

Meadow Park ICT/Computing Curriculum

Year Group	Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
KS1	Focus: Using the internet safely	Focus: Painting	Focus: Word Processing	Focus: Scratch Programming	Focus: Presentation Skills	Focus: Computer Art
	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Navigate the web to complete simple searches. 	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 	<p>Key Skills:</p> <ul style="list-style-type: none"> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instruction. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. 	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology to collect information Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
Year 3	Focus: Safe and Responsible Uses	Focus: Multimedia	Focus: Technical Society	Focus: Programming	Focus: Programming	Focus: Data and Digital Literacy
	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology respectfully and responsibly Know where to get help if I am 	<p>Key Skills:</p> <ul style="list-style-type: none"> Manipulate and improve the quality of digital images Understand that 	<p>Key Skills:</p> <ul style="list-style-type: none"> Use a range of software for similar uses Design and create simple 	<p>Key Skills:</p> <ul style="list-style-type: none"> Design a simple sequence of instructions, including directional 	<p>Key Skills:</p> <ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals 	<p>Key Skills:</p> <ul style="list-style-type: none"> Collect information Understand what computer

	<p>concerned online</p> <ul style="list-style-type: none"> Understand the importance of rules for keeping us safe online Understand the importance of keeping information private and using passwords Recognise that cyber-bullying is unacceptable and how to report it Follow the school's internet safety rules 	<p>copyright exists on most digital content</p> <ul style="list-style-type: none"> Understand how technology can be used as an advertising platform Design an advert using images, music and videos 	<p>content</p> <ul style="list-style-type: none"> Present simple information Search for information on the web in different ways Understand that the internet can show fact, fiction and opinions Use different search engines 	<p>instructions</p> <ul style="list-style-type: none"> Write simple programs that accomplish specific goals Work with some forms of input and output 	<p>on Scratch</p> <ul style="list-style-type: none"> Begin to experiment with variables to control models Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	<p>networks do and how they provide multiple services</p> <ul style="list-style-type: none"> Decide where it is best to use technology Analyse and evaluate digital information
Year 4	Focus: Safe and Responsible Uses	Focus: Multimedia	Focus: Technical Society	Focus: Programming	Focus: Programming	Focus: Data and Digital Literacy
	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology respectfully and responsibly Recognise appropriate and inappropriate uses for technology and the internet Know how to report a problem if concerned online Understand the importance of 	<p>Key Skills:</p> <ul style="list-style-type: none"> Manipulate and improve the quality of digital images Understand that copyright exists on most digital content Explain how technology can be the most effective way for advertising Create an advert using Windows Movie Maker 	<p>Key Skills:</p> <ul style="list-style-type: none"> Understand that the internet can show fact, fiction and opinions and how to differentiate between them Analyse and evaluate different search engines and select the most appropriate one to use Present information 	<p>Key Skills:</p> <ul style="list-style-type: none"> Design a sequence of instructions, including directional instructions Write programs that accomplish specific goals Work with some forms of input and output 	<p>Key Skills:</p> <ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals on Scratch Begin to experiment with variables to control models Give an on-screen robot instruction to move to and from a specific location Use logical 	<p>Key Skills:</p> <ul style="list-style-type: none"> Key Skills: Collect and present information using the most appropriate software Understand what computer networks do and how they provide multiple services Make

	<p>rules for keeping us safe online</p> <ul style="list-style-type: none"> • Understand the importance of keeping information private and how to set safe and secure passwords • Recognise that cyber-bullying is unacceptable and how to report it within school • Contribute towards the school's internet safety rules 		<p>found on the web in different ways, without simply copying it</p> <ul style="list-style-type: none"> • Understand which software can be used for different purposes 		<p>reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <ul style="list-style-type: none"> • Begin to debug programming errors 	<p>informed decisions about whether technology is the most suitable option for specific purposes</p> <ul style="list-style-type: none"> • Analyse and evaluate digital information
Year 5	Focus: Online Safety	Focus: Online Safety	Focus: Internet research and webpage design	Focus: Scratch – developing games	Focus: Algorithms	Focus: Data
	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact • I can identify spam E-mails and how to deal with them 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact • I can follow the schools' safer internet rules • I can make safe 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • I can analyse information • I can evaluate information • Select and combine a variety of 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection and repetition in 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • I can combine sequences of instructions and procedures to turn devices on and off • I can use 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • Understand computer networks, including the internet; how

