

Curriculum Intent Statement for **Computer Science**

At Chase Terrace Academy we aspire for all of our students to achieve greater things than they ever thought possible.

We pride ourselves on being a warm and welcoming school that places community at the heart of everything we do. Our ambitious curriculum is enriching and inclusive, providing challenge and breadth for all. This empowers our students to become compassionate, confident and creative individuals who are resilient, respectful and equipped with a desire to take up a fulfilling role in society and the wider world.

In Computer Science we aspire to enrich students with a varied and deep understanding of computing developments, concepts and the impact of technology on our society and environment. Students learn a diverse range of skills such as programming in a range of languages and also study the theory behind the science of computing, the Internet and the ever growing importance of our personal security and privacy. Ultimately, we aim to give students the knowledge and experience they need to study Computing to degree level, to use technology in their day to day lives or careers and to manipulate technology and tools to compliment almost any future study or job.

Year 8 Curriculum Implementation Plan (Computer Science)

Computer Science				
Knowledge and Skills – Students will be taught to...	Reading, Literacy and Numeracy	Formative Assessment	Summative Assessment	Link to GCSE Content
Understand, describe and apply common searching algorithms: <ul style="list-style-type: none"> Linear search Binary search 	Reading: <ul style="list-style-type: none"> Regular use of on screen sources of information Research and online reading and extracts 	On screen reviews of student work Regular self assessment at key stages against level descriptors	Four end of unit on screen tests. One end of year assessment	Binary/Logic – Unit 2.4 and 2.6 Financial education – Links directly to GCSE ICT coursework and also Business Studies
Understand, describe, apply and discuss the benefits and drawbacks of the bubble sort algorithm	Literacy: <ul style="list-style-type: none"> Use of spelling and grammar tools Regular review of in class work focussed on level of written response Modelling of appropriate level of written response 	Regular opportunities to revisit previous tasks and improve based on feedback Verbal feedback on an individual basis Whole class feedback		Networks and the internet – GCSE Computer Science Unit 1.4 and 1.5 Programming – GCSE Computer Science unit 2.2, 2.3
Understand that computers use the Binary number system				
Perform simple number conversions between decimal and binary	Numeracy: <ul style="list-style-type: none"> Algebra 	Microsoft Forms based quizzes and quick tests with visual feedback		

<p>Perform simple binary addition</p> <p>Understand how computers represent text, images and sound</p> <p>Understand a range of financial issues and skills such as:</p> <ul style="list-style-type: none"> • Interest • Inflation • The effect of interest and inflation on borrowing and spending • Safe and manageable borrowing • Types of borrowing • The cost of living • Setting career goals and ambitions • Investing, stock markets and shares <p>How the networks work and what they are:</p> <ul style="list-style-type: none"> • Networking terms • The need for networks • How data travels through a network • Networking hardware • What the internet is 	<ul style="list-style-type: none"> • Logic and conditions such as AND, IF • Comparators – Greater than, Less than • Boolean logic • Binary addition 			
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<ul style="list-style-type: none">• The difference between the WWW and the internet• Packets and routing <p>How to make simple web pages in HTML</p> <p>Programming skills:</p> <ul style="list-style-type: none">• Making decisions using IF• Manipulating input• Data types• Connecting to sources of data				
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