Computing Curriculum Justification Year 7.

The curriculum is designed to cover 5 topics throughout the year. The topics will cover 7 lessons per topic which is 35 sessions throughout the year. This will allow time to complete end of term Summative Assessments based on learning that has already taken place.

	Year 7	Topic 1 ½ Term 1	Topic 2 ½ Term 2	Topic 3 ½ Term 3	Topic 4 ½ Term 4	Topic 5 ½ Term 5	Topic 6 ½ Term 6
Computing	**Topic** Big Idea/Question	**Using the Network effectively. Collaborating, E-Safety, Digital Applications** **Strands Undertaken:** IT Digital Literacy	**Digital Media & the impact** **Strands Undertaken:** IT Digital Literacy	**Gaining support for a cause.** **Using applications appropriately** **Strands Undertaken:** IT Digital Literacy	**Networks – From Semaphores to The Internet** **Strands Undertaken:** IT Digital Literacy Computer Science	**Data Modelling** **Strands Undertaken:** IT Digital Literacy Computer Science	**Block Coding – Using Scratch effectively part 1** **Strands Undertaken:** IT Digital Literacy Computer Science
	Software to be used	PowerPoint Word **Internet** **Outlook**	PowerPoint Word **Internet** **DTP** **Paint**	PowerPoint Word **Internet** **DTP**	PowerPoint Word **Internet**	PowerPoint Word **Internet** **Excel**	PowerPoint Word **Internet** **Scratch - Online**
	Why this and why now? What is the content doing here? How does it integrate to prior learning or prepare students for future learning? Is it an opportunity for cumulative learning or to achieve	Start of the KS3 curriculum. Will give students an understanding of Health and Safety requirements and staying safe online. Will also allow student to improve basic Presentation skills. **This is the first unit of work in the SOL and underpins all Units of work (topics) that follow.**	During this unit, learners develop their understanding of information technology and digital literacy skills. They will use the skills learnt across the unit to create a poster using digital software. **This is the 2nd unit of work, and it follows on from the skills learned in topic 1 & will give students skills that will**	During this unit, learners develop their understanding of information technology and digital literacy skills. They will use the skills learnt across the unit to create a blog post about a real-world cause that they would like to gain support for. Learners will develop software formatting skills and explore concerns surrounding the use of other people's work,	This topic introduces learners to how information is shared from device to device. It gives learners a basic understanding of how networks are connected. Learners identify how computers allow society to learn, work, play, and communicate. The types of hardware required are explained, as is wired and wireless	The data modelling unit for Year 7 takes learners from having very little knowledge of spreadsheets to being able to confidently model data with a spreadsheet. The unit uses engaging activities to progress learners from using basic formulas to writing their own COUNTIF statements.	This unit is the first programming unit of KS3. The aim of this unit is to build learners' confidence and knowledge of the key programming constructs. Importantly, This unit does not assume any previous programming experience, but it does offer learners the opportunity to expand on their knowledge throughout the unit.

	proficiencies? Does it provide a step to collective sufficiency?	**Learners will develop skills that will be used in all units of work covered.**	**be used in all units of work covered.**	including licensing and legal issues. **This develops the skills learned in topics 1&2 and gives the students the opportunity to use Microsoft applications more effectively. This will help in** **This unit develops skills and knowledge that will be used in the following topics:** ○ **Y8 Topic - Representations** ○ **Y9 Topic – Cybersecurity** ○ **y9 topic – Data Science** ○ **Y9 Topic - Representations**	data transmission. Learners will develop an understanding of the terms 'internet' and 'World Wide Web', and of the key services and protocols used. **This unit develops skills and knowledge that will be used in the following topics:** ○ **Y8 Topic - Representations** ○ **Y9 Topic – Cybersecurity** ○ **y9 topic – Data Science** ○ **Y9 Topic - Representations**	This unit will give learners a good set of skills that they can use in computing lessons and in other subject areas. **This unit develops skills and knowledge that will be used in the following topics:** ○ **Y8 – Topic - Representations** ○ **Y9 – Topic - Representations**	**This unit develops skills and knowledge that will be used in the following topics:** ○ **Y8 – Topic - Programming Python** ○ **Y9 – Topic - Programming Python**
	What is the essential knowledge that needs to be remembered? What are the key facts, skills, and experiences that you want students to remember? What are the substantive and disciplinary concepts? Does the knowledge selected mean students leave	Learners will be able to • Login to the school system both in and outside of school. • Working remotely from home • Know and understand how to use computers safely both in the classroom and online. • Gain an understanding of and explain the following: ○ Online bullying ○ Online relationships	Learners will be able to • Search the internet for specific content and annotate the content. • Understand and use a variety of application software and tools to modify content. • Add text and colour appropriately to their work. • Add images to their work. • Present their work to others.	Learners will use word processing software to explore a range of formatting tools, and then they will be given a document to format using these tools. • Learners will look at a selection of images and discuss which image they think would be appropriate for the given scenarios. • Learners will be introduced to copyright law, and then they will watch a video about Creative	Learners will be able to • Know and understand what a network is. • Know what the word 'Protocol' means. • Know and understand the different types of network connectivity. • Know what bandwidth is? • Know how data is transmitted from place to place globally. • Know the difference	Learners will be able to • Navigate a spreadsheet via its rows and columns. • Understand cell referencing. • Use formatting effectively • Use formulas effectively. • Change data in cells to create a different outcome **(Modelling)** • Create tables and charts. • Identify the differences between **Data and Information**	Learners will be able to • Use Block Code instructions to create an appropriate action. • Use variables whilst creating code • Use sequences whilst creating code • Use true or false statements whilst creating code • Use logical and comparison operators in selection statements