	<ul style="list-style-type: none"> • I understand that some malicious adults may use various techniques to make contact and elicit personal information • I understand the potential risk of providing personal information • I understand the benefits of developing a 'nickname' for online use • I can create a strong password and manage them so that they remain strong • I recognise that people may publish content that is not accurate and understand the need to be critical evaluators of content • I understand that some materials on the internet is copyrighted 	<p>choices about the use of technology</p> <ul style="list-style-type: none"> • I can use technology in ways which minimise risk • I can independently and with regard to e-safety, select and use appropriate communication tools to solve problems • I know that content put online is extremely hard to remove • I know what to do if I discover something malicious • I understand that I should not publish other peoples' pictures without their consent • I can discuss the positive and negative impact of the use of ICT in my own life, my friends and family • I know how to 	<p>software (including internet services) on a range of digital devices to design systems and content that can accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <ul style="list-style-type: none"> • I can competently use the internet as a search tool • I can reference information sources 	<p>programs; work with variables and various forms of input and output</p> <ul style="list-style-type: none"> • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	<p>technology to control an external device</p> <ul style="list-style-type: none"> • I can design algorithms that use repetition & 2-way selection • I can combine sequences of instructions and procedures to turn devices on and of • I can analyse information • I can evaluate information 	<p>they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration</p> <ul style="list-style-type: none"> • I can analyse information • I can evaluate information
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	and may not be copied or downloaded	<ul style="list-style-type: none"> report suspicion I understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration 				
Year 6	Focus: Online safety	Focus: Film-making	Focus: Kodu programming	Focus: Spreadsheets	Focus: Scratch – animated stories	Focus: Using and applying skills – launch your own game
	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology safely, respectfully and responsibly; recognise acceptable/un acceptable behaviour; identify a range of ways to report concerns about content and contact Say what bullying and cyberbullying are Say how people should deal with 	<p>Key Skills:</p> <ul style="list-style-type: none"> Select, use and combine a variety of software to design and create a range of programs, systems and content that accomplish given goals, including presenting information Use search technologies effectively, appreciate how results are 	<p>Key Skills:</p> <ul style="list-style-type: none"> Select, use and combine a variety of software, including evaluating and presenting data and information. use logical reasoning to explain how some simple algorithms work Design, write and debug programs that accomplish specific goals, 	<p>Key Skills:</p> <ul style="list-style-type: none"> Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, 	<p>Key Skills:</p> <ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables 	<p>Key Skills:</p> <ul style="list-style-type: none"> Select, use and combine a variety of software to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting

	<ul style="list-style-type: none"> cyberbullying Understand why I should ask an adult if I am unsure Identify warning signs that a website might not be secure Identify personal information Explain what to do if I am asked or told something online which makes me uncomfortable Explain some of the dangers of revealing personal information to an online friend Choose an appropriate action online to stay safe Identify a situation I should be careful in online; Understand how a stereotype can be harmful 	<ul style="list-style-type: none"> selected and ranked, and be discerning in evaluating digital content Understand computer networks including the internet and the opportunities they offer for communication and collaboration Use a variety of software on a range of digital devices to design and create a range of content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 	<ul style="list-style-type: none"> including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	<ul style="list-style-type: none"> evaluating and presenting data and information Enter text and numbers into a spreadsheet Identify and refer to cells by row and column Begin to enter formulae with the SUM function 	<ul style="list-style-type: none"> and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Select appropriate characters to match a scene Animate characters with movement and speech in a story scene Use broadcast and receive blocks correctly in code Use show and hide blocks correctly in code 	<ul style="list-style-type: none"> data and information Present research on game types to inform planning Use Scratch or Kodu to create a simple game Design appropriate advertising materials to launch or promote a product
Year 7	Focus: E-Safety / ICT and Ethics	Focus: Hardware and software	Focus: Carrying out projects, Collecting and analysing data, Audience	Focus: Designing programs	Focus: Spreadsheets	Focus: Networking

	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use technology safely and responsibly • Identify measures to protect identity • Understand good and bad online behaviour, including cyberbullying and scams • Explain ways to report concerns • Choose key terms to do with privacy and security threats 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Understand what a computer device is • Understand the difference between hardware and software • Identify input and output devices • Understand what a CPU is • Explain the function of an operating system • Explain the features of an operating system 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Explain a plan for a project • Choose a planning template framework • Say what appropriate applications can be used to create a digital project(s) • Identify a number of different data capture methods 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use script and object orientated programming languages • Understand and create simple programs • Say how to debug simple programs • Explain and write programs to do specific things • Explain how programs execute following the instructions we give them 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Understand the nature and purpose of spreadsheets • Explain how to create a simple spreadsheet • Say how to format cells, rows and columns in a variety of ways (e.g. fonts, shading, borders, merging, adjusting column width) • Use cell references • Identify how to sort and filter data in a spreadsheet • Use common simple formulae involving +, -, *, and / to make calculations 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Understand what networks are • Identify the terms LAN and WAN, and know that the internet is an example of a WAN • Explain the difference between different types of networks (e.g. Physical, mobile, wireless)
Year 8	Focus: E-Safety / ICT and Ethics	Focus: Hardware and software	Focus: Carrying out projects, Collecting and analysing data, Audience	Focus: Designing programs	Focus: Spreadsheets	Focus: Networking
	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use technology safely and responsibly • Identify measures to 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Identify input and output devices • Explain what 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use and create a planning template • Choose and 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use script and object orientated programming languages 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Understand how to sort and filter data in a spreadsheet • Explain and use 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Understand what networks are • Identify the terms LAN

