



## Computing Intent

Our intent is to expand and deepen children's knowledge, understanding and interest in Computing within a rich and relatable sequence of learning. At Canonbury, the Computing curriculum aims to inspire **responsibility, creativity and collaboration**.

**Online Safety** is essential to our curriculum. Our priority is to ensure our children create, consume and engage in this world as responsible and self-regulated individuals. We intend our children to understand how to portray themselves positively and responsibly online, while also having an appropriate awareness of potential dangers and how to keep safe. We want them to **grow** their personal and social skills and manage relationships in the same way that they do in the classroom and wider school environment.

Technology surrounds us in our 21<sup>st</sup> century workplaces, homes and environments. In line with the National curriculum (2014), we will provide children with the opportunity to develop and refine **essential digital skills**. These will support children to grow an understanding of the **difference that technology makes in the world** and in our lives. Starting in the Early Years, children learn that inside every machine and piece of technology, there is something that makes it work. In Key Stages One and Two, they have opportunities to apply their skills to **understand and design** games, utilities and applications, using **code, programming and script**. In upper Key Stage Two, children can take a step further to becoming entrepreneurs, making choices in how they use technology to solve problems.

When working on computing tasks, children have opportunities to develop and apply relevant **language** and **vocabulary** to **plan** and **explain** their programming and processes.

The future of technology is exciting and full of adventure as we seek to use it to make improvements to our lives and the world around us. When working on a computing task children will have opportunities to develop and share their skills and ideas through purposeful **collaboration**, so that they focus on the positive application and influence that can be found in technology.

### Early Years

By exposing pupils to a range of digital technology, pupils reinforce their understanding of the world around them while building early computing skills in a positive, purposeful context.

In early Years, pupils learn to:

- know where to go for help and support when they have concerns about something they see online
- use a mouse and keyboard to follow a series of steps to select and use simple learning software
- use simple controls on tablets to record their work
- use talking clipboards and sound recorders to record their own ideas/ stories
- explore defunct IT equipment in their play to see there are connected parts inside
- use remote control and programmable toys

### **Key Stage One**

In Key Stage One, pupils continue to recognise digital technology in their environment and begin to explore its use and impact in the world. They gain an understanding of what algorithms are, how they are used as programmes on digital devices and the importance of precise instructions.

In Key Stage One pupils learn to

- use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- understand what algorithms are and predict the outcome of simple algorithms
- programme robotic toys
- create, edit, store, and retrieve digital content using simple apps and online software.
- recognise common uses of information technology beyond school

### **Key Stage Two**

In Key Stage Two, pupils

- practise using technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
- Learn about the opportunities the World Wide Web offers for positive collaboration and communication
- Learn about the various search engines available to them and how these computing networks communicate with each other and the user
- Develop an understanding and engage with a range of programs, software, devices, and websites, within the principles of Online Safety
- develop and expand their knowledge of computational systems and digital technology.
- design, write and debug programmes that have specific goals and target audiences
- use sequence, selection, and repetition in programmes and understand how variables, inputs, and outputs can affect the programmed algorithm
- build on their logical reasoning skills to deconstruct problems into smaller, more manageable parts
- debug and correct errors in code written by themselves and their peers. KS2 pupils are able to evaluate their work, and recognise ways to improve.