

COMPUTING CURRICULUM COHESION

| | Autumn | Spring | Summer |
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| Nursery | <p style="text-align: center;"><u>Online Safety and Digital Literacy</u></p> <p>During their time in Nursery children will build their knowledge and understanding of kindness and appropriate behavior between friends, including on the internet when appropriate. This will build the foundation for further exploration of online safety in Reception class. We will explore emotions and how we can recognise them. Children will find out how to tell a trusted adult if something makes them unhappy, scared or nervous.</p> <p>RRS: Staying safe online - Article 19: We must do all we can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment.</p> <p style="text-align: center;"><u>Information Technology</u></p> <p>Children will use the interactive screen to access educational games linked to topics of interest, phonics or mathematics. Children will explore basic technology and their purpose in the role play area such as tills, mobile phones and laptops.</p> <p style="text-align: center;"><u>Computer Science</u></p> <p>Through their mathematics learning, children will learn about directional language. This will form a foundation for later computer science programmes such as Code and Go Mice in Reception.</p> | | |

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| <p style="text-align: center;">Rec</p> | <p style="text-align: center;">Marvellous Me! Celebrations</p> <p style="text-align: center;"><u>Online Safety and Digital Literacy</u> Pupils understand the need to be kind offline and begin to link this to actions online. We will link to Anti Bullying Day and children will learn that sometimes people cannot be kind online. We will look at what this means, and what to do if this happens.</p> <p style="text-align: center;"><u>Information Technology</u> Introducing the use of iPads, taking photos, games and to create. Technology within role play e.g phones, till.</p> <p style="text-align: center;"><u>Computer Science</u> Introducing the use of Code and Go Mice - exploring.</p> | <p style="text-align: center;">The Big Freeze Superfood</p> <p style="text-align: center;"><u>Online Safety and Digital Literacy</u> Pupils begin to understand that being safe online is similar to staying safe in real life. They know how to get help from an adult if they are unsure about a website. We will link to Safer internet day in February, looking at how to keep safe on iPads/computers if 'pop ups' come onto our screen. We will look at what this means, and what to do to keep safe if this happens.</p> <p style="text-align: center;">RRS: Staying safe online - Article 19: We must do all we can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment.</p> <p style="text-align: center;"><u>Information Technology</u> Developing the use of iPads and class computer. Using computers- begin to use for research and software to create e.g. Google Earth, Pic Collage, Paint, photos and videos. Technology within role play e.g phones, till.</p> <p style="text-align: center;"><u>Computer Science</u> Teach the basic use of Code and Go Mice- position and direction to aid further exploration.</p> | <p style="text-align: center;">Me and My Universe Out and about</p> <p style="text-align: center;"><u>Online Safety and Digital Literacy</u> Linked to videos, pupils begin to understand that being safe online is similar to staying safe in real life. They know how to get help from an adult if they are unsure about a website.</p> <p style="text-align: center;"><u>Information Technology</u> Developing the use of iPads and class computer. Using computers- begin to use for research and software to create e.g. Google Earth and Maps, Pic Collage, Paint, photos and videos. Introduce Clicker and allow for application of basic mouse and keyboard skills. Technology within role play e.g phones, till.</p> <p style="text-align: center;"><u>Computer Science</u> Application of the use of Code and Go Mice e.g. use within simple activities e.g. phonics- roll a dice, read word and direct Code and Go Mice to that image on mat. Create own mats.</p> |
| | <p style="text-align: center;">Year 1</p> | | |