	<ul style="list-style-type: none"> protect identity Understand good and bad online behaviour, including cyberbullying and scams Explain ways to report concerns Choose key terms to do with privacy and security threats Say several ways in which individuals and organisations can protect their data Explain understanding of the positive and negative ways in which technological developments have impacted the world 	<p>input and output devices can be applied to a scenario</p> <ul style="list-style-type: none"> Identify 'proprietary' and 'open file formats' Understand what a CPU is Explain the function of an operating system Explain the features of an operating system Identify ROM, RAM, cache, flash, and virtual parts of a computer system Say how instructions are stored and executed by computer systems Explain the fetch-execute cycle 	<p>combine multiple appropriate applications when creating a digital project</p> <ul style="list-style-type: none"> Create, re-use, revise and re-purpose digital artefacts for a given audience Identify improvements Explain a number of different data capture methods Say how trustworthy data can be Identify factors that affect the choice of data capture methods Explain design choices to suit the needs of the target audience Identify usability and functionality factors to suit a users' needs 	<ul style="list-style-type: none"> Use logical reasoning to detect and correct errors in programs Understand and design programs to do specific things and then follow this design when I program Explain how data types are represented in programming Use a programming language to solve computational problems 	<p>common simple formulae involving +, -, * and / to make calculations</p> <ul style="list-style-type: none"> Identify and use spreadsheet functions appropriately (e.g. SUM, AVERAGE, COUNT) Choose and develop useful graphs and charts from spreadsheet data Identify appropriate data types for fields when creating a spreadsheet Use both relative and absolute cell references in formulae Use several different types of data validation in a spreadsheet 	<p>and WAN, and know that the internet is an example of a WAN</p> <ul style="list-style-type: none"> Identify network hardware devices Explain the difference between different types of networks (e.g. Physical, mobile, wireless)
Year 9	Focus: E-Safety / ICT and Ethics	Focus: Hardware and software	Focus: Carrying out projects, Collecting and analysing data, Audience	Focus: Designing programs	Focus: Spreadsheets	Focus: Networking

