



Year 8 Computer Science Curriculum Map

Overview	<p>We start Year 8 with a unit that gives students a broad understanding of the term ‘fake news’ and the skills and techniques to distinguish between what’s false or fake and what’s real. Students practice their touch typing skills at the beginning of lessons and are regularly challenged with a short test which helps them view their progress over the year. Taking part in the annual Bebras Computing Challenge develops the Y8 students’ computational thinking skills. Flowol is a practical unit covering the principles of producing control and monitoring solutions using a flowchart-based interface. Students will start by producing systems that use simple loops and basic outputs, and then move on to look at systems that have multiple inputs and outputs, they will refine their solutions using subroutines and variables. The Edublocks unit makes the transition from programming in blocks to Python. Core programming concepts such as sequencing, selection, and iteration are revisited. The Vector Graphics unit offers students the opportunity to design graphics using vector graphic editing software. Using Kodu, students will understand how to build a world and program characters and objects before moving on to enhance their games with more advanced features.</p>					
Year 8	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Recognising fake news	BEBRAS Computing Challenge Flowol: Control Technology	Edublocks	Spheros	Vector Graphics	Kodu
Knowledge	What fake news is and to consider where, when and why the media might be doing it.	BEBRAS: Computational thinking. Flowol: Hardware and software that make up computer systems Common types of sensors used by control systems Flowchart symbols	Use of blocks and introducing Python. Design algorithms.	Basic programming constructs (sequence, selection and iteration). Know what Spheros are and can do	How to design graphics using vector graphic editing software	Design, use and evaluate computational abstractions
Skills	Media literacy skills Distinguish between what’s false or fake and what’s real.	Design, use and evaluate computational abstractions Produce flowchart-based solutions for control systems	Debugging Logical Reasoning Geometric Constructions Solve a variety of computational problems	Develop coding skills using a physical device. Practice collaboration	Vector Graphics software (Inkscape) Creating a complex design Create, reuse, revise and repurpose digital artefacts	Undertake creative projects Programming with visual elements