



<u>Year 7 Overall Curriculum Goal & Intent</u>		<u>Key prior knowledge and skills</u>				
<p>Our intent is to help pupils study aspects of staying safe online to raise awareness and preparation for using social media. Pupils are taught how to use technology safely and respectfully, keeping personal information private. Pupils are challenged to understand the basic principles of hardware and software components that make up a computer system and we introduce pupils to a variety of software applications.</p>		<p>Pupils arrive with a varied background of skills and knowledge of computing:</p> <p>Core skills of word processing, scratch programming and some awareness of spreadsheet usage is common. It is clear that there is enthusiasm when the pupils use computer systems and a willingness to learn and experiment.</p>				
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic Focus	E Safety	Understanding Computers	Programming using Scratch	Creating Spreadsheet systems	Coding using Micro bits and Flowol	HTML and Website development
<p>Summary of key knowledge & skills</p> <p>What do you want students to know and learn?</p> <p>What are the opportunities for repetition and over-learning?</p>	<p>The intent of this unit is to ensure that all pupils are aware of the positives and potential dangers of using digital technology for communication and how to deal with potentially dangerous scenarios.</p> <p>Aspects of e safety – cyberbullying, social media, online grooming digital footprint What to do if the pupil is feeling harmed and targeted.</p> <p>Why passwords are important</p> <p>To Recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>The intent is for pupils to gain an understanding of what makes up a computer systems and how it operates.</p> <p>This looks into the hardware and software that make up a computer system. Input, output and storage devices are identified. Pupils are taught what is binary and how it used, learning how to convert binary to denary.</p> <p>Binary addition links with maths SoW identifying base 2 and base 10 calculations.</p>	<p>To develop confidence and creativity in coding.</p> <p>Pupils have previous knowledge of the basics of coding with this software. Terminology is developed using conditional loops and variables - with the end product being a two player multi-level game designed and created by the student.</p>	<p>The intent is for all pupils to acquire basic formatting, formula and function knowledge using Microsoft Excel. Sum, Max, Min Average, conditional formatting and the creation of graphs are skills we want the pupils to have and then to be transferrable to other subjects that require data to be analysed.</p>	<p>The intent is to develop the programming concepts learnt earlier in the year into real life simulations and hardware outputs. The pupils are able to look at automated sensors and how they help us in society, leisure and the work place. The pupils learn skills of computational thinking solving the problems set and making them efficient with the use of subroutines and procedures.</p>	<p>The intent is to highlight career opportunities in web development looking at basic HTML coding language, designing and creating webpages. This uses coding and graphical design skills not ‘tested in other topics in year 7.</p>



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Main common assessments	Assessment is through a Presentation created by the pupils for year6 /7 pupils about staying safe online.	Assessment is done through an online quiz using Microsoft Forms sent via a web link	The product is tested by other pupils against set success criteria.	Assessment is through an onscreen practical tasks pitched at different levels of challenge both formula and functions	Assessed through outcomes of the automated greenhouse scenario task. The use of efficient subroutines and the written explanations of how automated devices have help the individuals and society	Peer assessment based on success criteria set.
Extended writing tasks	Written advice in response to a child needing support.				A written report of the design, development and evaluation of the automated simulation.	
Examples of opportunities for challenge	Opportunities to develop sources of knowledge via websites, and text. Chance to reflect on own practice of online safety	Systems created by the students can be as complex as desired via cross worksheet workbooks	Opportunities to develop the pupils own success criteria and programming techniques	A final task set if for the pupils to solve a task using any formulas, functions and layout as they see fit to meet the clients brief.	Pupils using Flowol4 can link the software to a hardware platform of VEX-IQ Robots	Pupils can embed other plug in features as they see fit.
Links to numeracy, Literacy and other subjects	A variety of key words are developed, and in writing responses to target audiences literacy skills are developed.	Base 10 (denary) & Base 2 (binary) are developed linking to mathematics content. Addition, subtraction and conversion.		Modelling of scenarios using <i>what ifs</i> link to skills taught in numeracy	Mathematical angles and lengths are discussed as well as flowchart symbols e.g. parallelograms, rectangles and diamond shapes	



