Year 7 Topics

In year 7 we teach the following modules over the course of the year. Each module draws on prior learning from KS2 and builds on understanding from the KS2 programme of study. Each module develops and deepens the Core knowledge that will underpin all areas of the curriculum at KS3 and KS4.

Topic	Rationale	Knowledge acquisition	Key vocabulary	Skills and enrichment
Getting started	To understand rules and routines in computing lessons. To be able to log in to the VLE & network with a strong password. To be able to use MS Office software.	Check your username and passwords are correct for the school network and VLE	Network, VLE, Login, Password, Confirm, Secure	Independence Problem solving Literacy Oracy
		To know and understand the routines and rules of ICT lessons	Rules, PRAISE code	
		To know and understand how to use Microsoft Word 2010	PowerPoint, MS Word, Publisher, Open, Save, New, Formatting	
		To know how to manage and upload work to the VLE	My Assignments, Browse, Upload	
		To know where to locate homework for all subjects.	Assignments, Resources, Upload, Due Date	
Flowol	To understand how processes can be sequenced and how we can represent sequences with flowcharts which can be used to plan algorithms.	To recognise flowchart symbols for inputs and outputs, start and stop	Flowchart, arrow, shape, symbol, start, stop, sequence, routine, input, output, If, loop	Independence Problem solving Analysis Creativity Literacy Numeracy Oracy
		To recognise the flowchart symbols for processes	Process, delay, rectangle, seconds, time	
		To recognise flowchart symbols for decisions	Question, decision, yes, no, rhombus	
		Able to create a flowchart in Flowol	Flowol, instructions, direction, Input, outputs, decisions, mimic	
		Able to turn an output off in Flowol	Output, on, off	
		Able to use iteration in Flowol Flowcharts	Loops	

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Computer systems	Awareness about the types of input, output and storage devices	Inputs and outputs	Mouse, keyboard, graphics tablet, microphone, headphones, speakers, monitor, printer, device	Independence Problem solving Evaluation Creativity Literacy
		Storage device	Memory, data	
		Hardware and Software	Devices, input, output, software, operating system, programmes, desktop icons	
Kodu	Become familiar the use of a 3D game environment and programing with an intuitive block editor	Design game environment	Variable	Independence Problem solving Evaluation Analysis Creativity Numeracy
		Character control	Condition	
		Creating classic games	Paths, rules	
		Create own game, test and evaluate	Blocks, rules, characters, actions, evaluate, test, play, problems, feedback	
Data, Information and Knowledge	Knowledge of the fundamentals underpinning computer science and how information is encoded and represented.	Binary numbers – introduction and binary to denary conversion	Binary, 2, multiple, times table, base, denary, decimal, 10, conversion, number systems	Independence Problem solving Evaluation Analysis Literacy Numeracy Oracy
		Binary numbers – denary to binary conversion		
		ASCII character representation	Representation, ASCII, symbol, character	

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Small Basic	First attempt with programming using a scaffolded IDE	Small basic introduction	Small Basic, Windows Programming, Virtual Machine, Desktop, Saving	Independence Problem solving Evaluation Analysis Creativity Literacy Numeracy Oracy
		Inputs and outputs	Inputs, outputs, hello command	
		Data Types	Inputs, outputs, iteration, data types	
		Subroutines	Selection techniques, If statements	
		Selection	Selection techniques, If statements	
		Basic Turtle and code commenting	Turtle, Commands, Programming	
The Internet	Learning about networks and how information is transmitted through them	The internet and WWW	Networks, Internet, world wide web, sub-networks	Independence Problem solving Evaluation Analysis Creativity Literacy Numeracy Oracy
		Data Packets	Data packets	
		Hyperlinks and website creation	Hyperlinks, HTML, tags, pair, bold, underline, heading, size, font, style, face, head, body, paragraph, marquee, text file, html file, notepad	
Spreadsheets and modelling	Learning how to analyse and present information on a spreadsheet	Zoo Model – Changing inputs on a ready-made spreadsheet and similar model	Input, process, output, model, variable, spreadsheet, formula, sum, total, multiply, add, equals	Independence Problem solving Evaluation Analysis Creativity Literacy Numeracy Oracy
		Pizza Model- Changing inputs on a ready-made spreadsheet		
		Spreadsheet Formulae – Adding formulae and formatting	Format, function, formulae, equals, plus, subtract, multiply, star, asterisk, divide, slash, sum, max	

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Microbits	Further understand the concept of what is a computer and compiling programs onto a computer	Programming on the online IDE block editor	Input, output, process, compile, integrated development environment	Independence Problem solving Evaluation Analysis Creativity Literacy Numeracy Oracy
		Further develop standard programming techniques on another medium	LCD	
		Bluetooth interaction between devices	Transfer, transmit, information	
		Understand the concept of machine code	Assembly language, hexadecimal, binary	
Online Safety	Developing an awareness of how the internet and online platforms influence our lives and how to protect ourselves from danger	How and when to seek support with online issues	Social media, platform	Independence Problem solving Evaluation Analysis Creativity Literacy Numeracy Oracy
		Sign posting at school, home, police.	Safeguarding	
		Personal data	Encryption	
		Privacy settings	Privacy settings	
		Online golden rules	Rules, safety, netiquette, respect	
		How to evaluate what you see online	Domain names, source, validity, reliability	