	with a good understanding? <u>Substantive – key facts</u> <u>Disciplinary- Methods of subjects</u> <u>Procedural- Skills</u>	○ Privacy and security The overriding principle for this unit of work is to ensure students are aware of how the school computer system works and can access all elements of it. Learners will also be aware of how to use computers safely and appropriately.	• Identify a WAGOLL and give genuine feedback based on their knowledge. Learners will be able to use effectively the following applications: **DTP** – Adding text, colour, images, resizing images. **Internet search engine** – Effective searching, downloading images, placing images into software.	Commons licensing. Learners will need to know the difference between each aspect. • Learners will look at techniques to use to help determine the credibility of a source, Learners will then look at each other's work and try to determine whether the article is credible. • Learners will use their research document from the previous lesson to create their blog. • Learners will spend time giving feedback on each other's work. • Learners will review their work based on the success criteria and will have a chance to make final changes to their work based on the peer feedback that they received in the previous lesson. • Learners will finish the unit by completing an	between the WWW and the internet. Learners will be able to identify how networks are connected and how the data is transmitted within the network.	Learners will be able to use a spreadsheet effectively. Both by inputting data and modifying data. They will be able to create graphs and charts form the data.	• Use iteration whilst creating code Learners will also be introduced to the PRIMM method of learning. This is a method of teaching that gives the learner a clear structure to understand, create and modify code. **PRIMM** stands for: • **Predict** • **Run** • **Investigate** • **Modify** • **Make**

				end-of-unit assessment			
	What is the assessment intent and how will you assess? What types of assessments and question stems are being used to demonstrate students are learning and progressing to produce ever higher standards of work? What formative assessment is there for component learning and summative for composite learning?	Ongoing formative assessment to include questioning, peer and self-assessment, mini quizzes plenaries and use of mini WB etc to check for misconceptions and inform learning. Summative assessment will take place at the end of the unit of work based on topics learned. Assessments will be holistic to include learning from previous components to interrupt the forgetting curve as well as provide opportunities for development feedback. There will be a Termly Summative Assessment in line with school policy.	Ongoing formative assessment to include questioning, peer and self-assessment, mini quizzes plenaries and use of mini WB etc to check for misconceptions and inform learning. Summative assessment will take place at the end of the unit of work based on topics learned. Assessments will be holistic to include learning from previous components to interrupt the forgetting curve as well as provide opportunities for development feedback. There will be a Termly Summative Assessment in line with school policy.	Assessment will be in a variety of forms. There will also be an ongoing formative assessment based on student work. This will be in the form of presentations and questioning. This will be both Peer and Teacher led Summative assessment will take place at the end of the unit of work based on topics learned. This will be a paper test. Each lesson will start with a mini quiz on forms. This will identify and test knowledge from the previous lesson and from previous topics covered. At the end of each lesson there will be a plenary on forms, and this will test knowledge and learning from the lesson.	Ongoing formative assessment to include questioning, peer and self-assessment, mini quizzes plenaries and use of mini WB etc to check for misconceptions and inform learning. Summative assessment will take place at the end of the unit of work based on topics learned. Assessments will be holistic to include learning from previous components to interrupt the forgetting curve as well as provide opportunities for development feedback. There will be a Termly Summative Assessment in line with school policy.	Ongoing formative assessment to include questioning, peer and self-assessment, mini quizzes plenaries and use of mini WB etc to check for misconceptions and inform learning. Summative assessment will take place at the end of the unit of work based on topics learned. Assessments will be holistic to include learning from previous components to interrupt the forgetting curve as well as provide opportunities for development feedback. There will be a Termly Summative Assessment in line with school policy.	Ongoing formative assessment to include questioning, peer and self-assessment, mini quizzes plenaries and use of mini WB etc to check for misconceptions and inform learning. Summative assessment will take place at the end of the unit of work based on topics learned. Assessments will be holistic to include learning from previous components to interrupt the forgetting curve as well as provide opportunities for development feedback. There will be a Termly Summative Assessment in line with school policy.
	What does the end point look like?	Learners will demonstrate prior knowledge of ICT from KS2 through completing an online baseline assessment.	Learners will be able to effectively use Microsoft DTP effectively and identify that there are similarities between	Learners will be able to effectively use Microsoft word and identify that there are similarities between Word and other	Learners will be able to: • Define what a computer network is and explain how data is transmitted	Learners will be able to : • Identify columns, rows, cells, and cell references in spreadsheet software	Learners will be able to: • Compare how humans and computers understand