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| | <p><u>Online Safety and Digital Literacy</u> Pupils understand the need to be kind online through the context of sharing photos. They explore what might happen if a picture is shared online and how it might affect themselves and others. They recognise that it is not a good idea to join in and they remember how it is important to ask a trusted adult for help. Pupils understand that being safe online is similar to staying safe in real life. They know how to get help from an adult if they are unsure about a website.</p> <p><u>Information Technology</u> Building on from their EYFS experience, children will be able to access the computer by logging in and develop word processing skills for accuracy and mouse control skills for navigation. They will be introduced to the space bar and capitalisation. Children will be taught how to find and use an app for a specific purpose such as a self-portrait in art. During the unit children will also begin to recognise ICT around them and explore information from various ICT sources.</p> <p><u>Computer Science</u> Building on their understanding of programming from EYFS, the children learn to use and control Code and</p> | <p><u>Online Safety and Digital Literacy</u> Pupils understand that being safe online is similar to staying safe in real life. They know how to get help from an adult if they are unsure about a website. Using a child friendly search engine. They learn to identify information that is "just right" and "not right" for them. Children will be taught that the internet is accessed all over the world and that some devices are connected to the internet.</p> <p><u>Information Technology</u> Children will be further developing keyboard skills to increase their confidence and accuracy. By the end of the unit children will be able to independently log on to a computer.</p> <p><u>Computer Science</u> Planning a journey around a route using simple algorithms and building on their usage of Code and Go Mices. Children will need to know which button on a device represents which action e.g. Code and Go Mice. They will have the opportunity to make a simple sequence of instructions / algorithm. During the unit they will be able to make simple predictions about an algorithm and a program.</p> <p><u>Internet Safety Day</u></p> | <p><u>Online Safety and Digital Literacy</u> Children will be introduced to SMART. Safe, Meet, Accepting, Reliable, Trust. Children will understand the importance of being SMART online. They will create posters to advocate being SMART to display in the school.</p> <p>RRS: Staying safe online - Article 19: We must do all they can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment.</p> <p><u>Information Technology</u> Children will be further developing keyboard skills to create a simple slide. By the end of the unit children will be able to independently log on to a computer and share/explain what they are now able to do.</p> <p><u>Computer Science</u> As we continue children will be able to change (debug) the program to improve the route and explain how they debugged the algorithm. Children will complete these activities first with the Code and Go Mices and then on the Code and Go Mice game on the iPads. As the unit progress children will be able to use their knowledge to recognise things around them that respond to signals and instructions.</p> |
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| | <p>Go Mices, inputting simple (1-2turns) directions and instructions to move around objects.</p> | | |
| <p>Year 2</p> | <p><u>Online Safety and Digital Literacy</u> They will learn that the information they put online leaves a digital footprint or "trail." This trail can be big or small, helpful or hurtful, depending on how they manage it. By doing this, children improve their understanding of what is OK to be shared online. Children will recap from Year 1 that the internet is used all around them and will learn that devices enable direct communication between people through images and text. Internet Safety work will link to Anti Bullying Day and pupils will be introduced to the term cyberbullying. They will understand what this means and what to do if they encounter it.</p> <p>RRS: Staying safe online - Article 19: We must do all they can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment.</p> <p><u>Information Technology</u> Pupils will improve their understanding of how word processing works and their</p> | <p><u>Online Safety and Digital Literacy</u> Pupils understand that they should stay safe online by choosing websites that are good for them to visit and avoid sites that are not appropriate for them. They also will understand what to do if they find things that make them feel uncomfortable. They identify ways to respond to mean words online, using S-T-O-P.</p> <p><u>Information Technology</u> Pupils will be able to use 'Paint' and other related programs to produce some digital art linked to their topic of exploring. They will look at this process in art lessons too and combine their computing knowledge to produce a finished product.</p> <p><u>Computer Science</u> They will show that they are able to debug more complex coding and use their theme of Explorers to plan a journey. Pupils will begin to understand that algorithms can be used in more digital devices and be introduced to Scratch Junior. Using their topic of exploring as a stimulus, they will create a project on there that uses simple instructions.</p> <p>International links: Exploring the globe</p> <p><u>Internet Safety Day</u></p> | <p><u>Online Safety and Digital Literacy</u> Building on this through an online gaming example, pupils understand that being a good digital citizen means being safe and responsible online. They take a pledge to be a good digital citizen.</p> <p><u>Information Technology</u> Pupils will combine images with voice to create a simple iMovie inspired by their topic. They'll show that they are able to search for images to use and them to create a simple movie.</p> <p><u>Computer Science</u> Pupils will develop their understanding of algorithms and how they can be used in more digital devices they will be given time to develop and debug their projects on Scratch Junior.</p> |