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Enrichment, clubs, trips and other extra-curricular activities	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.
<u>Opportunities for links to careers</u> At the beginning all topics the pupils look at the skills required for the task and identify jobs/careers within this area. Job titles, duties and salaries are researched to act as a motivational boost.				<u>Opportunities for links to SMSC, PSHE, ethos and values</u> Teaching online safety in school links with PSHE department, where both departments have analysed the DfE documents June2019 and are working in collaborations of such topics		
<u>How can parents support learning?</u> Encourage pupils to attend all lessons. Log on to our VLE portal to view the lesson plans, worksheets and homework if pupils are absent, or need reminding of the content. Pupils could use touch typing online tutorials to speed up. Keyboard skills. Attend lunchtime clubs if needing support or just time on the PC's Tuesday – Thursday. Please encourage your child to be open with all their social media usage and If possible remove devices from their bedrooms at a sensible time in the evening.				<u>Other comments</u>		



<u>Year 8 Overall Curriculum Goal & Intent</u>				<u>Key prior knowledge and skills</u>		
<p>Our intent in year 8 is to develop computational thinking; solving a variety of scenarios through developing systems in programming, animation, spreadsheets and Networks. The aim is for pupils to become digitally literate and develop skills suitable for the future workplace and as active participants in a digital world.</p>				<p>Pupils should have an understanding of:</p> <ul style="list-style-type: none"> • how to stay safe on the internet and offer advice to others, • a high level programming block language • Basic Spreadsheet formulas and functions • Presentation PowerPoints skills appropriate for audience 		
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic Focus	Computer Cyber Crime and E Safety	Introduction To Python	Spreadsheet development	PC Networks	Pseudocode and Online Safety	Animation
Summary of key knowledge & skills	Pupils are made aware of the potential consequences of sharing information on line that could not be true.	Pupils are taught their second programming language looking at strings and variables, data types, Selection, While loops and algorithms in order to solve a variety of computational problems.	Skills are developed using basic formulas and functions such as absolute cell referencing, conditional formatting, sum product and vlookup to solve and model scenarios. Analysis of the data is then done through creation of graphs and pivot tables.	Pupils are taught how the internet is connected, methods of connectivity, LAN network topology, client servers and encryption.	Pupils are given the skills to write out pseudocode and the use of mathematical symbols.	Skills are given to solve a promotional brief using Adobe Flash animation to be uploaded to the school website.
What do you want students to know and learn?	The pupils will be able to identify Phishing, hacking, and the different types and impact of viruses.				Social networking consequences and sexting are discussed	
What are the opportunities for repetition and over-learning?	How to identify secure websites and the risks The rights children have with regard to their data including GDPR. Repetition of computer legislation is constantly addressed through most units ie Copyright Act, GDPR Computer misuse.					



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Main common assessments	Summative assessment is through an online end of topic test	Summative assessment is through an online end of topic test. Formative assessment is done at the end of each challenge.	Summative assessment is through a practical set of scenarios.	Summative assessment is through an online end of topic test.	Summative assessment is through an online end of topic test	Summative assessment is through an online end of topic test.
Extended writing tasks	Written advice in response to a child needing support.					A written evaluation of the project deducing whether the success criteria has been met and what further improvements could be made if possible.
Examples of opportunities for challenge	Opportunities to develop sources of knowledge via websites, and text. Chance to reflect on own practice of online safety	Pupils are required to create either a millionaire quiz or story using validation techniques python and to make it as robust as possible.	The flexibility of layouts and presentational methods are offered to present information.	Pupils are offered materials to identify the layers of a network and other topology forms.		Due to the openness of the brief pupils can include any features necessary into their animation. E.g. audio video , complex interactions.
Links to numeracy, literacy and other subjects	A variety of key words are developed,	Numeracy using formulas, variables, integers, Boolean and floats	Mathematics – through data analysis		Literacy through report writing.	English/Art/Digital Photography in the creation of storyboards, timings, angles etc.
Enrichment, clubs, trips and other extra-	Lunchtime club (used for both intervention/extension) and coding clubs.	Lunchtime club (used for both intervention/extension) and coding clubs.	Lunchtime club (used for both intervention/extension) and coding clubs.	Lunchtime club (used for both intervention/extension) and coding clubs.	Lunchtime club (used for both intervention/extension) and coding clubs.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.



