



KS3 Brunts Digital

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Year 7		
Term	Title	Unit Context
Autumn 1	Digital Literacy	Digital Literacy is such an important area of knowledge, it's vital that Students are given the time and opportunity to advance their basic IT skills into skills that employers are looking for in the workplace and skills which will help them present all of their future work to a high, organised standard. Students will appreciate how to create secure Passwords, improve Folder organisation, learn about how Search Engines work, The Internet Vs The WWW and E-mails. They will also look at different Software and deciding what is the most appropriate for a given task.
Autumn 2	The Birth of computing	In this unit students will learn about the birth of the modern computer from its early foundations in WWII. Students will be taught about Alan Turing and other significant figures that have contributed to the history of computer science. Students will be able to explain how valves in early computers came to be replaced with transistors and the role that they play in the CPU. Students will begin to understand how some of the main internal components of a computer work. They will build simple logic gates and learn how to convert denary numbers into binary and back again. Work in this unit will be complemented by an after school showing of "The Imitation Game" and a visit to Bletchley park in the Summer Term.
Spring 1	Working with Digital Graphics	In this unit you will learn how to create bitmap and vector graphics. These graphics will be suitable for the audience and purpose, if you consider their target audience and intended purpose. Based on the bitmap/vector briefs, you will plan both graphics on paper and create them using suitable graphics software. You will need to test the graphics to make sure they meet their briefs. Finally, you will ask 2 of your peers to evaluate the graphics. This will tell you what is good about your graphics and something you could improve on.
Spring 2	Computational Thinking	Before Students undertake programming, The Brunts Digital Department felt that it would be beneficial for Students to learn 'how to think' like a computer would. In this Unit they will learn how to Abstract, Decompose, find Patterns and create Algorithms in fun, out of the box and out of the classroom lessons! This gives Students a firm grounding for how to approach problems in real life and in Programming to create solutions.
Summer 1	Programming	Students will learn to programme using a text based language to solve problems. They will learn how to plan (using pseudocode) create and test a solution to a problem. Students will learn basic programming constructs such as defining constants and variables, looping, selection and in some cases working with 1D arrays.
Summer 2	E-Safety	In this unit students will learn about the importance of staying safe online. They will understand the dangers of online predators and the impact that Cyberbullying can have. Students will learn how to report online abuse and the role of CEOP. Students will have an understanding of The Internet, Social Media, Apps, Phones/Tablets etc, this unit will help them understand how to use it all safely, respectfully, responsibly and be able to recognise inappropriate content.



Year 8

Term	Title	Unit Context
Autumn 1	A History of the Internet	In this Unit, you will learn how the thing you will undoubtedly spend a lot of time on, The Internet, was created, how it works and what effect it has on all of us Today! Sir Tim Berners Lee will feature in your lessons as well as knowing the difference between the World Wide Web and The Internet. You will also learn how to create your very own web pages, using HTML and then move on to the exciting world of 'The Internet of Things', where you will look at Smart Homes and other tech that will be making our lives easier, in the future!
Autumn 2	Computer Science Theory	In this unit you will refresh and build upon your knowledge of binary conversion. Furthermore, you will learn how to add and subtract binary digits. There will be lessons covering the basic logics gates and then using truth tables you will be able to predict how they behave. Understanding data measurements is your next learning journey and from there we look at how image and sound files are represented by binary digits. Finally, you will arrive at the hardware and software lessons, where you will not only learn about the internal parts of a computer, but also the software needed to communicate between your interaction with a computer and the computer hardware. Enjoy!!
Spring 1	Problem Solving and Programming	You will be learning to further develop your problem solving skills, not only for how you would solve a problem but how a computer would solve a problem. These problem solving skills will then be put into practice with learning key programming techniques.
Spring 2	Audio & Video	In these units you will develop your sound and video technology skills, being taught the skills needed to create content which harnesses sound and video to meet a given brief. You will learn how to create a Podcast for the Mansfield 103.2 radio station and a special news feature for the East Midlands Today TV programme. Both projects will require development towards a specific purpose and audience. You will learn how to use a range of hardware and software when creating your solution to the briefs.
Summer 1		
Summer 2	Micro:bit	micro:bit, made by the BBC, intended to develop a new era of programmers and to inspire the next generation. Within these lessons, Pupils will be able to implement theory that they have learnt in the "Problem Solving and Programming" Unit, into further practice, with something practical and something that they can touch! By the end of this Unit, Pupils will have experimented with their micro:bit and have harnessed their creativity to create anything they can think of, the end result? A plethora of different LED pictures, a night light, a song, a Magic 8 ball, a Love meter, Rock Paper Scissors, Truth or Dare, a thermometer, a compass, a selfie stick remote, or if they're feeling adventurous, a Watch or even Pac Man!