

Computing: Progression of Skills

Early Years Foundation Stage (EYFS)

(Supports early learning goals in Understanding the World & Communication and Language)

Computer Science

Children will:

- Begin to understand that digital devices follow instructions
- Use simple programmable toys (e.g. Bee-Bots) to give instructions
- Explore cause and effect through simple programming apps and games
- Develop early problem-solving skills through trial and error

Information Technology

Children will:

- Use technology to create content such as pictures, simple stories or drawings
- Use basic digital tools (e.g. camera, tablet, drawing apps)
- Develop control of devices such as tablets, keyboards and touchscreens

Digital Literacy / Online Safety

Children will:

- Begin to understand that technology is used in everyday life
- Talk about how to use technology safely with support
- Know that they should ask an adult for help when unsure

Key Stage 1 (Years 1 and 2)

Computer Science

Children will:

- Understand what an algorithm is and create simple algorithms
- Write and follow simple programs (including sequences)
- Debug simple programs
- Use logical reasoning to predict the outcome of simple programs

Information Technology

Children will:

- Use technology purposefully to create, organise, store, retrieve and manipulate digital content
- Use simple text, images and multimedia tools to create work
- Save and retrieve work independently
- Begin to recognise common uses of information technology beyond school

Digital Literacy / Online Safety

Children will:

- Use technology safely and respectfully
- Keep personal information private
- Recognise acceptable and unacceptable online behaviour
- Know where to go for help if something online makes them uncomfortable

Key Stage 2 (Years 3–6)

(KS2 is taught as a whole, with increasing depth and complexity across years)

Computer Science

Children will:

- Design, write and debug programs that achieve specific goals
- Use sequence, selection (if/then) and repetition (loops)
- Work with variables and events
- Use logical reasoning to explain how algorithms work
- Understand computer networks, including the internet
- Understand how data is represented and stored digitally

Information Technology

Children will:

- Use a range of software to create, edit and combine digital content
- Select appropriate tools to present information clearly and effectively

- Collect, analyse and evaluate data using technology
- Create digital content for a specific audience and purpose
- Understand how search technologies work and evaluate digital content

Digital Literacy / Online Safety

Children will:

- Use technology responsibly, respectfully and securely
- Understand the importance of strong passwords and protecting personal data
- Recognise risks such as cyberbullying, scams and inappropriate content
- Understand their digital footprint and online reputation
- Know how and where to report concerns
- Demonstrate respectful communication and behaviour online

Expected Outcomes by the End of KS2

Children will:

- Be confident, competent users of technology
- Apply computing skills across the wider curriculum
- Create and debug programs independently
- Use digital tools safely, ethically and responsibly
- Be well prepared for further computing study at secondary school