COMPUTING Year 7 Curriculum End Points and Key Vocabulary

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Ethos Links	**STEM** - making links & applying knowledge, researching, finding & using evidence, planning & organisation, creating, imagining & innovating **Character** - developing RRK, risk-taking, resilience, perseverance & learning from mistakes, critical thinking, planning & organisation, self-regulation	**MK** - links to Bletchley Park **STEM** - problem solving, conversion of numbers, making links & applying knowledge **Character -** critical thinking	**STEM** - problem solving, making links & applying knowledge, modelling of data, using formulae within a model, analysing problems, researching **Sustainability** - understanding of e-waste **Character** - planning and organisation, resilience, communication, listening	**STEM** - problem solving, understanding how networks work, making links & applying knowledge	**STEM** - creating, imagining & innovating, problem solving, programming, creating an animation for a purpose, researching, analysis & evaluation, making links & applying knowledge, collecting, using & distilling data **Character** - planning & organisation, risk-taking, resilience, perseverance & learning from mistakes	**STEM** - problem solving, programming, creating, imagining, and innovating **Character** - critical thinking, self-regulation, planning & organisation
Learning End Points	**Clear Messaging in Digital Media** By the end of this unit students will know and understand: • How to create a secure password • Understand the rules of the computing lab • Recognise a respectful email • Choose search terms relating to a particular issue • Identify key features of a good poster • Choose and download a suitable image • Choose how to combine text and graphics in a slide • How to create a styled set of slides based on a plan • Modify a logo so that it fits in with the planned slide styles	**Computer the Basics** By the end of this unit students will know and understand: • How the verb 'to compute' can be applied to mathematical calculations • What the Colossus is and what its role is in World War II was • What Moore's Law is and the effect it has had on the development of Processors • Define Input, Output and Storage Devices, Memory and Processor and give examples of each • A processor Fetches, Decodes and Executes instructions • The difference between RAM and ROM	**Spreadsheets** By the end of this unit students will know and understand: • How to write basic formulae in a spreadsheet • The concept of replication and the uses of relative and absolute cell referencing • How to write a range of basic functions including SUM, AVERAGE, MAX, MIN, COUNT, and IF • How to use conditional formatting • How to use data in a spreadsheet to create graphs and charts	**Networks** By the end of this unit students will know and understand: • What a computer network is • What a protocol is and be able to give examples • What hardware is necessary for connecting devices to networks • The difference between wired and wireless connections • What bandwidth is • What the Internet is • How data travels between computers across the Internet • The difference between the Internet and the World Wide Web	**Animations** By the end of this unit students will know and understand: • What frame-by-frame animation is • Explain how frame rate and speed affect the smoothness of the animation • What a tween is • What the difference between a shape tween and a motion tween is **Drawing & Manipulating Shapes** By the end of this unit students will know and understand: • Define what abstraction is • Define what decomposition is • The benefits of a modular approach to programming	**Scratch Game Development** By the end of this unit students will know and understand: • Relate computational abstractions and programming code to on-screen actions • How to effectively design, implement and refine their own algorithms • How to systematically test their own projects to ensure that few errors remain • How to use a range of 'event handlers' effectively to create a project

	• How to search for suitable text for slides • How to search for and add a suitable image • Evaluate their work against a rubric	• The purpose of RAM and ROM in a computer system • What secondary storage is • Why computers need secondary storage • The different types of secondary storage • Why computer systems use binary • How to convert numbers to and from binary • Define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte, petabyte • Understand that data needs to be converted into a binary format to be processed by a computer	**Ethics of Computing** By the end of this unit students will know and understand: • Understand the role of algorithms in decision making • Understand the importance of respecting copyright		• What the Dr John Snow Algorithm is and how to apply it to solve problems • How to write algorithms to draw geometrical shapes in Scratch and Python	
Key Vocabulary	**Clear Messaging in Digital Media** Keywords for the topic can be found by clicking here	**Computer the Basics** Keywords for the topic can be found by clicking here	**Spreadsheets** Keywords for the topic can be found by clicking here **Ethics of Computing** Keywords for the topic can be found by clicking here	**Networks** Keywords for the topic can be found by clicking here	**Animations** Keywords for the topic can be found by clicking here **Drawing & Manipulating Shapes** Keywords for the topic can be found by clicking here	**Scratch Game Development** Keywords for the topic can be found by clicking here