Curriculum Intent Statement for Computer Science

At Chase Terrace Academy we aspire for all of our pupils 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: • Linear search • Binary search Understand, describe, apply and discuss the benefits and drawbacks of the bubble sort algorithm	Reading: • Regular use of on screen sources of information • Research and online reading and extracts Literacy: • Use of spelling and grammar tools • Regular review of in class work	On screen reviews of student work Regular self assessment at key stages against level descriptors Regular opportunities to revisit previous tasks and improve based on feedback Verbal feedback on an individual basis	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 Networks and the internet – GCSE Computer Science Unit 1.4 and 1.5

Understand that computers use the Binary number system Perform simple number conversions between decimal and binary Perform simple binary addition Follow simple Boolean logic (AND, OR, NOT) Understand how computers represent text, images and sound Understand a range of financial issues and skills such as: • Interest • Inflation • The effect of interest and inflation on borrowing and spending • Safe and manageable borrowing • Types of borrowing • The cost of living	focussed on level of written response • Modelling of appropriate level of written response Numeracy: • Algebra • Logic and conditions such as AND, IF • Comparators – Greater than, Less than • Boolean logic • Binary addition	Whole class feedback Microsoft Forms based quizzes and quick tests with visual feedback		Programming – GCSE Computer Science unit 2.2, 2.3

• Setting career goals and ambitions • Investing, stock markets and shares How the networks work and what they are: • Networking terms • The need for networks • How data travels through a network • Networking hardware • What the internet is • The difference between the WWW and the internet • Packets and routing How to make simple web pages in HTML Programming skills: • Making decisions using IF • Manipulating input • Data types				

• Connecting to sources of data Further Online Safety: • Online Identity • Online stereotypes • Online Bias				