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| | <p>ability to type. They will use this knowledge to help them create an E-book (Clicker, Book builder) showcasing the facts learned about animals. Children will be able to save their document and retrieve it for further editing.</p> <p><u>Computer Science</u></p> <p>Using the Code and Go Mice, pupils will build on their knowledge from Year 1 and create more complex instructions and show they are able to debug if things go wrong. Pupils will build on their knowledge of algorithms and transfer this knowledge to other programmes (ALEX, Code and Go Mice app).</p> | | |
| <p>Year 3</p> | <p><u>Online Safety and Digital Literacy</u></p> <p>They will build on their Year 2 work on cyberbullying and understand that if they see anything online that concerns them, they should report it to a trusted adult. They will also know that some people on the internet should not be trusted and that they need to keep their personal information private. They will build on the DL work they did in Year 2 about using safe search engines by using them find key information from given key words to put in their brochures. They will begin to know which websites are useful and</p> | <p><u>Online Safety and Digital Literacy</u></p> <p>Building on their understanding of internet safety, children create powerful passwords and understand the importance of reporting concerns to an adult. Continuing their safe internet use, they will begin to search using key words and evaluate the trustworthiness of websites. Children will join in with activities for Safer Internet Day in February. As part of this, the key focus will be on online presence and advertising. Children will learn how to be safe in their online presence creating posters using publisher to demonstrate their understanding. Children will continue developing their understanding of key word searches.</p> | <p><u>Online Safety and Digital Literacy</u></p> <p>They will also use other search methods such as google reverse image search to find specific information. Children will understand that technology can sometimes be inappropriate and begin to understand the importance of device free moments. Pupils will explore the similarities and differences between in-person and online communications, and then learn how to write clear and respectful messages.</p> <p><u>Information Technology</u></p> |

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| | <p>begin to understand all might not be trustworthy.</p> <p><u>Information Technology</u> Children will develop their understanding of iMovie to create a detailed trailer based on their Diwali topic. Children will use iPads to save different images to include in their trailer. Children will learn how to save these files on a shared drive, in order for them to use them in a document using a programme of their choice.</p> <p>Children will be introduced to the Publisher Software and will use this to create a simple poster linked to living sustainably.</p> <p><u>Computing science</u> Building on their work on Code and Go Mice in KS1, children will explore the use of more complex instructions using Scratch Junior.</p> | <p>RRS: Staying safe online - Article 19: We must do all they can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment.</p> <p><u>Information Technology</u> Continue to develop the use of publisher and word throughout the term, using these systems in various subjects to allow keyboard confidence.</p> <p><u>Computing science</u> Building on their coding knowledge, children will begin to learn the programming language and environment in Scratch including 'repeat loops' to draw regular 2D shapes. In this unit of work the children will begin by recapping the coding work that they have done so far.</p> <p><u>Internet Safety Day</u></p> | <p>Children will develop their understanding of the Publisher Software to create a detailed brochure linked to their Egyptian topic. They will develop their layout, font and inserting image skills.</p> <p><u>Computing science</u> Building on their coding knowledge, children will work on more advanced codes to create an Egyptian inspired route. They will be given a criteria of repeated loop shapes to include within their route. Children will develop their debugging skills.</p> |
| <p>Year 4</p> | <p><u>Online Safety and Digital Literacy</u> Building on their understanding of 'digital footprint' work in Year 2, children will learn that anything they share online may be seen by anyone – including strangers.</p> <p>Knowledge and understanding of the need for password protection is developed to enable children to</p> | <p><u>Online Safety and Digital Literacy</u> Know that having a balance of online and offline activities is important and that it is important for their health. Private and Personal Information – In this unit pupils will consider how they can protect themselves from online identity theft? The Power of Words – In this unit pupils consider that they may get online messages from other kids that can</p> | <p><u>Online Safety and Digital Literacy</u> Know that having a balance of online and offline activities is important and that it is important for their health. The Key to Keywords - Pupils learn strategies to increase the accuracy of their keyword searches and make inferences about the effectiveness of the strategies. This links the ICT</p> |

