Computing overview with concepts and links to the National Curriculum

Concept:	Description
Algorithms	Writing and using algorithms to perform given tasks successfully.
Programming	Writing software to allow computers to solve problems. Involving the use of and understanding of abstraction, debugging, computational thinking, logic, problem solving and sequencing.
Data and Information	How data is stored, organised, and used to represent real-world artefacts and scenarios. Manipulation of data within programs
Computer systems and Networks	What is a computer, how do its parts function together as a whole? Understand how networks can be used to retrieve and share information and come with associated risks.
Creating media	Select and create a range of media including text, images, sounds and video to complete a desired outcome.
Design and development	Planning, creating and evaluating computing artefacts.
Effective use of tools	Use software tools to support computing work. Selection of appropriate tools to complete a desired outcome.

Impact of technology	How individuals, systems, and society interact with computer systems. Analysing the positives and negatives of computerised systems.
Safety and security	Understanding risks when using technology and how to protect individuals and systems.

Cycle A   2022 / 2023

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1/2	Digital Writing 1.4, 1.6 `CM`, `ET`	Grouping Data 1.4, 1.6 `DI`	Data and Information – Pictograms 1.1, 1.2, 1.3, 1.4 `DI`, `ET`	Programming – Introduction to animation 1.1, 1.2, 1.3, 1.4 `AL`, `DD`, `PG`	Programming – An introduction to Quizzes 1.1, 1.2, 1.3 `PG`	Creating Music 1.4 `CM`
Year 3/4	Desktop Publishing 2.5, 2.6 `CM`	Branching Databases 2.6 `DI`	Programming – Events in action 2.1, 2.2, 2.3, 2.6 `ET` `PG`	Creating media- photo editing 2.5, 2.6, 2.7 `CS`, `DI`	Data logging 2.2, 2.6 `DI`	Programming – Repetition in games. 2.1, 2.2, 2.3, 2.6 `AL`, `PG`
Year 5/6	Creating Media – Vector drawings. 2.6, `CM`, `DI`, `ET`	Flat-file databases 2.5, 2.6 `DI`, `ET`	Selection in quizzes 2.1, 2.2, 2.3, 2.6 `AL`, `DD`, `PG`	Selection in physical computing 2.1, 2.2, 2.3, 2.6 `CS`, `PG`	3D Modelling 2.6, 2.7 `CM`, `ET`, `DD`	Sensing 2.1, 2.2, 2.3, 2.6 `CS`, `DD`, `PG`

Cycle B   2023 / 2024

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1/2	Technology around us 1.4, 1.5, 1.6 `CS`, `IT`	Information Technology around us 1.4, 1.5, 1.6 `CS`, `NW`, `SS`	Digital Painting 1.4 `CM`, `ET`, `DD`	Digital Photography 1.4, 1.5, 1.6 `CM`, `CS`, `DD`, `ET`	Moving a robot 1.1, 1.2, 1.3, 1.5 `AL`, `DD`, `IT`, `PG`	Robot Algorithms 1.1, 1.2, 1.3, 1.4 `AL`, `DD`, `PG`
Year 3/4	Stop-frame Animation 2.6 `CM`, `DD`, `ET`	Audio editing 2.5, 2.6, 2.7 `CM`, `CS`, `DD`, `DI`, `ET`,	Sequence in music 2.1,2.2,2.3,2.6 `AL`, `CM`, `DD`, `ET` `PG`	Repetition in shapes 2.1, 2.2, 2.3. 2.6 `AL`, `ET`, `PG`	Connecting Computers 2.2, 2.4, 2.6 `CS`, `IT`, `NW`	The Internet 2.4, 2.5, 2.6, 2.7 `NW`, `SS`, `CM`, `IT`
Year 5/6	Sharing information 2.1, 2.2, 2.4, 2.6, 2.7 `CS`, `IT`, `NW`, `DD`, `ET`	Communication 2.1, 2.4, 2.5, 2.6, 2.7 `ET`, `NW`, `IT`, `DD`	Introduction to spreadsheets 2.6 `DI`, `ET`, `PG`	Video editing 2.5, 2.6, 2.7 `CM`, `CS`, `DD`, `ET`, `SS`	Web page creation 2.5, 2.6, 2.7 `CM`, `DD`, `ET`, `IT`, `NW`, `SS`	Variables in games 2.1, 2.2, 2.3, 2.6 `PG`, `DD`