	What is the impact of this component on the student's learning? What should the learning now look like via the assessment? Is disciplinary language used?	Learners will be able to identify aspects of computer safety and use Microsoft applications such as Word & PowerPoint. Learners will be able to: • Create a memorable and secure password for an account on the school network • Remember the rules of the computing lab • Find personal documents and common applications • Recognise a respectful email • Construct an effective email and send it to the correct recipients • Describe how to communicate with peers online • Plan effective presentations for a given audience • Describe cyberbullying • Explain the effects of cyberbullying • Check who you are talking to online	DTP and other applications. Learners will be able to: • Choose search terms relating to a particular issue. • Use tools to copy an image into another application. • Choose and download a suitable image. • Modify a logo using a graphic editing program. • Choose how to combine text and graphics in a slide • Modify a logo so that it fits in with the planned slide styles • Search for suitable text for slides • Search for and add a suitable image • Explain your work to others through a presentation • Evaluate your work against a rubric	applications. A continuation from the last units work. Learners will be able to: • Select the most appropriate software to use to complete a task • Identify the key features of a word processor • Apply the key features of a word processor to format a document • Evaluate formatting techniques to understand why we format documents • Select appropriate images for a given context • Apply appropriate formatting techniques • Demonstrate the ability to credit the original source of an image • Critique digital content for credibility • Construct a blog using appropriate software • Apply referencing techniques that	between computers across networks & define the protocols that allow for this. • Identify hardware devices used to create a network and compare wired and wireless networks • Define 'bandwidth', using the appropriate units for measuring the rate at which data is transmitted. • Explain how data travels between computers across the internet • Explain the difference between the internet, its services, and the World Wide Web • Explain the term 'connectivity' as the capacity for connected devices ('Internet of Things') • Describe how internet-connected devices can affect me • Describe components (servers, browsers, pages, HTTP and	• Use formatting techniques in a spreadsheet • Use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /) • Use the autofill tool to replicate cell data • Explain the difference between data and information • Explain the difference between primary and secondary sources of data • Collect data • Analyse data • Create appropriate charts in a spreadsheet • Use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet • Use a spreadsheet to sort and filter data • Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet • Use conditional formatting in a spreadsheet	instructions (understand and carry out) • Understand the Information Processing Model **PRIMM instructions that include:** **Sequences** • Define a sequence as instructions • Predict the outcome of a simple sequence • Modify a sequence **Variables** • Identify variables • Make a sequence that includes a variable **Selection** • Identify that selection uses conditions to control the flow of a sequence • Identify where selection statements can be used in a program • Modify a program to include selection **Conditions / Operators** • Create conditions that use comparison operators (>,<,=)

				credit authors appropriately • Design the layout of the content to make it suitable for the audience • Create content for a blog based on credible sources that credit authors appropriately • Design the layout of the content to make it suitable for the audience	HTTPS protocols, etc.) and how they work together		• Create conditions that use logic operators (and/or/not) • Identify where selection statements can be used in a program that include comparison and logical operators **Iteration** • Define iteration as a group of instructions that are repeatedly executed • Describe the need for iteration
	How does it cover the NC? Refer explicitly to the NC or KS4 Assessment Objectives.	The topic meets the NC statement requirements for strands 3.8/3.9	The topic meets the NC statement requirements for strands 3.7/3.8	The topic meets the NC statement requirements for strands 3.7/3.8/3.9	The topic meets the NC statement requirements for strands 3.5	The topic meets the NC statement requirements for strands 3.1/3.7	The topic meets the NC statement requirements for strands 3.2/3.3/3.4/3.8