Our scheme of work fulfils the statutory requirements outlined in the **National Curriculum (2014)**. The National Curriculum Programme of Study for Computing aims to ensure that all pupils:

- ★ Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- ★ Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

→ Computer Science

- ★ Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

→ Information Technology

- ★ Are responsible, competent, confident and creative users of information and communication technology.

→ Digital Literacy

We have identified these three strands which run throughout our scheme of work:

Key areas

We have categorised our lessons into the five key areas below, which we return to in each year group making it clear to see prior and future learning for your pupils and how what you are teaching fits into their wider learning journey.

Computing systems and networks	Programming	Creating media	Data handling	Online safety
Identifying hardware and using software, while exploring how computers communicate and connect to one another.	Understanding that a computer operates on algorithms, and learning how to write, adapt and debug code to instruct a computer to perform set tasks.	Learning how to use various devices — record, capture and edit content such as videos, music, pictures and photographs.	Ensuring that information is collected, recorded, stored, presented and analysed in a manner that is useful and can help to solve problems.	Understanding the benefits and risks of being online — how to remain safe, keep personal information secure and recognising when to seek help in difficult situations.

A spiral curriculum

Kapow Primary's Computing scheme of work has been designed as a spiral curriculum with the following key principles in mind:

- ✓ Cyclical: Pupils revisit the five key areas throughout KS1 and KS2.
- ✓ Increasing depth: Each time a key area is revisited, it is covered with greater complexity.
- ✓ Prior knowledge: Upon returning to each key area, prior knowledge is utilised so pupils can build on previous foundations, rather than starting again.

Is there any flexibility in the Kapow Primary Computing scheme?

Our Computing scheme of work is organised into units.

Within each unit, lessons must be taught in order as they build upon one another.

Across a single year group, units themselves do not need to be taught in the suggested order, with the exception of the numbered units which should be taught in the correct order (e.g. **Programming 1** before **Programming 2**). We would also suggest that the **Autumn 1** unit is taught first each year where possible.

The flexibility in the order the units can be taught, allows schools to adapt the planning to suit their school and to make use of cross-curricular links available.

Computing LTP Based on the Condensed Kapow Scheme - created Summer 2021 Subject Lead: Katie White

	Unit 1	**Unit 2**	**Unit 3**	**Unit 4**
EYFS	Computing Systems and networks Using a computer	Programming 1 All about instructions	Programming 2 Programming Bee-Bots	Data Handling Introduction to data
Year 1	Computing Systems and networks Improving mouse skills	Programming 1 Algorithms unplugged	Programming 1 Programming Bee-Bot VIRTUAL	Data Handling Introduction to data
Year 2	Computing Systems and networks 1 What is a computer? KP covering Term 1 Sept 2022 Week 2-6	Programming Algorithms and debugging KP covering	Online Safety Online Safety KP covering	Data Handling International Space Station KP covering
Year 3/4	Computing Systems and networks 1 Year A: Networks and the internet (Y3) Year B: Collaborative learning (Y4)	Programming Year A: Scratch (Y3) Year B: Further coding with Scratch (Y4)	Computing systems and networks 3 Year A: Journey inside a computer (Y5) Year B: HTML (Y4)	Year A: Creating media Video Trailers – IPADS (Y3) Year B: Programming 2 Computational thinking (Y4)
Year 5/6	Computing Systems and networks Year A: Search engines (Y5) Year B: Bletchley Park (Y6)	Programming Year A: Sonic Pi (Y5) Year B: Intro to Python (Y6)	Data Handling Year A: Mars Rover 1 (Y5) Year B: Big Data 1 (Y6)	Year A: Online Safety Online Safety (Y5) Year B: Creating media History of computers (Y6)

Safer Internet Day - Tuesday 7th February 2022