered	Data Representation Binary Conversion Binary Representation of Images Binary Representation of Sound Binary Representation of colour Intermediate UK Bebras Competition 2026	Artificial Intelligence (AI) Python Programming using Zigzag Python Turing lab Mid-Year Assessment	3D Photo editing in Photoshop
Skills to be developed	Image Representation Remembering binary digits and conversion create images out of individual elements, to help them understand pixels represent the colour of each pixel using one or two binary digits Explore GIMP environment Create and manipulate images using GIMP Sound Representation understand the true nature of sound Sound waves Digital sound Analogue sound Sample size Sample Frequency Colour Representation Understand RGB Create colours by mixing RGB Use the colour picker Compression Lossy Lossless	Arithmetic operations Getting User Input Formatting Outputs Data Types Boolean If statements Else clause String manipulation Lists For loops While loops Machine learning	Photoshop Manipulation Adding text Understanding main shortcut keys Color replacement tool Cloning tools Selection brush tool Filtering History brush Sponge tool

Website Links

<https://www.bbc.co.uk/education>

<https://w3schools.com>

<https://teach-ict.com>

<https://senecalearning.com/en-GB/>

Marking, Assessment and Feedback

Over the course of an academic year students will complete a number of topics and will be assessed using progress paths, formal tests, topic tests.

Information from these assessments will contribute in making decisions regarding reporting student progress and predicting outcomes. Current guidelines mean that we cannot provide as much detailed written feedback as is typical from core subjects. In addition, teachers will evaluate students' learning through enrichment activities, class contribution, homework and a range of other activities. Through this, students will know where they are in their learning journey and what they need to do next to make further progress.

Teachers will continue to provide planned written feedback on selected pieces of work.

Homework

Homework will be set using the online platform Go 4 Schools <https://www.go4schools.com/>

Contact Information:

If you would like to contact the Science Department please email: science@gilberd.com or contact your child's teacher.

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