ICT KS3 Year 7

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Curriculum Intent:

In a world where new technology is constantly evolving and the impact that has on the way we live, work and interact, we feel that pupils should be equipped with skills that will keep them safe, allow them to thrive, adapt in an ever-changing digital environment, and provide them with the skills they will need in a future workplace.

Our ICT curriculum at Key Stage 3, aims to create a supportive and challenging environment to explore a range of topics relating to Computer Science and Digital Literacy. Moving through the Key Stage, pupils will use more sophisticated techniques and explore a wider range of digital media products. They will understand the importance of e-safety and know tools for minimising risks. They will use computational thinking to solve problems, developing their ability to think logically and innovatively. They will research, plan, create and critically evaluate a range of digital products including animation, audiovisual, graphics and apps. They will be confident in a range of software, when producing slideshows, using spreadsheets, producing reports, posters and animations. They will understand the job roles that exist relating to ICT and the skills and subjects that will be important to progress onto these.

In Year 7, the focus will be around foundational skills and an introduction into key aspects such as programming, algorithms, e-safety, use of MS Office applications, basic networking and legal issues. They will be given opportunities to develop curiosity, creativity and reflection.

Core Knowledge		**Procedural Knowledge**
	Topics:	Pupils will:
Autumn Term 1	E-Safety and foundational digital literacy skills	• Log into a school network securely. • Organise and manage digital files independently. • Create and edit documents, presentations and simple spreadsheets. • Conduct safe and effective internet searches. • Evaluate the credibility of online information. • Communicate appropriately through digital platforms. • Recognise and respond appropriately to common online safety risks. • Manage personal information and privacy settings responsibly. • Report safeguarding concerns using school procedures.

		• Demonstrate responsible digital citizenship across school systems.
Autumn Term 2	Networks from semaphores to the internet	• Encode and decode information using simple communication systems such as semaphores and binary. • Draw and interpret basic network diagrams. • Explain how devices communicate across a network. • Identify and describe the function of common networking hardware. • Model packet switching and message transmission. • Navigate the web using URLs and hyperlinks. • Explain the difference between the Internet and the World Wide Web. • Compare historical communication methods with modern networked systems.
Spring Term 1	Programming Skills	• Design a simple algorithm to solve a problem. • Create and save programs independently. • Use sequence, selection and iteration within programs. • Use variables, inputs and outputs effectively. • Predict the outcome of simple code. • Test and debug programs systematically. • Modify existing programs to achieve new outcomes. • Evaluate and improve their own solutions.
Spring Term 2	Modelling data using spreadsheets	• Enter, organise and format data effectively. • Use cell references to create simple formulae. • Apply basic functions such as SUM and AVERAGE. • Create and interpret charts. • Analyse data to answer questions and identify trends. • Test different values in a spreadsheet model. • Check and correct errors in data and calculations. • Evaluate the effectiveness of a spreadsheet model.
Summer Term 1	Using Media – Gaining support for a cause	• Research a cause using credible online sources. • Evaluate the reliability and bias of information. • Select and use appropriately licensed content. • Avoid plagiarism through paraphrasing and attribution. • Plan a digital campaign for a specified audience. • Create a blog, website, presentation or digital media product. • Use Google Sites, Microsoft Sway, WordPress or presentation software effectively.

		• Apply basic design principles to communicate a message. • Publish and promote content responsibly. • Evaluate and improve their digital product based on feedback.
Summer Term 2	Using the Microbit	• Connect and program a Micro:bit independently. • Use inputs such as buttons and sensors. • Control outputs on the LED display. • Apply sequence, selection and iteration in programs. • Use variables to store and manipulate data. • Read and respond to sensor data. • Test and debug physical computing projects. • Design and evaluate a simple physical computing solution.

Homework:

For every 6 hours of lesson time, a homework task will be set by the class teacher. Pupils will receive feedback on this task. The task should take no more than 30 minutes to complete and will enable the pupil to master a skill or key concept that they have learnt in class. The task will not require the pupil to have access to specific software. Example tasks may include producing a mood board or mind map, explaining a key concept or procedure.

Assessment:

Formative assessment will be used to regularly monitor student progress and check for understanding. This will include retrieval practice, low-stakes quizzes, end of topic tests, in class questioning and assessing the products they have planned, created and reflected upon.

Summative assessments:

For each of the assessments detailed below, pupils will be provided with revision materials including topic lists for each specific assessment.

Spring – this in class assessment will mainly cover concepts and themes from E-Safety, Foundational digital literacy skills and Networks. The 45 minutes assessment will be completed on the computer and will be a series of multiple choice, closed response, short and extended answer questions.

Summer – – this in class assessment will mainly cover concepts and themes from E-Safety,
Foundational digital literacy skills, Networks, Programming skills, Modelling data using spreadsheets and some early aspects of the Using Media – Gaining support for a cause unit. The 45 minutes assessment will be completed on the computer and will be a series of multiple choice, closed response, short and extended answer questions.

Links to Personal Development:

Personal development is supported by helping students become responsible, confident and effective users of technology. Through topics such as e-safety and digital literacy skills, learners develop an understanding of how to stay safe online and use technology responsibly. Working with spreadsheets, programming and networks builds problem-solving, logical thinking and analytical skills, while creating and promoting a blog to support a cause encourages creativity, communication and digital citizenship. Using devices such as the Micro:bit develops resilience, teamwork and practical innovation skills as students design, test and improve their ideas. Together, these experiences help students build confidence, independence and the digital skills needed for success in learning and everyday life.

How is my knowledge further developed in Year 8?

In Year 8, pupils will develop skills and techniques in a broader range of media products, focusing on developing for the web, mobile app development and graphics. They will learn about the layers of computing systems with has some links to the Networks from semaphores to the internet that they study in Autumn Term 2 in Year 7. They will learn about data representation and encryption, which links to the programming element of Year 7, but introducing binary. Pupils will revisit and build on their knowledge of e-safety, an area which is important in all years of Key Stage 3 to keep our pupils safe.