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curricular activities	Warhammer club.	Warhammer club.	Warhammer club.	Warhammer club.	Warhammer club.	
<u>Opportunities for links to careers</u> At the beginning all topics the pupils look at the skills required for the task and identify jobs/careers within this area. Job titles, duties and salaries are researched to act as a motivational boost.				<u>Opportunities for links to SMSC, PSHE, ethos and values</u> Teaching online safety in school links with PSHE department, where both departments have analysed the DofE documents June2019 and are working in collaborations of such topics. The animation unit pupils are encouraged to design a brief to match a school rule, anti-bullying or a promotion of an extra curricula club.		
<u>How can parents support learning?</u> Encourage pupils to attend all lessons. Log on to our VLE portal to view the lesson plans, worksheets and homework's if pupils are absent or need reminding of the content. Pupils could use touch typing online tutorials to speed up. Keyboard skills. Attend lunchtime clubs if needing support or just time on the PC's Tuesday – Thursday. Please encourage your child to be open with all their social media usage and If possible remove devices from their bedrooms at a sensible time in the evening.				<u>Other comments</u>		



Year 9 Overall Curriculum Goal & Intent				Key prior knowledge and skills		
<p>Our intent in year 9 is to develop computational thinking; solving a variety of scenarios through developing systems in programming, project management, spreadsheets and Database systems. The aim is to develop skills and knowledge and offer an insight into options at GCSE, develop skills suitable for the future workplace and as active participants in a digital world.</p>				<p>Pupils should have base line skills in Microsoft Office, an awareness of computational thinking, how to use technology safely and respectfully and how to programme using two languages.</p>		
	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic Focus	Spreadsheet development	Database Management systems	Programming Python	Project Management and Flash Animation	Advanced programming techniques Animation	
Summary of key knowledge & skills	A variety of spreadsheets skills are developed to build a variety of systems as per a client’s brief.	Skills are developed to build a working system on Microsoft Access.	The concepts of sequence, selection, iterations are developed using.	Aspects of the stages of project management are identified, the inputs and outputs at each stage are analysed.	Advanced programming challenges are given to develop techniques in	
What do you want students to know and learn?	<ul style="list-style-type: none"> • Pivot tables • Sumproduct • Vlookup • Indexmatch • Data Validation 	<ul style="list-style-type: none"> • Complex queries • Forms • Parameter searches • Reports • Navigation Menus systems 	<ul style="list-style-type: none"> • Variables • Validation techniques • Arrays 	<ul style="list-style-type: none"> • Initiation • Planning • Execution • Evaluation 	<ul style="list-style-type: none"> • Loops • Lists • Tables • Drawing • Defining and calling Procedures • Defining and calling Functions 	
What are the opportunities for repetition and over-learning?	Pupils will do a variety of tasks repeating some of the functions and formulas when applicable.		As well as looking at creating shapes using python turtle	A variety of planning tools/methods are used to map out a project. The strengths and weaknesses of each tool are acknowledged. The clients brief will be focused around the production of an animation using Flash to promote an event or place.	As per Term 3.	
Main common assessments	Summative assessment is through an online end of topic test	Summative assessment is through an online end of topic test.	Summative assessment is through a practical set of scenarios.	Summative assessment is through an online end of topic test.	Summative assessment is through an online end of topic test	
Extended writing tasks				Pupils are expected to write a work plan looking at aspects such as resources, time, contingencies	A solution to a given brief is produced allowing the pupils to Design, Develop, test and evaluate. The extended writing is through the design and evaluate stage.	
Examples of opportunities for challenge			www.snakify.com Through open ended programming tasks.	Pupils are encouraged to read around the topics and refer to our KS4 materials of Information Technologies.	Numerous methods can be used with a variety of complex programming procedure and validation methods.	



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Links to numeracy, literacy and other subjects	Mathematical functions and formulas whilst modelling scenarios.			Pupils are encouraged to write in a structured manner, for example setting SMART targets linking to literacy. Pupils create Gantt and PERT charts linking to mathematics. Timings of frames per second needs to be calculated when creating the animation.		
Enrichment, clubs, trips and other extra-curricular activities	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.	Lunchtime club (used for both intervention/extension) and coding clubs. Warhammer club.
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<u>How can parents support learning?</u>				<u>Other comments</u>		
<p>Encourage pupils to attend all lessons.</p>						



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