COMPUTING Year 8 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** - problem solving, programming, making links & applying knowledge **Character** - risk-taking, resilience, perseverance & learning from mistakes, critical thinking, reasoning & making judgements	**STEM** - problem solving, making links & applying knowledge, creating flowcharts for control systems, adding binary numbers, converting between different number bases **Character** - risk taking, resilience, perseverance & learning from mistakes, critical thinking, reasoning, and making judgements	**Sustainability** - creating a quiz for a given scenario **STEM** - making links & applying knowledge, making links & applying knowledge, analyse problems, researching **Character** - planning and organisation, resilience, communication, listening	**Sustainability** - creating a mobile phone application for a given scenario **STEM** - problem solving, programming, making links & applying knowledge **Character** - risk-taking, resilience, perseverance & learning from mistakes, critical thinking, reasoning & making judgements	**STEM** - creating, imagining, and innovating, problem solving, writing HTML to create a webpage, researching, analysis & evaluation **Character** - planning & organisation, risk-taking, resilience, perseverance & learning from mistakes	**STEM** - problem solving, programming, making links & applying knowledge **Character** - risk-taking, resilience, perseverance & learning from mistakes, critical thinking, reasoning & making judgements
Learning End Points	**Small Basic** By the end of this unit students will know and understand: - How to use a text based programming language to create programs using sequence, variables, selection and iteration - The rules for creating variables - What a syntax error is and how to interpret an error message within the small basic environment - The use and value of using comments - The importance of using correct data types - How to use different comparison operators - How to use different logical operators	**Data Representation** By the end of this unit students will know and understand: - 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 - The rules when adding binary numbers together - What a binary overflow error is	**Advanced Spreadsheets** By the end of this unit students will know and understand: - The structure and use of a range of more advanced functions - How to use validation to create drop-down lists - How to sort data and run simple queries - The use of macros to automate processes and know how to record, edit, and assign macros	**Mobile Phone Development** By the end of this unit students will know and understand: - When a problem needs to be broken down using decomposition - That events can control the flow of a program - How to pass the value of a variable into an object - How to use a block based programming language (AppLab) to create a mobile phone application using sequence, variables, selection and iteration - How to establish user needs - How to reflect and react to user feedback - How to evaluate the success of a programming project	**HTML & Website Development** By the end of this unit students will know and understand: - What HTML is and where it is used - What CSS is and how it can be used when web developing to enhance a webpage - What a navigation system is used for on a website - What a web form is and what it is used for - A range of HTML tags - A range of CSS codes - How a HTML and CSS template can be used to create a consistent look and feel to each page	**GDevelop** By the end of this unit students will know and understand: - How to add a particle emitter object - The key components of a platform game - how collision detection works - Understand the purpose of variables

		Flowol				
		By the end of this unit students will know and understand:				
		• How to identify everyday situations where computer control is used				
		• How to identify common types of sensors used by control systems				
		• How to identify control flowchart symbols and understand how they are used to break down problems				
		• Why control systems might fail and how this might impact on safety				
Key Vocabulary	**Small Basic** Keywords for the topic can be found by clicking here	**Data Representation** Keywords for the topic can be found by clicking here **Flowol** Keywords for the topic can be found by clicking here	**Advanced Spreadsheets** Keywords for the topic can be found by clicking here	**Mobile Phone Development** Keywords for the topic can be found by clicking here	**HTML & Website Development** Keywords for the topic can be found by clicking here	**GDevelop** Keywords for the topic can be found by clicking here