Computing Curriculum

INTENT:

We believe that skills in computing are fundamental to children's learning and should be incorporated into all areas of the curriculum wherever possible. It is recognised that we have a responsibility to encourage digital literacy in all pupils so support the present and in preparation for their future. New technologies require children to be able to interact fully with computers, laptops, tablets and a growing number of other devices, programs and software in order to fully support their learning in a number of contexts. It is recognised that the level of expectation on children's capabilities for using new technologies is rising particularly within the new National Curriculum for Computing with its strong emphasis on computer science and computer programming skills which we teach through the Purple Mash scheme.

EYFS

To understand technology needs to be programmed.
Use IPads, tonie box, telephones and cameras.

Online safety

While using iPads teachers will ensure child safety restrictions will be on.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online safety Login using their own login and logout, explaining why this is important. Open, save, share and print work.	Online safety Begin to understand how things are shared electronically for others to see. Send an email to a character. Explain what a digital footprint is and give examples of things that they wouldn't want to	Online safety Create a strong password. Contribute to a class blog with clear and appropriate messages. Understand how to search the Internet and how to think critically about the results that are returned. Identify some physical and emotional effects of	Online safety Understand that security symbols such as a padlock protect their identity online to prevent identify theft. Understand that malware is software that is specifically designed to disrupt, damage, or gain access to a computer. Determine whether activities that they undertake online, infringe another's' copyright.	Online safety Use the SMART rules as a source of guidance when online. Think critically about what they share online, even when asked by a usually reliable person to share something. Have clear ideas about good passwords. Have experienced how image manipulation could be used to upset them or others even using simple,	Online safety Recall and research the risks online including sharing location, secure websites, spoof websites, phishing and other email scams. Recall and research the steps they can take to protect themselves including protecting their digital footprint, where to go for help, smart rules and security software.

	be in their digital footprint.	playing/watching inappropriate content/games. Relate cyberbullying to bullying in the real world and have strategies for dealing with online bullying including screenshot and reporting.	Make conscious decisions about how to behave appropriately online and what to do if they feel unsafe or uncomfortable online. Take more informed ownership of the way that they choose to use their free time; recognising a need to find a balance between being active and digital activities.	freely available tools and little specialist knowledge. Cite all sources when researching and explain the importance of this. Select keywords and search techniques to find relevant information and increase reliability Show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each.	Understand how what they share impacts upon themselves and upon others in the long-term. Understand the consequences of promoting inappropriate content online, and how to put a stop to such behaviour when they experience it or witness it as a bystander. Take more informed ownership of the way that they choose to use their free time; recognising a need to find a balance between being active and digital activities.
Sorting, collecting and grouping data. Recording these results. Organise instructions for a simple recipe using an algorithm. Using directional keys, and debug it. Create an e-storybook that includes text, sound and additional pages. Explain what coding means. Design a scene with character that will perform basic actions.	Using an algorithm the repeat and timer commands. Create a table of data on a spreadsheet and use the data to create a block graph. Use a database to answer simple and more complex search questions. Learn how to effectively search online. Create art based upon impressionism, pointillism, abstract and surrealism.	Design, write and debug a program with an object that repeats actions. Use a spreadsheet program to create charts and graphs from data. Describe a cell location in a spreadsheet. Use two hands to type the letters on the keyboard. Read and respond to a series of email communications and attach files appropriately. Explore branching database, stimulations.	Explain what a variable is when used in programming. Using an algorithm, to make a simulation of an event and remove unwanted details. Understand why security symbols are used and what malware is. Make conscious decisions about how to behave appropriately online and what to do if they feel unsafe or uncomfortable online. Recognising a need to find a balance between being active and digital activities.	Create a game using coding including timer and score pad. Understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each. Use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied. Create their own database. Design and evaluate the setting and characters for a game. Explore how to edit polygon 3D models to design a 3D model for a purpose.	Create a simulation in which devices can be controlled. Use a spreadsheet to model a real-life situation and come up with solutions that can be applied to real life. Create a blog with a specific purpose, evaluate its effectiveness. Create and debug their own text-based adventure based upon a map. Understand the difference between the World Wide Web and the Internet. Know about their school network.

Create a spreadsheet that can count images as values. Name and record some types of technology used in school and out of school.	Create their own tune to express feelings using chosen sounds. Collect, organise and present data combining software packages.	Solve a maths investigation and present the results in a range of graphical formats.	Use data in a spreadsheet to create a line graph. Use text formatting to make a piece of writing fit for its audience and purpose. Recreate their own animation. Locate and analyse content on a web page to check credibility.	Use a concept map to create an informative text.	