



COMPUTING

Vision & Aims

At Moorthorpe, Computing will help us to interact with the world.

Our Computing curriculum aims to ensure that all pupils are:

- able to use technology imaginatively, creatively and efficiently.
- enthused and equipped with the capability to use technology throughout their lives.
- able to access a variety of high quality hardware and software resources.
- critical thinkers and reflective learners.
- responsible and competent users of data, information and communication technology.
- respectful towards legislation regarding how information is used, stored, created, retrieved, shared and manipulated.
- equipped with the skills, strategies and knowledge that will enable them to reap the benefits of the online world, whilst being able to minimise risk to themselves or others.
- users of computational thinking beyond the Computing curriculum.



High-quality provision for all

Thriving children. Engaged parents. Skilled staff. Remarkable outcomes.



COMPUTING

LONG TERM PLAN

KSI	Cycle 1	Cycle 2
Autumn 1	Exploring PM (1.1), Online Safety (1.1/2.2) & Effective Searching (2.5)	Exploring PM (1.1), Online Safety (1.1/2.2) & Maze Explorers (1.5)
Autumn 2	Lego Builders (1.4), Technology Outside (1.9) and Grouping & Sorting (1.2)	Questioning (2.4)
Spring 1	N/A	N/A
Spring 2	Creating Pictures (2.6) & Spreadsheets (1.8/2.3)	Making Music (2.7) & Animated Story Books (1.6)
Summer 1	Spreadsheets (1.8/2.3) & Coding (1.7/2.1)	Animated Story Books (1.6) & Spreadsheets (1.8/2.3)
Summer 2	Coding (1.7/2.1)	Pictograms (1.3) & Presenting Ideas (2.8)

LKS2	Cycle 1	Cycle 2
Autumn 1	Coding (3.1/4.1)	Coding (3.1/4.1)
Autumn 2	Online Safety (3.2/4.2) & Spreadsheets (4.3/5.3)	Online Safety (3.2/4.2) & Effective Search (4.7)
Spring 1	N/A	N/A
Spring 2	Touch Typing (3.4) & Email (3.5)	Spreadsheets (4.3/5.3) & Writing for Different Audiences (4.4)
Summer 1	Branching Databases (3.6)	Writing for Different Audiences (4.4) & Logo (4.5)
Summer 2	Simulations (3.7) & Graphing (3.8)	Animation (4.6) & Hardware Investigations (4.8)

UKS2	Cycle 1	Cycle 2
Autumn 1	Coding (5.1/6.1)	Coding (5.1/6.1)
Autumn 2	Online Safety (5.2/6.2) & Spreadsheets (5.3/6.3)	Online Safety (5.2/6.2) & Networks (6.6)
Spring 1	N/A	N/A
Spring 2	Databases (5.4) & Game Creator (5.5)	Spreadsheets (5.3/6.3) & Blogging (6.4)
Summer 1	3D Modelling (5.6)	Text Adventures (6.5)
Summer 2	Concept Maps (5.7)	Quizzing (6.7)



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Year	Computer Science
EYFS	<ul style="list-style-type: none"> - Interact with age-appropriate computer software.
KSI	<ul style="list-style-type: none"> - Understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. - Work out what is wrong with a simple algorithm when the steps are out of order. - Show an awareness of the need to be precise with their algorithms. - Know that an unexpected outcome is due to errors in their code. - Read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. - Create a simple program that achieves a specific purpose. - Identify and correct some errors. - Identify the parts of a program that respond to specific events and initiate specific actions.
LKS2	<ul style="list-style-type: none"> - Turn a simple real-life situation into an algorithm for a program. - Use coding structures for selection and repetition to achieve a goal. - Understand 'if' statements' for selection and attempt to combine these with other coding structures. - Identify an error within their program and then fix it. - Make more intuitive attempts to debug their own programs. - Design and code a program that follows a simple sequence. - List a range of ways that the internet can be used to communicate. - Recognise the main component parts of hardware which allow computers to join and form a network.
UKS2	<ul style="list-style-type: none"> - Turn a more complex programming task into an algorithm. - Test and debug programs and use logical methods and a systematic approach to identify the approximate cause of any bug. - Translate algorithms that include sequence, selection and repetition into code with increasing ease. - Combine sequence, selection and repetition with other code structures. - Interpret a program in parts and make logical attempts to put the separate parts of a complex algorithm together. - Understand and explain in some depth the difference between the internet and the World Wide Web. - Know what a WAN and LAN are and can describe how they access the internet in school. - Explain how to keep personal information safe. - Select the most appropriate form of online communications.



