



INTENT / Aims

Our computing curriculum has been developed from the National Curriculum and with guidance from the National Centre for Computing Education (NCCE) to offer children experience of what technology exists, how this technology works and how can be used to benefit them in different ways. The themes of computational thinking, information technology and computer science will inspire and train them in the use of a variety of software, hardware, information use and sharing, and programming, all while embedding an ethos of e-safety to ensure the children are able to use the technology and skills they have learnt responsibly, safely and respectfully. The key three areas of learning are:

- Computer Science (Programming/coding)
- Digital Literacy
- Information Technology.

Whilst computing is not specifically taught, the Early Learning Goals within the EYFS curriculum allow the children to develop key skills that will support their computing knowledge in future years. The speaking skills they will develop, alongside their experience of creating with materials, will support their computational thinking and programming skills, giving them base knowledge of how they can share ideas and information with each other. By learning to build relationships, the children will gain transferrable skills to support them communicating online with others. Finally their learning of the past and present and the difference between them will support them in understanding the similarities and differences in technology through time.

Implementation

In order for children to know more and remember more, each key area of learning will be covered twice over the year as half-termly units. Due to the nature of computing as a means to compliment and embed other areas of the curriculum, these will be planned to fit in where appropriate to other subjects. For example, if they are learning about a particular historical period they will be able to learn and apply skills in searching for information within Digital Literacy to find out more about it. They will be able to present and share what they have learnt in different topics through Information Technology and through Computer Science (Programming/Coding). E-safety is embedded within the three key areas of learning as the initial lesson of each half term, so that the children can learn about the respectful and safe use of technology, software or skills while they are gaining experience and understanding of it.

Through these lessons, it is intended that the children build an understanding on how technology can be used safely, respectfully and responsibly to instil an interest in the ways technology can support their everyday lives.

Impact

Although not all lessons will require the computing suite, the children will be exposed to a range of hardware and software throughout their time in the school. This technology, and the skills they learn for their use, can then be used to complement other areas of the curriculum. The learning environment around the computing suite will work as a learning wall that is built upon within each lesson, allowing the children to create a bank of knowledge, skills and vocabulary to refer back to in each lesson. The vocabulary within each area of learning will be revisited and displayed within the computing suite for each year group in order to support the children in recalling and correctly using the language they have learnt.

Impact will be measured through questioning built into lessons, child-led assessment against the LO, and tasks to apply and showcase the skills they have learnt.

By EOEYFS, children will know:

How to work and play cooperatively and take turns with others.
How to form positive attachments to adults and friendships with peers.
How to show sensitivity to their own and to others' needs .

By EOKS1, children will know:

Understand that algorithms are programs, create and debug simple programs, and use logical reasoning to predict the behaviour of simple programs .
How to recognise common uses of information technology beyond the wider school life.
How to use technology purposefully to create, organise, store, manipulate and retrieve digital content .
Use technology safely and respectfully.

By EOKS2, children will know:

How to design, write and debug programs by controlling or simulating physical systems, and by using variables and various forms of input and output.
About computer networks including the internet and how they can provide multiple services, such as the world wide web, using these in a discerning and evaluative way.
How to select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
The opportunities technology offers for communication and collaboration.
How to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.



	EYFS Knowledge & Skills	Year 1 Knowledge & Skills	Year 2 Knowledge & Skills	Year 3 Knowledge & Skills	Year 4 Knowledge & Skills	Year 5 Knowledge & Skills	Year 6 Knowledge & Skills
NC Objective		Understand that algorithms are programs, create and debug simple programs, and use logical reasoning to predict the behaviour of simple programs .		Know how to design, write and debug programs by controlling or simulating physical systems, and by using variables and various forms of input and output.			
Computer Science (Programming /Coding)	Offer explanations for why things might happen . Share their creations, explaining the process they have used	Understand what algorithms are. Understand how algorithms are implemented as programs on digital devices. Create and debug simple programs.	Understand that algorithms are programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.	Design, write and simple programs that accomplish specific goals including controlling or simulating physical system. Use sequence, selection, and repetition in programs.	Design, write and debug simple programs that accomplish specific goals solve problems by decomposing them into smaller parts . Use sequence, selection, and repetition in programs. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
E safety	Know how to work and play cooperatively and take turns with others. Know how to form positive attachments to adults and friendships with peers. Know how to show sensitivity to their own and to others' needs .	Use technology safely and respectfully.	Use technology safely and respectfully.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.



	EYFS Knowledge & Skills	Year 1 Knowledge & Skills	Year 2 Knowledge & Skills	Year 3 Knowledge & Skills	Year 4 Knowledge & Skills	Year 5 Knowledge & Skills	Year 6 Knowledge & Skills
NC Objective		Understand how to recognise common uses of information technology beyond the wider school life.		Know about computer networks including the internet and how they can provide multiple services, such as the world wide web, using these in a discerning and evaluative way.			
Digital Literacy	Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.	Recognise common uses of information technology beyond school life.	Recognise common uses of information technology beyond the wider school life.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web. Use search technologies effectively.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web;. Use search technologies effectively, appreciate how results are selected and ranked.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Understand computer networks including the internet; how they can provide multiple services, such as the world wide web. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.
E –safety	How to work and play cooperatively and take turns with others. How to form positive attachments to adults and friendships with peers. How to show sensitivity to their own and to others' needs.	Use technology safely and respectfully.	Use technology safely and respectfully.	Know about the opportunities computer science offers for communication and collaboration.	Know about the opportunities computer science offers for communication and collaboration.	Know about the opportunities computer science offers for communication and collaboration.	Know about the opportunities computer science offers for communication and collaboration.



	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NC Objective	Knowledge & Skills	Knowledge & Skills	Knowledge & Skills	Knowledge & Skills	Knowledge & Skills	Knowledge & Skills	Knowledge & Skills
Information Technology	Share their creations, explaining the process they have used	Use technology purposefully to create, organise, store, digital content.	Use technology purposefully to , manipulate and retrieve digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
E safety	<p>Know how to work and play cooperatively and take turns with others.</p> <p>Know how to form positive attachments to adults and friendships with peers.</p> <p>Know how to show sensitivity to their own and to others' needs .</p>	<p>Know about how to keep personal information private</p> <p>Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p>	<p>Know about how to keep personal information private</p> <p>identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>