**Computing Curriculum**

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|  | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Year 5 (45 mins a week) | ***Introduction to computer systems and Google Classroom***Children learn what a basic computer system is and their common uses while being introduced to our school computer network. | ***Internet Safety***We will be learning about our rights and responsibilities when online. Children will also learn about how to stay safe and who they can talk to if things go wrong. | ***Programming with Scratch***As our first introduction into the world of programming, we look at two websites that allow us to create basic visual programmes. | ***Spread Sheets******Business Budgeting*** We get introduced to the world of business by setting up our own Pizza Takeaway company. The children learn how to use formulas to solve calculations. | ***The History of Computers***Who invented the computer? We explore the diverse history of the computer by looking at consoles and code breakers in the war. | ***2D Animation***During this topic, the children will learn the history of animation and find out how computer systems can help in the process, while creating their own 2D animations***.*** |
| Year 6 (45 mins a week) | ***Computer Networks***We all use the internet so often but do we really understand it? During this topic children will learn the basic hardware needed to create the internet and how information is transferred.  | ***Internet Safety***Children will talk about how they can deal with people being unkind online and the support they can offer their friends. We also recap our rights and responsibilities when online. | ***Programming with Scratch.***Children continue to learn about programming with Scratch with the introduction to variables and ‘If’ ‘Else’ functions. | ***Spread Sheets******Conditional Formatting***This year we find ourselves owning a brand new theme park. By using Excel, children will learn how to use formulas and conditional formatting to make the most profit possible. | ***Input and Output Devices***Children will learn the differences between and input and output device and use this knowledge to design, build and test their very own games controllers. | ***Micro:bits***We will use Micro:bits to develop our understanding of how computers work and develop our programming skills. |
| Year 7 (45 mins a week) | ***Internet Safety***We talk about why there are the need for privacy settings on social media accounts and the importance of being mindful of what you post. Children will also talk about consequences of not staying safe. | ***App Permissions and Online Safety***With children using mobile technology so much at home it is important that we know how to be safe when sharing images. We look into the ‘permissions’ we give the apps we use. | ***Programming with Python***This will be the children’s first experience of a text based programming language. We will learning the basic functions and how they can be used to create simple programmes that help us everyday. | ***Programming HTML and Digital Media***Year 7 explore the secret code behind websites and learn how to create their own homepage using HTML code. | ***Computer Hardware and Operating Systems***What is an operating system? Why are they needed? Children learn how different computer systems require different OS’s to function and also the names of key components. | ***Data Handling Access***How do apps like Netflix keep track of their customers? Year 7 learn how to build and query databases to run their own video club. |
| Year 8 (45 mins a week) | ***Social Networking and its Impact*** Year 8 children are close to reaching the age to use social networking apps. We learn practical tips to staying private online. We also explore the social, economic and cultural impact of social media on us as a society. | ***Binary Code and Logic Gates***How are pictures and audio represented in a digital format? Year 8’s will explore the world of Binary and Hexadecimal code to see how computers read information. | ***Programming with Python***Children will revisit this text programming language and looked to solve real world problems using Python. | ***Computer Hardware and Design***Children learn the roles of the main components found inside of a computer system and attempt to design their own computer within a strict budget. | ***Programming HTML and Digital Media***We explore the secret code behind websites and learn how to create their own homepage using HTML code. |