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| | <p>reliably use a more complex password. They investigate and understand what to do if exposed to unpleasant material on any device.</p> <p><u>Information Technology</u> Children will access their previous work and organise their own personal folder effectively (for example, into year groups) for ease of access and retrieval on school system. They will use PowerPoint to create a Roman report/recount/research document, save in a shared folder and retrieve later to continue working on it. Using their saved document in their folder, children will be able to change font size and style; include shapes and backgrounds and use the spellcheck function.</p> <p><u>Computer Science</u> Continue developing computing skills using Scratch to sequence, use conditionals and add a variety of inputs and outputs. Children will be able to explain how their program works by annotating screenshots.</p> | <p>make them feel angry, hurt, sad, or fearful. Pupils identify actions that will make them Upstanders in the face of cyberbullying.</p> <p>RRS: Staying safe online - Article 19: We must do all they can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment.</p> <p><u>Information Technology</u> Consolidating the previous term's work, children will create and deliver an iMovie to their peers linked to volcanoes. Children effectively use key word searches in search engines and select useful websites from results.</p> <p><u>Computer Science</u> Working on their program created previously, children can modify it further and be able to predict the effects of any changes. They will break sets of instructions into short steps to achieve a goal e.g. drawing repeated squares to make a pattern.</p> <p><u>Internet Safety Day</u></p> | <p>work, searching for information and Literacy when pupils consider what the reader needs to know and include relevant details adapt style and language appropriately for a range of forms, purposes and readers.</p> <p>RRS: Access to information from the media – Article 17: Every child has the right to reliable information from a variety of sources.</p> <p><u>Information Technology</u> Children will be introduced to the programme Adobe Spark. They will create a simple presentation using their knowledge of PowerPoint to support their understanding of application to different programs.</p> <p><u>Computer Science</u> Children will continue to develop their understanding of the functions of Scratch by creating a game involving repeated loops and patterns. They will develop their coding skills to decipher a set of instructions to achieve a goal.</p> |
| <p>Year 5</p> | <p><u>Online Safety and Digital Literacy</u> Children will explore the need for safety and learn about appropriate use of social media. They will develop their</p> | <p><u>Online Safety and Digital Literacy</u> Using the History topic, children will learn how to search for information and decide if it useful. They will begin to understand how</p> | <p><u>Online Safety and Digital Literacy</u> Know that having a balance of online and offline activities is important and that it is important for their health.</p> |

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| | <p>understanding of misuse of social media e.g. Cyberbullying, and how they can report this.</p> <p>RRS: Staying safe online - Article 19: We must do all they can to ensure that children are protected from all forms of violence, abuse, neglect and bad treatment.</p> <p><u>Information Technology</u> Using work from their personal folder, children will work collaboratively to create an Adobe Spark presentation based on the Space topic.</p> <p><u>Computer Science</u> Building on from the previous work in Y4, children will continue to investigate coding software. Using the knowledge gained, children will use an alternative program to sequence, use conditionals and use a variety of inputs and outputs. – i.e. in Kodu build a simple world and program so that it can be controlled with keys.</p> | <p>results are selected and compare information for reliability. Linked to internet safety day, children will learn about how to do this safely. How to Cite a Site- Children will learn to effectively use a search engine to find multiple criteria using AND/OR to refine searches for speed and accuracy. They will know how to compare information from different websites and understand that some sites may show bias. They will distinguish between good and bad information found on the internet and rank information found on the internet in order of importance and relevance. This follows on and develops the work children completed in Year 3 and 4 when they began to use a search engine to find specific information.</p> <p>RRS: Access to information from the media – Article 17: Every child has the right to reliable information from a variety of sources.</p> <p><u>Information Technology</u> Using previous knowledge of the software available, children will choose the most appropriate program and create an effective poster/leaflet.</p> <p><u>Computer Science</u> Children create a game using a choice of software – kodu or scratch and demonstrate their understanding of previous learning to use variables, conditional sentences and loops.</p> | <p>Strong Passwords - Throughout this unit Pupils learn how to create secure passwords in order to protect their private information and accounts. This links to the work children have completed in Year 3 and Year 4 about their personal information online.</p> <p><u>Information Technology</u> Consolidating their shared work children will produce an effective presentation using a choice of software (Adobe Spark, PowerPoint, Slide Share, iMovie) incorporating elements of time/sequencing.</p> <p><u>Computer Science</u> Building on from the previous work in Y4, children will continue to investigate coding software. Using the knowledge gained, children will use an alternative program to sequence, use conditionals and use a variety of inputs and outputs. – i.e. in Kodu build a simple world and program so that it can be controlled with keys. Children create a game using a choice of software – kodu or scratch and demonstrate their understanding of previous learning to use variables, conditional sentences and loops.</p> |
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| | <u>Internet Safety Day</u> | | |
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| Year 6 | <p style="text-align: center;"><u>Online Safety and Digital Literacy</u></p> <p>Children will increase their awareness of social media and how to reduce staying safe on-line. They will discuss digital friendships and the dangers of not always knowing who you are talking to. Pupils learn that children's websites must protect their private information. They learn to identify these secure sites by looking for their privacy policies and privacy seals of approval. Pupils know how to reduce the risks posed by using Social Media by managing their friend lists and privacy settings to develop rewarding relationships. Pupils explore how it feels to be cyberbullied, how cyberbullying is similar to or different than in-person bullying and learn strategies for handling cyberbullying when it arises. Pupils explore how it feels to be cyberbullied, how cyberbullying is similar to or different than in-person bullying and learn strategies for handling cyberbullying when it arises.</p> <p>RRS: Staying safe online - Article 19: We must do all they can to ensure that children are protected from all forms of</p> | <p style="text-align: center;"><u>Online Safety and Digital Literacy</u></p> <p>Linked to Internet Safety Day, children will look at their 'media balance' and understand the need to have a limit on online usage of all forms. Children will learn about the term 'hacking'. They will investigate how information can be changed and learn about Fake News. They will discuss how advertising is used in social media and search engines and why. They will understand the importance of fact checking. They will discuss digital friendships and the dangers of not always knowing who you are talking to. Children will learn about the term 'hacking'. They will investigate how information can be changed and learn about Fake News. They will discuss how advertising is used in social media and search engines and why. They will understand the importance of fact checking. Pupils learn that children's websites must protect their private information. They learn to identify these secure sites by looking for their privacy policies and privacy seals of approval. Pupils know how to reduce the risks posed by using Social Media by managing their friend lists and privacy settings to develop rewarding relationships.</p> <p style="text-align: center;"><u>Information Technology</u></p> | <p style="text-align: center;"><u>Online Safety and Digital Literacy</u></p> <p>Pupils explore how the media can play a powerful role in shaping our ideas about girls and boys. They practice identifying messages about gender roles in two online activity zones for kids Pupils know that search results can be manipulated by sponsorship and advertising – selling stereotypes. They know how to validate information found through searches by checking more than one source. Pupils know that some news is 'fake' and use information to hypothesise and speculate in a range of everyday situations.</p> <p>Educate & Celebrate: Gender identity</p> <p>RRS: Access to information from the media – Article 17: Every child has the right to reliable information from a variety of sources.</p> <p style="text-align: center;"><u>Information Technology</u></p> <p>Learn how to add and interpret data from a prepared spreadsheet linked to the 'Fiver Challenge', children will develop the use a spreadsheet for working out the cost of a project. They will add formulas and use Microsoft</p> |

