

What will my child learn in Computer Science

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 10	<p>Computational Thinking</p> <ul style="list-style-type: none"> Representing Algorithms Linear Search Binary Search Bubble Sort Insertion Sort Merge Sort <p>Translators & IDEs</p> <ul style="list-style-type: none"> Sequence Variables Input Flowcharts & Random numbers Arithmetic expressions 	<ul style="list-style-type: none"> Selection Logical Expressions Nested Selection While Loops Trace Tables For Loops Data Validation <p>What is Representation?</p> <ul style="list-style-type: none"> Number Bases Binary Addition Binary Shifts Hexadecimal <p>Logic</p> <ul style="list-style-type: none"> Logic Gates Logic Problems 	<p>Computer Systems & System Software</p> <ul style="list-style-type: none"> Introducing the CPU The FDE Cycle Main Memory Secondary Storage Optical and Magnetic Storage Selecting a Storage Computer Specifications <p>Pseudocode Project</p>	<p>What is Representation?</p> <ul style="list-style-type: none"> Representing Text Unicode and File Size Calcs Representing Bitmap images Bitmap File Size Calculation Representing Sound Sound File Size Calculation Measurements of Storage Compression <p>What is a Computer Network?</p> <ul style="list-style-type: none"> The Client-Server Model Network Hardware Network Topologies Transmission Media 	<p>What is a Computer Network?</p> <ul style="list-style-type: none"> Network Performance and Costs What is the Internet? Protocols The TCP/IP Model <p>Database Essentials</p> <ul style="list-style-type: none"> SQL Searches Insert, Update, Delete Swim Challenge 	<p>Programming</p> <ul style="list-style-type: none"> Subroutines Functions Scope Structured Programming Create a Program Snakes and Ladders

Year 11	<p>How Does Technology Impact US?</p> <ul style="list-style-type: none"> • The Law, Data Protection and Copyright • The FIA and the CMA • Cultural Impacts • Privacy and Surveillance • Enviromental Impact • Ethical Impact 	<p>Programming</p> <ul style="list-style-type: none"> • String Handling • Arrays and Lists • List Methods • 2D Arrays and Lists • 2D List Challenge • Reading Text Files • Writing Text Files <p>Cybercrime</p> <ul style="list-style-type: none"> • The Cost of Cybercrime and Hacker Motivation • Non-automated Cybercrime • Automated Cybercrime • Protecting Systems with Software • Network Design and Defence • Where is the Danger? 	<p>Cybercrime</p> <ul style="list-style-type: none"> • Being Part of the Solution <p>Reteach</p> <ul style="list-style-type: none"> • Issues • Computer Systems • Algorithms 	<p>Reteach</p> <ul style="list-style-type: none"> • Networks • Databases • Network Security • Programming 	Exams	Exams
----------------	--	---	--	---	-------	-------