



Computing

Year 7

	Intent <ul style="list-style-type: none"> • Give students ability to keep their accounts and devices safe. • Introduce programming fundamentals in a way that gives students confidence about writing programs. • Introduce students to the concept of data being stored in binary. • Explain the purpose of spreadsheets and give students skills to use basic formulas. • Expose students to a range of office software. 			
	Cybersecurity (Sept to Nov)	Programming (Nov to Feb)	Data Representation (Feb to May)	Spreadsheets (May to July)
Knowledge (facts, information, concepts and key terminology)	Definitions of: <ul style="list-style-type: none"> • Social engineering and techniques: phishing, blagging and shouldering. • Malware and categories: virus, trojan and worm. • Good practice when creating presentations. • Select a strong password. 	<ul style="list-style-type: none"> • Instructions are in order (sequence) • Programs can follow different paths (selection) • Instructions can be repeated (iteration) 	<ul style="list-style-type: none"> • All data is represented in binary code. • Numeric place values for positive binary integers up to 255. • ASCII values. • Digital images are made from pixels. Each pixel can show one colour from a binary value. 	<ul style="list-style-type: none"> • Data values should be atomic in a spreadsheet. • Formulas should be used for any calculation. • Basic operators used in formulas (/, *, -, +) • BODMAS applies in formulas.
Understanding (ability to connect and synthesise knowledge within a context)	<ul style="list-style-type: none"> • Give advice about protecting accounts and avoiding malware. 	<ul style="list-style-type: none"> • Combine different instructions to form a program. 		
Skills (successful application of knowledge and understanding to a specific task)	<ul style="list-style-type: none"> • Create a presentation using good practice: consistent and professional appearance, balance of text and graphics, concise text. • Write a phishing email. 	<ul style="list-style-type: none"> • Write programs with some support containing sequence, selection and iteration. 	<ul style="list-style-type: none"> • Convert between base 2 and base 10 numbers. • Translate binary text into English and vice-versa. • Create a model of a bitmap image. 	<ul style="list-style-type: none"> • Complete spreadsheet templates by adding in formulas. • Manipulating variables and reading the results of the formulas.
Formal Assessments (those done by all/vast majority of the cohort)	Multiple-choice test at the end of the unit.			
By the end of the year students on course for at least a grade 5 will... <ul style="list-style-type: none"> • Be able to describe techniques used to hack into accounts and devices and how to prevent this from happening. • Write programs with some support using variables, sequence, selection and iteration. • Understand how binary is used to represent numbers, text and images in computer systems. • Apply simple formulas on a spreadsheet. 				