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Year	Digital Literacy
EYFS	<ul style="list-style-type: none">- Recognise that a range of technology is used in places such as homes and schools.
KSI	<ul style="list-style-type: none">- Understand what is meant by technology and identify a variety of examples both in and out of school.- Make a distinction between objects that use modern technology and those that do not (e.g. microwave vs chair).- Understand the importance of keeping information such as passwords private.- Take ownership of work and save in a private space.- Effectively retrieve relevant, purposeful digital content using a search engine.- Apply learning of effective searching beyond the classroom.- Make links between the technology they see around them and the work they do in school.- Begin to understand how things are shared electronically.- Know ways of reporting inappropriate behaviours and content to a trusted adult.
LKS2	<ul style="list-style-type: none">- Demonstrate the importance of having a secure password and explain potential negative implications.- Explore key concepts related to online safety and help others to understand its importance.- Know a range of ways of reporting inappropriate content and contact.
UKS2	<ul style="list-style-type: none">- Have a secure knowledge of common online safety rules and demonstrate the safe and respectful use of a few different technologies.- Relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others.- Identify more discreet inappropriate behaviours through developing critical thinking.- Recognise the value in preserving their privacy when online for their own and other people's safety.



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Year	Information Technology
EYFS	<ul style="list-style-type: none"> - Select and use technology for particular purposes.
KSI	<ul style="list-style-type: none"> - Sort, collate, edit and store simple digital content. - Organise and retrieve specific data for conducting simple searches. - Edit more complex digital data such as music composition. - Create, name, save and retrieve content. - Use a range of media in their digital content including photos, text and sound.
LKS2	<ul style="list-style-type: none"> - Carry out simple searches to retrieve digital content and understand that to do this, they are connecting to the internet. - Understand the function, features and layout of a search engine. - Appraise selected webpages for credibility and information at a basic level. - Make improvements to digital solutions based on feedback. - Collect, analyse, evaluate and present data and information using a selection of software. - Consider what software is most appropriate for a given task. - Make informed software choices when presenting information and data. - Create linked content using a range of software and share digital content within their community.
UKS2	<ul style="list-style-type: none"> - Search with greater complexity for digital content when using a search engine. - Readily apply filters when searching for digital content. - Explain how credible a webpage is and the information it contains. - Compare a range of digital content sources and rate them in terms of content quality and accuracy. - Make appropriate improvements to digital solutions based on feedback received confidently comment on the success of the solution. - Review solutions from others. - Collaboratively create content and solutions using digital features within software and use several ways of sharing digital content. - Use critical thinking skills in everyday use of online communication. - Make clear connections to the audience when creating digital content. - Design and create their own blogs to become a content creator. - Use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.



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Year	Vocabulary			
EYFS	Technology Computer PC Speakers		Mouse Keyboard Machine Monitor	
KSI	Log In/Out Username Password Avatar Save Notification Internet Search Search Engine Instruction Algorithm Sort	Criteria Palette Share Template Delete Cursor Columns Cells Clipart Spreadsheet Rows Action	Background Coder Coding Command Input Program Copy & Paste Bug Debug Email Attachment Digital Footprint	Undo Collate Binary Tree Data Database Digitally Animation E-Book Font File Concept Map Node
LKS2	Control Event If/Else Output Simulation Variable Blog Website Webpage Spoof PEGI Rating Advance Mode	Posture Communication Compose Draft CC Formatting Branching Database Graph Field Selection Alert Virus	Cookies Copyright Identity Theft Malware Phishing Plagiarism Spam Average Formula Wizard Bold Italic	Underline Flipbook Frame Onion Skinning Stop Motion Video Clip Internet Browser Motherboard CPU RAM Graphics Card Network Card
UKS2	Get Input Reputable Encryption Shared Image Citations Reference Bibliography Charts Collaborative Find Record	Group Arrange Customise Interactive Screenshot Playability CAD Modelling Viewpoint 3D Printing Visual	Visual Function Tabs Screen Time Icon Sprite LAN WAN Router Network Cables Wireless	Base 10 Base 2 Bit Byte Denary Gigabyte Kilobyte Megabyte Terabyte Transistor