

ICT and Computing Year Six MTP

Term	Overview	National Curriculum Objectives	Target Tracker Statements	Recommended programs/software
Autumn 1	<u>Health, Well-being and Lifestyle</u> Teaching children to become responsible users of the internet and other online technologies. Children will be able to tell you the impact that technology has on health, well-being and lifestyle including understanding negative behaviours and issues amplified and sustained by online technologies and the strategies for dealing with them.	<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 (DL) 	<ul style="list-style-type: none"> Use technology responsibly and and respectfully (E-Safety) Identify a range of ways to report concerns about content and contact in and out of school (E-Safety) 	<ul style="list-style-type: none"> Project Evolve > Year Six > Health, Well-being and Lifestyle
	<u>Internet Communication</u> In this unit, the class will learn about the World Wide Web as a communication tool. First, they will learn how we find information on the World Wide Web, through learning how search engines work (including how they select and rank results) and what influences searching, and through comparing different search engines. They will then investigate different methods of communication, before focusing on internet-based communication. Finally, they will evaluate which methods of internet communication to use for particular purposes.	<ul style="list-style-type: none"> Understand computer networks including the internet; how they can provide multiple services, such as the world wide web (CS) Understand the opportunities they offer for communication and collaboration (DL) Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 	<ul style="list-style-type: none"> Understand how computer networks enable computers to communicate and collaborate (Networks) Begin to use internet services within his/her own creations to share and transfer data to a third party (Networks) Be discerning when evaluating digital content (Net Searching) 	<ul style="list-style-type: none"> National Centre for Computing Education Year 6
Autumn 2	<u>Online Relationships</u> Teaching children to become responsible users of the internet and other online technologies. Children will learn about relationships and behaviours that may lead to harm and how positive online interaction can empower and amplify voice.	<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 (DL) 	<ul style="list-style-type: none"> Use technology responsibly and and respectfully (E-Safety) Identify a range of ways to report concerns about content and contact in and out of school (E-Safety) 	<ul style="list-style-type: none"> Project Evolve > Year Six > Online Relationships

	<p><u>Web-page Creation</u> Learners will be introduced to creating websites for a chosen purpose. Learners identify what makes a good web page and use this information to design and evaluate their own website using Google Sites. Throughout the process, learners pay specific attention to copyright and fair use of media, the aesthetics of the site, and navigation paths.</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, evaluating and presenting data and information • Use technology safely, respectfully and responsibly 	<ul style="list-style-type: none"> • Begin to use internet services within his/her own creations to share and transfer data to a third party (Networks) • Independently select, use and combine a variety of software to design and create content for a given audience, including collecting, analysing, evaluating and presenting data and information (Using Computer) • Design and create a range of programs, systems and content for a given audience (Using Computer) • Independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information (Using Computer) 	<ul style="list-style-type: none"> • National Centre for Computing Education Year 6 • Google Sites
Spring 1	<p><u>Online Bullying</u> Teaching children to become responsible users of the internet and other online technologies. Children will learn strategies for effective reporting and intervention and how bullying and other aggressive behaviour relates to legislation.</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 (DL) 	<ul style="list-style-type: none"> • Use technology responsibly and respectfully (E-Safety) • Identify a range of ways to report concerns about content and contact in and out of school (E-Safety) 	<ul style="list-style-type: none"> • Project Evolve > Year Six > Online Bullying
	<p><u>More Complex Variables</u> Learners will use their prior knowledge of variables in more complex ways and to manipulate inputs to create useful outputs. They will use variables to store information that the user inputs, they will perform calculations on the numerical information stored within variables using operator blocks. They will be exposed to the term 'Boolean expressions' which are like 'true or false' questions that you can ask the computer.</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 and various forms of input and output • Use logical reasoning to explain how some simple algorithms work and to 	<ul style="list-style-type: none"> • Include use of sequences, selection and repetition with the hardware used to explore real world systems (Coding) • Create programs which use variables (Coding) • Use variables, sequence, selection and repetition in programs (Coding) • Use logical reasoning to explain how increasingly complex algorithms work and to detect and correct errors in algorithms and programs efficiently (Coding) 	<ul style="list-style-type: none"> • Discovery Education – Level 6 (More complex variables)

