



CURRICULUM INTENT

The ICT and Computer Science Department at Avanti Fields aims to promote the fact that computing aids logical thinking, therefore improves decision-making, and in turn helps society solve problems. Key components of the curriculum ensure students learn about how different parts of a computer work together and why they are required to work in specific ways. E safety is at the core of the curriculum. We aim to prepare students for the dangers that exist online and on social media platforms. The curriculum also ensures that students are equipped with office skills for use in modern life and the world of work. Programming skills are embedded early on so we can start to understand how computers communicate internally and via networks. Languages such as Scratch, Python, JavaScript and CSS are progressively incorporated within the curriculum

Technology is paramount in today's society. Computing has strong links with mathematics, science, design and technology, and provides insights into both natural and artificial systems. The curriculum will enable students to evaluate the impact and issues that arise from using hardware and software. Students are required to be ambitious in their practise and look for opportunities to improve on current usage of computing in society.

PROGRAMME OF STUDY

Students will be provided opportunities to develop the following knowledge, skills and understanding in subject:

- Microsoft office skills
- Use of hardware and software
- Coding skills
- Analytical skills
- Problem solving skills
- Creativity and resilience
- Analysis, evaluation and justification skill

TERM	YEAR 7	YEAR 8	YEAR 9
Autumn 1	<u>E-Safety</u> <ul style="list-style-type: none"> • SMART rules • Social Media • Cyber Bullying 	<u>Spreadsheets</u> <ul style="list-style-type: none"> • Complex formatting • Conditional formatting • Analyse business data and carry out calculations 	<u>Pioneers and Career</u> <ul style="list-style-type: none"> • CS pioneers • Boolean Logic • Tim Berners Lee • Alan Turning and code breaking
Autumn 2	<u>Word processing</u> <ul style="list-style-type: none"> • Formatting and layout • Creating tables • Templates and mail merging 	<u>Computer Hardware</u> <ul style="list-style-type: none"> • Computer components • Functions of components • Von Neumann Architecture 	<u>Programming</u> <ul style="list-style-type: none"> • Advanced Python • Advanced variable storage and outputs • Loops and While Loops



SUBJECT at Avanti Fields

Spring 1	<u>Spreadsheets</u> <ul style="list-style-type: none"> • Microsoft excel • Workbooks and cell manipulation • Sorting and filtering • Basic formatting 	<u>Video Editing</u> <ul style="list-style-type: none"> • Film making with story boards • File transfer and video editing software 	<u>The internet</u> <ul style="list-style-type: none"> • Computer networks • LANs ad WANs • Data packets • Network operations 	
Spring 2	<u>Powerpoint</u> <ul style="list-style-type: none"> • Creating presentations • Toolbars and Menus • Slide shows and animations 	<u>The Internet</u> <ul style="list-style-type: none"> • HTML and tags • The horizontal rule and fonts • Images and hyperlinks 	<u>Programming</u> <ul style="list-style-type: none"> • RECAP HTML • Introduction to JAVASCRIPT • Introduction to CSS 	
Summer 1	<u>Programming</u> <ul style="list-style-type: none"> • Understanding the concept of code development • Scratch programming platform • Designing interfaces 	<u>Programming</u> <ul style="list-style-type: none"> • Complex code development • Robust alpha testing and debugging • If statements and extended loops 	<u>Programming Project</u> <ul style="list-style-type: none"> • Use of programming languages and web design to implement project based task 	
Summer 2	<ul style="list-style-type: none"> • <u>The internet</u> • Search engines • Understanding privacy and filtering • Evaluate online dangers • Explore online safety 	<u>Programming</u> <ul style="list-style-type: none"> • Introduction to python • Outputs and variable storage • Abstraction and decomposition 	<u>Programming Project</u> <ul style="list-style-type: none"> • Use of programming languages and web design to implement project based task 	

orminKS3 CURRICULUM MAP (CORE SUBJECTS ONLY AT THIS STAGE)

Add the key components (simple and/or more concrete concepts) for each unit of work in the Programme of Study that build up to the composites (complex and/or abstract concepts). What is the progression model? (This will be **hyperlinked** to a curriculum map document following the template below).



SUBJECT at Avanti Fields

TERM	YEAR 7	YEAR 8	YEAR 9
Autumn 1			
Autumn 2			
Spring 1			
Spring 2			
Summer 1			
Summer 2			
ASSESSMENT AND FEEDBACK			
Students are assessed at the end of each unit. Student feedback involves <ul style="list-style-type: none">• Area of Strengths• Areas of improvement• Project marks and actions for improvement			
SUPPORT AND GUIDANCE			
All students will have access to the following <ul style="list-style-type: none">• https://www.bbc.co.uk/bitesize/subjects/zvc9q6f• Topic specific aid and model examples to use for support.• ICT support sessions All lesson support material can be found on student drives. Module files contain highly modelled examples and explanations. There are module specific resources, which allow students to attempt interactive questions and practise. Students are encouraged to read ahead in preparation.			
EXTRA-CURRICULAR / SUPER-CURRICULAR OPPORTUNITIES			
<ul style="list-style-type: none">• Code clubs• University trips with a view on usage of Computer science in the real world• Computer science enrichment clubs			