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| | <p>violence, abuse, neglect and bad treatment.</p> <p><u>Information Technology</u> Children will continue to build their IT knowledge skills by creating a presentation using a choice of programs (Adobe Spark, PowerPoint, Slide Share, iMovie) linked to the residential to Grinton. They will use a range of Microsoft programs: PowerPoint, Publisher and Word) to further edit pictures (layers/filters etc.), add text and create and add music.</p> <p><u>Computer Science</u> Children will write and design programs using Scratch or Kodu. They will learn to debug programs and work with conditional commands and variables within a code. They will explain how an algorithm works.</p> | <p>They will build upon their skills on creating videos from Year 4 and plan, create and edit a short video on iMovie linked a topic, using more complex features of the programme.</p> <p><u>Computer Science</u> They will build on the programs created and learn how to use mathematical expressions to create conditionals and make a model (Kodu/Microbits). In this unit, pupils will build on their understanding of using electrical variables in year 5 by programming a microbit to create a pedometer. Pupils will learn how to use conditional sentences (when/then), sequences, selection and repetition to program a microbit. They will understand that poor input choices equal unreliable results. Pupils will use mathematical expressions when constructing conditionals to measure movement to calculate the number of steps a person has completed. They will be able to explain what a program will do and accurately predict the effect of changes. Pupils will be able to make an efficient program by using an effective algorithm and techniques such as loops and procedures – Make the microbit have more than one pre-determined action.</p> | <p>Excel to create graphs of their expenditure. They will also produce a final piece of IT work that incorporates 2 or more programs demonstrating their skills across the key stage.</p> <p><u>Computer Science</u> During this half term children will be asked to join another class to teach, define and share their knowledge based on a programme of their choice. They will develop their oracy and computational thinking by imparting their knowledge to another group of children. They can create a presentation to support this or develop a project.</p> |
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