		detect and correct errors in algorithms and programs		
Spring 2	<u>Self-image and Identity</u> Teaching children to become responsible users of the internet and other online technologies. Children will recognise that there may be people online who could make someone feel sad, embarrassed or upset. If this was to happen, children will know when and how to speak to an adult that they trust and how they can help. Shaping online identities and how media impacts on gender and stereotypes.	<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 (DL) 	<ul style="list-style-type: none"> Use technology responsibly and and respectfully (E-Safety) Identify a range of ways to report concerns about content and contact in and out of school (E-Safety) 	<ul style="list-style-type: none"> Project Evolve > Year Six > Self-image and Identity
	<u>Object Parameters</u> Learners will identify that the numbers used to describe an object's properties are known as parameters. They will use code to detect these parameters so that they can be used in some way. Children will practise detecting and passing on parameters as they make fun and challenging games.	<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 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 	<ul style="list-style-type: none"> Include use of sequences, selection and repetition with the hardware used to explore real world systems (Coding) Create programs which use variables (Coding) Use variables, sequence, selection and repetition in programs (Coding) Use logical reasoning to explain how increasingly complex algorithms work and to detect and correct errors in algorithms and programs efficiently (Coding) 	<ul style="list-style-type: none"> Discovery Education – Level 6 (More complex variables)
Summer 1	<u>Managing Online Information</u> Teaching children to become responsible users of the internet and other online technologies. Children will learn strategies for effective searching, critical evaluation and ethical publishing.	<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 (DL) Be discerning in evaluating digital content (DL) Appreciate how [search] results are selected and ranked (CS) 	<ul style="list-style-type: none"> Use technology responsibly and and respectfully (E-Safety) Identify a range of ways to report concerns about content and contact in and out of school (E-Safety) Use filters in search technologies effectively (Net Searching) Use filters in search technologies effectively and appreciates how results are selected and ranked (Net Searching) 	<ul style="list-style-type: none"> Project Evolve > Year Six > Managing Online Information

	<p><u>3D Modelling</u> During this unit, learners will develop their knowledge and understanding of using a computer to produce 3D models. Learners will initially familiarise themselves with working in a 3D space, including combining 3D objects to make a house and examining the differences between working digitally with 2D and 3D graphics. Learners will progress to making accurate 3D models of physical objects, such as a pencil holder, which include using 3D objects as placeholders. Finally, learners will examine the need to group 3D objects, then go on to plan, develop, and evaluate their own 3D model of a photo frame.</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, evaluating and presenting data and information • Use technology safely, respectfully and responsibly 	<ul style="list-style-type: none"> • Independently select, use and combine a variety of software to design and create content for a given audience, including collecting, analysing, evaluating and presenting data and information (Using Computer) • Design and create a range of programs, systems and content for a given audience (Using Computer) • Independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information (Using Computer) 	<ul style="list-style-type: none"> • National Centre for Computing Education Year 6 • Tinkercard • Purple Mash – 2DIY3D
Summer 2	<p><u>Privacy and Security</u> Teaching children to become responsible users of the internet and other online technologies. Behavioural and technical strategies to limit impact on privacy and protect data and systems against compromise.</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 (DL) 	<ul style="list-style-type: none"> • Use technology responsibly and and respectfully (E-Safety) • Identify a range of ways to report concerns about content and contact in and out of school (E-Safety) 	<ul style="list-style-type: none"> • Project Evolve > Year Six > Privacy and Security
	<p><u>Introduction to Spreadsheets</u> This unit introduces the learners to spreadsheets. They will be supported in organising data into columns and rows to create their own data set. Learners will be taught the importance of formatting data to support calculation, while also being introduced to formulas and will begin to understand how they can be used to produce calculated data. Learners will be taught how to apply formulas that include a range of cells, and apply formulas to multiple cells by duplicating them. Learners will use spreadsheets to plan an event and answer questions. Finally, learners will create charts, and evaluate their results in comparison to questions asked.</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, evaluating and presenting data and information • Use technology safely, respectfully and responsibly 	<ul style="list-style-type: none"> • Independently select, use and combine a variety of software to design and create content for a given audience, including collecting, analysing, evaluating and presenting data and information (Using Computer) • Design and create a range of programs, systems and content for a given audience (Using Computer) • Independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information (Using Computer) 	<ul style="list-style-type: none"> • National Centre for Computing Education Year 6 • Google Sheets