Curriculum overview for parents and carers

Computing

Summary of key Computing learning for Reception to Year 5/6.

	EYFS: Reception		
Autumn 1	**Computing through continuous provision** Exploring different forms of technology in the children's daily classroom play.	Autumn 2	**Computing systems and networks** **Using a computer** Discovering the main parts of a computer and how to use the keyboard and mouse. Learning how to log in and out.
Spring 1	**Programming 1** **All about instructions** Receiving and giving instructions and understanding the importance of precise instructions.	Spring 2	**Computing systems and networks** **Exploring hardware** Tinkering and exploring with different computer hardware and learning to operate a camera.
Summer 1	**Programming 2** **Programming Bee-Bots** Learning about directions, experimenting with programming a Bee-Bot/Blue-Bot and tinkering with hardware.	Summer 2	**Data handling** **Introduction to data** Sorting and categorising data and introducing branching databases and pictograms.

Year 1/2 Cycle A

Autumn 1	**Computing systems and networks** **Improving mouse skills** Learning how to login and navigate around a computer; developing mouse skills; learning how to drag, drop, click and control a cursor to create works of art.	**Autumn 2**	**Programming 1** **Algorithms unplugged** Identifying where algorithms, decomposition and debugging can be found in relatable, familiar contexts. Following directions, learning why instructions need to be specific.
Spring 1	**Skills showcase** **Rocket to the moon** Developing keyboard and mouse skills through designing, building and testing. Creating a digital list of materials, using drawing software and recording data.	**Spring 2**	**Computing systems and networks** **What is a computer?** Exploring what a computer is by identifying how inputs and outputs work and how computers are used in the wider world. Designing a computerised invention.
Summer 1	**Programming 2** **Algorithms and debugging** Developing an understanding of; what algorithms are, how to program them and how they can be developed to be more efficient including the introduction of loops.	**Summer 2**	**Computing systems and networks** **Word processing** Developing touch typing skills, learning keyboard shortcuts and simple editing tools.
Online safety	**Online safety** **Online safety Y1** Learning how to stay safe online and how to manage feelings and emotions when someone or something has upset us.		

Year 3/4 Cycle A

Autumn 1	**Computing systems and networks** **Emailing** Sending emails with attachments and understanding what cyberbullying is.	Autumn 2	**Programming 1** **Scratch** Exploring the programme Scratch, following the predict > test > review cycle. Using 'loops' and programming an animation, story and game.
Spring 1	**Creating media** **Video trailers** Developing digital video skills to create trailers, with special effects and transitions.	Spring 2	**Computing systems and networks** **Website design** Learning how web pages and sites are created and how to embed media and links.
Summer 1	**Programming 2** **Further coding with Scratch** Revisiting the key features of the programme Scratch and beginning to use 'variables' in code scripts.	Summer 2	**Creating media** **Computational thinking** Solving problems effectively using the four areas of abstraction, algorithm design, decomposition and pattern recognition.
Online safety	**Online safety** **Online safety Y3** Learning the difference between fact, opinion and belief and how to deal with upsetting online content. Knowing how to protect personal information online.		

Year 5/6 Cycle A

Autumn 1	**Programming** **Micro:bit** Creating algorithms and programs that are used in the real world. Using the 'predict, test and evaluate' cycle to create and debug programs with specific aims.	**Autumn 2**	**Data handling** **Mars Rover 1** Learning about the Mars Rover, exploring how and why it transfers data including instructions, and how messages can be sent using binary code.
Spring 1	**Skills showcase** **Mars Rover 2** Exploring how the Mars rover: moves, follows instructions, collects and sends data; understanding how computers work, what data is and how it is transferred.	**Spring 2**	**Computing systems and networks** **Bletchley Park and the history of computers** Discovering the history of Bletchley Park, historical figures and the importance of code breaking and passwords. Designing a computer of the future and creating an audio advert for their designs.
Summer 1	**Programming** **AI** Exploring what AI is and how it generates text, images and code. Learning about creating and refining prompts to improve AI responses while also considering the ethical implications of AI and its potential to replace human roles.	**Summer 2**	**Skills showcase** **Inventing a product** Designing a product, pupils: evaluate, adapt and debug code to make it suitable for their needs and designing products in CAD and creating a website and video.
Online safety	**Online safety** **Online safety Y5** Learning about app permissions; the positive and negative aspects of online communication; that online information is not always factual; how to deal with online bullying and managing our health and wellbeing.		