	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use technology safely and responsibly • Identify measures to protect identity • Understand good and bad online behaviour, including cyberbullying and scams • Explain ways to report concerns • Explain understanding of the positive and negative ways in which technological developments have impacted the world 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Explain the function of an operating system • Explain the features of an operating system • Identify ROM, RAM, cache, flash, and virtual parts of a computer system • Say how instructions are stored and executed by computer systems • Explain the fetch-execute cycle 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use, devise and re-purpose digital artefacts for a given audience • Identify improvements that can be made to work • Describe a number of different data capture methods • Say how trustworthy data can be • Explain factors that can affect the choice of data capture methods • Choose designs to suit the needs of the target audience • Identify usability and functionality factors to suit a users' needs 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use script and object orientated programming languages • Explain and program in more than one programming language • Use logical reasoning to detect and correct errors in programs • Choose and design programs to do specific things and then follow this design when I program • Explain how data types are represented in programming • Use a programming language to solve computational problems • Say and model behaviour of physical systems • Explain several software development life cycles 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Use spreadsheet functions appropriately (e.g. SUM, AVERAGE, COUNT) • Identify and create useful graphs and charts from spreadsheet data • Explain the appropriate data types for fields when creating a spreadsheet • Utilise both relative and absolute cell references in my formulae • Understand several different types of data validation in a spreadsheet • Explain mail merge documents using fields from a spreadsheet • Understand how to use a spreadsheet to model situations and answer 	<p>Key Skills:</p> <ul style="list-style-type: none"> • Explain a range of network topologies • Understand the purpose of hubs, switches and routers • Describe appropriate network components for a given scenario • Identify appropriate choices of network components • Explain the purpose of MAC addresses
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				<ul style="list-style-type: none"> Understand and discuss advantages and disadvantages of prototyping 	'what if' questions	
Year 10	Focus: E-Safety-Social Networking, Operating systems and E-Mail	Focus: Graphic editing and desktop publishing	Focus: Spreadsheets and macros	Focus: Role of ICT and business needs, Impact of data and information	Focus: Working practices, legal, ethical, safety and security issues	Focus: Interface design for individuals and organisations
	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology respectfully and demonstrate and explain safe practice(s) Understand and identify inappropriate behaviours Explain ways to identify and report concerns Understand what makes a good digital citizen Identify appropriate software Explain planning techniques and lists sourced components. Chooses and stores components using suitable file types 	<p>Key Skills:</p> <ul style="list-style-type: none"> Use techniques to search for information and data Understand how to store and share information Identify and use software to communicate information for a business purpose Explain and demonstrate how software tools can be utilised to format information 	<p>Key Skills:</p> <ul style="list-style-type: none"> Use software to edit financial data Say and explain how data type can affect software selection Understand how to use software to communicate information for a business purpose Choose and explain software tools to format information 	<p>Key Skills:</p> <ul style="list-style-type: none"> Understand computer systems, system input and output devices, system software, application software and assistive technologies. Describe data-capture methods, factors that affect choice of data-capture methods Explain and design data-capture forms Identify file formats for storing Use data and data validation methods Explain data storage 	<p>Key Skills:</p> <ul style="list-style-type: none"> Identify and use business communication , telephones, SMS, IM, email, chat rooms, forums, bulletin boards, VoIP, video-conferencing, webcams, blogs, social Understand how diary management software can be used to organise work schedules; how documents can be created collaboratively Explain moral and ethical issues affecting business computer users, implications 	<p>Key Skills:</p> <ul style="list-style-type: none"> Identify design principles used in two different types of user interface Understand ways that the user interfaces meet user needs Explain a project plan for the design of a user interface Use project planning techniques Choose initial designs that meet some user requirements

	<ul style="list-style-type: none"> Explains technical terminology Understands cross curricula knowledge 			technologies, data transferral methods, speed and optimisation considerations when transferring data, back-up and recovery systems.	<ul style="list-style-type: none"> and consequences of data loss, corruption or theft, security Choose and explain automatic and manual updating facilities for OS and security software 	
Year 11	Focus: E-Safety-Social Networking Information Systems	Focus:Developing dynamic products	Focus: Targets and testing a dynamic product(s)	Focus: Role of ICT and business needs Impact of data and information	Focus: Working practices, legal, ethical, safety and security issues	Focus: n/a
	<p>Key Skills:</p> <ul style="list-style-type: none"> Use technology respectfully and demonstrate and explain safe practice(s) Understand and identify inappropriate behaviours Explain ways to identify and report concerns Understand what makes a good digital citizen Know how to recognise and report online safety issues and manage 	<p>Key Skills:</p> <ul style="list-style-type: none"> Produces a dynamic product specification, identifies success criteria. Selects appropriate software, applies planning techniques and lists sourced components. Stores components using suitable file types, makes use of technical terminology and uses 	<p>Key Skills:</p> <ul style="list-style-type: none"> Tests a dynamic product and suggests further changes Develops further specific improvements to a dynamic product Gathers feedback and undertakes analysis, utilises a PEE approach. 	<p>Key Skills:</p> <ul style="list-style-type: none"> Understand computer systems, system input and output devices, system software, application software and assistive technologies. Describe data-capture methods, factors that affect choice of data-capture methods Explain and design data-capture forms Identify file 	<p>Key Skills:</p> <ul style="list-style-type: none"> Identify and use business communication , telephones, SMS, IM, email, chat rooms, forums, bulletin boards, VoIP, video-conferencing, webcams, blogs, social Understand how diary management software can be used to organise work schedules; how documents can be created 	<p>Key Skills:</p> <p>n/a</p>

	<p>their own digital footprint</p> <ul style="list-style-type: none"> Independently review outcomes in relation to exam board criteria and undertake further development Using interactive materials to demonstrate key skills within e-Mail 	<p>knowledge from other units. Key skills within Databases.</p>		<p>formats for storing</p> <ul style="list-style-type: none"> Use data and data validation methods Explain data storage technologies, data transferral methods, speed and optimisation considerations when transferring data, back-up and recovery systems. 	<p>collaboratively</p> <ul style="list-style-type: none"> Explain moral and ethical issues affecting business computer users, implications and consequences of data loss, corruption or theft, security Choose and explain automatic and manual updating facilities for OS and security software 	
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