

Rationale and National Curriculum links to subject



Subject Overview

The Langney 2024-2025 Computing End of Year Expectations (EoYE) outlines a comprehensive and engaging computing curriculum for students from EYFS to KS2. The curriculum is structured around six units, delivered across three terms each year. These units cover key aspects of Information Technology, Computer Science, Electronic Safety, Handling Data, and iMedia. The units are designed to provide a balanced and progressive learning experience, equipping students with essential knowledge and skills for the digital age.

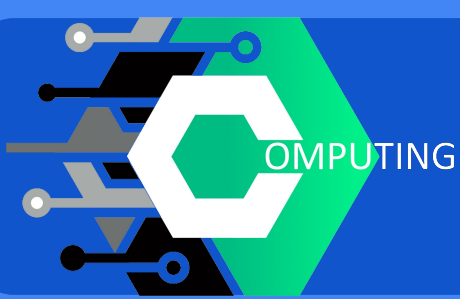
Aims and Objectives

The primary aim of the Langney Computing EoYE is to develop students into confident and capable digital citizens. This is achieved through a curriculum that fosters computational thinking, problem-solving skills, and creativity in digital environments. The objectives of the curriculum are to:

- Equip students with a fundamental understanding of how computers work and the wider impact of technology on society.
- Develop proficiency in using a range of digital tools and applications, including programming languages.
- Cultivate responsible and safe online behaviour, enabling students to navigate the digital world confidently.
- Promote computational thinking and problem-solving skills through activities like coding and robotics.
- Encourage creativity and expression through digital art, animation, and storytelling.

Progression of Knowledge and Skills

The Langney Computing EoYE is built upon a clear progression of knowledge and skills, ensuring that learning builds upon previous experiences. Students begin in EYFS by exploring basic computer components and input/output devices. They are introduced to robotics and the concept of algorithms through playful activities. As they progress through KS1, they build on these foundations, learning to use programming languages like Logo and Scratch to control robots and create interactive programs. They also develop their data handling skills, learning to collect, organise, and analyse data using spreadsheets. Throughout KS2, students continue to advance their programming skills, transitioning to more complex programming languages like Python in Year 6. They also engage with wider computing concepts like the World Wide Web, networks, and hardware/software relationships. The curriculum also places a strong emphasis on online safety, with dedicated units throughout each Key Stage that address age-appropriate issues.



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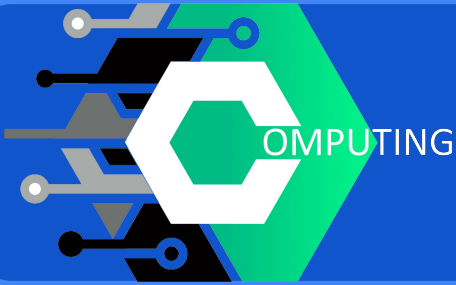


Teaching and Learning Approaches

The Langney Computing EoYE encourages a variety of teaching and learning approaches to cater to different learning styles and keep students engaged. Active learning strategies are prioritised, with a focus on hands-on activities, project-based learning, and problem-solving tasks. The use of robotics, programming languages, and multimedia tools provides opportunities for students to apply their learning in practical and creative ways. Collaborative learning is also encouraged, with students working together on projects and sharing their ideas. The curriculum also incorporates elements of unplugged learning, where students engage with computing concepts away from screens, using physical activities and games to reinforce their understanding. This blended approach to teaching and learning ensures that students develop a deep and meaningful understanding of computing concepts, whilst also fostering their creativity, problem-solving skills, and digital fluency.



Langney Primary Academy



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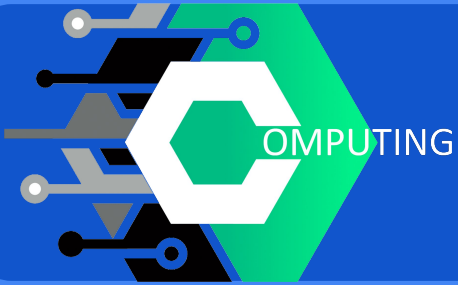


National Curriculum programme of study

EYFS

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Reception					
Information Technology <i>Devices and Networks</i>	Computer Science 1 <i>Robotics</i>	Digital Literacy <i>Online Safety</i>	Digital Literacy <i>Handling Data</i>	Computer Science 1 <i>Coding and Problem Solving</i>	Digital Literacy <i>iMedia</i>
	✓			✓	
	✓			✓	
	✓			✓	
✓		✓	✓		✓
✓	✓	✓	✓		✓
		✓			



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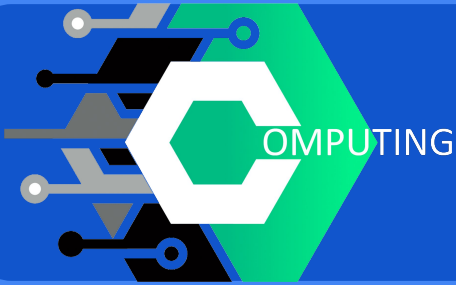


National Curriculum programme of study

Key Stage 1

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
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	Year 1					
	Information Technology	Computer Science 1	Digital Literacy	Digital Literacy	Computer Science 1	Digital Literacy
	<i>Devices and Networks</i>	<i>Robotics</i>	<i>Online Safety</i>	<i>Handling Data</i>	<i>Coding and Problem Solving</i>	<i>iMedia</i>
• understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions		✓			✓	
• create and debug simple programs		✓			✓	
• use logical reasoning to predict the behaviour of simple programs		✓			✓	
• use technology purposefully to create, organise, store, manipulate and retrieve digital content	✓		✓	✓		✓
• recognise common uses of information technology beyond school	✓	✓	✓	✓		✓
• use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.			✓			



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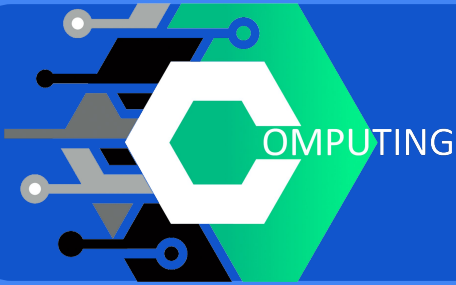


National Curriculum programme of study

Key Stage 1

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
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- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
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Year 2					
Information Technology	Computer Science 1	Digital Literacy	Digital Literacy	Computer Science 1	Digital Literacy
<i>Devices and Networks</i>	<i>Robotics</i>	<i>Online Safety</i>	<i>Handling Data</i>	<i>Coding and Problem Solving</i>	<i>iMedia</i>
	✓			✓	
	✓			✓	
	✓			✓	
✓		✓	✓		✓
✓	✓	✓	✓		✓
		✓			



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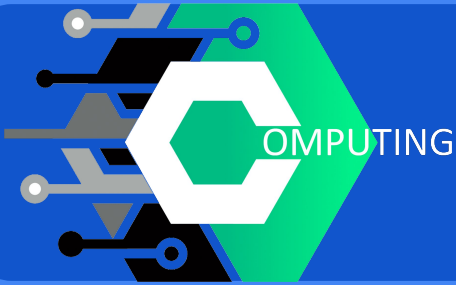
National Curriculum programme of study

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- use sequence, selection, and repetition in programs; 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
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration.
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating 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.
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Year 3

Information Technology Devices and Networks	Computer Science 1 Robotics	Digital Literacy Online Safety	Digital Literacy Handling Data	Computer Science 1 Coding and Problem Solving	Digital Literacy iMedia
	✓			✓	
	✓			✓	
	✓		✓	✓	
✓					
✓					
✓			✓		✓
		✓			

Key Stage 2



Rationale and National Curriculum links to subject



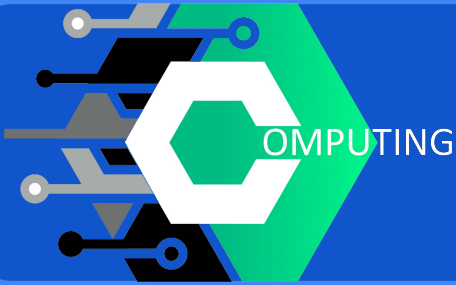
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Year 4

Information Technology Devices and Networks	Computer Science 1 Robotics	Digital Literacy Online Safety	Digital Literacy Handling Data	Computer Science 1 Coding and Problem Solving	Digital Literacy iMedia
	✓			✓	
	✓			✓	
	✓		✓	✓	
✓					
✓					
✓			✓		✓
		✓			

Key Stage 2



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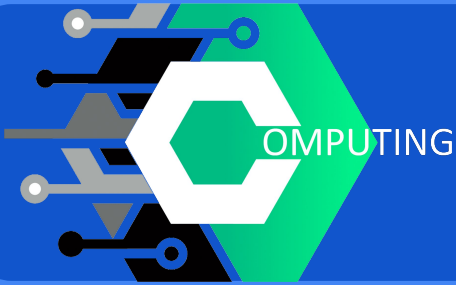
National Curriculum programme of study

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Year 5

Information Technology Devices and Networks	Computer Science 1 Robotics	Digital Literacy Online Safety	Information Technology Digital Design	Computer Science 1 Coding and Problem Solving	Digital Literacy iMedia
	✓			✓	
	✓			✓	
	✓			✓	
✓					
✓					
✓			✓		✓
		✓			

Key Stage 2



Rationale and National Curriculum links to subject



National Curriculum programme of study

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output.
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- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Year 6

Information Technology Devices and Networks	Computer Science 1 Robotics	Digital Literacy Online Safety	Information Technology Digital Design	Computer Science 1 Coding and Problem Solving	Digital Literacy iMedia
	✓			✓	
	✓			✓	
	✓			✓	
✓					
✓					
✓			✓		✓
		✓			

Key Stage 2