



Lotus
Academy

Computing Curriculum Learning for Life



Computing Overview

Intent

The Lotus Academy Computing curriculum aims to equip pupils with the knowledge, skills and confidence to participate safely, creatively and responsibly in an increasingly digital and AI-enabled world. Through a progressive curriculum from Key Stage 2 to Key Stage 4, pupils develop computational thinking, digital literacy, computer science knowledge and an understanding of emerging technologies, enabling them to become informed digital citizens and lifelong learners.

As Artificial Intelligence becomes an integral part of everyday life, our curriculum introduces pupils to AI in age-appropriate ways. Pupils learn what AI is, how it is used in society, its benefits and limitations, and the importance of using AI ethically, safely and responsibly. Pupils will develop the critical thinking skills needed to question AI-generated content, recognise bias and misinformation, understand data privacy, and make informed decisions about the use of intelligent technologies.

Alongside the study of computer science, pupils develop creativity through digital media, preparing them for further study and employment within the digital and creative industries. In Year 9, pupils have the opportunity to work towards *the Entry Level/Level 1 Essential Digital Skills Qualification (EDSQ)*, enabling them to develop and demonstrate practical digital skills required for learning, employment and everyday life. The qualification supports pupils in becoming confident and capable users of digital technologies while reinforcing the digital literacy skills embedded throughout the computing curriculum. At Key Stage 4, pupils have the opportunity to study *Creative iMedia*, applying technical knowledge and creative design skills to produce digital products such as graphics, interactive media, websites and visual assets. This vocational pathway complements the academic study of computing by developing project management, communication, design thinking and industry-standard digital production skills.

The curriculum is designed to:

- Develop confident, independent and responsible users of technology.
- Build computational thinking through problem-solving, logical reasoning and programming.
- Foster creativity through digital media production, design and the purposeful use of AI-assisted technologies where appropriate.
- Develop an understanding of computer systems, networks, data and how AI technologies are trained and applied.
- Encourage pupils to evaluate the reliability, accuracy and ethical implications of AI-generated information.
- Promote digital resilience, online safety and responsible digital citizenship.
- Prepare learners for further study, employment and careers within the computing, digital technology and creative media sectors.
- Provide opportunities for pupils to achieve recognised digital qualifications that validate their practical skills and readiness for further education and employment.

Lotus has developed the learning so it's carefully sequenced that new knowledge builds upon prior understanding. Pupils revisit key concepts throughout their education, allowing them to deepen their understanding and apply their learning in increasingly complex contexts. Through practical programming, digital media creation, collaborative problem-solving and real-world projects, pupils become confident, adaptable and ethical users and creators of technology, ready to succeed in an ever-evolving digital society.



In lower school, pupils begin to learn how to use computers and other digital devices. They have one computing lesson each week to build their confidence and learn new skills. Lessons are practical, fun and hands-on. Pupils learn by exploring, trying new things and practising their skills as well as develop their problem-solving skills, think carefully and work within increasing independence. As they move into middle school, they will increase and enhance their knowledge and understanding based around the three computing strands of Computer Science, Information Technology and Digital Literacy - pupils learn how computers work, how to create digital projects and how to use technology safely.

Within upper school, pupils continue to access lessons which further develops their practical computational skills which they will need in everyday life, further education and future employment. Lessons are practical and help pupils build confidence, independence and problem-solving skills when using technology. Students learn how to use a range of digital tools safely and effectively. For some pupils, who have the option to follow the Creative iMedia qualification - (OCR Cambridge National Creative iMedia (J834)). Pupils have five computing lessons each week to develop the knowledge and practical skills needed for the course. Lessons are practical and give students the opportunity to build creative and technical skills. Students learn how to plan, create and improve digital media while developing confidence, independence and problem-solving skills.

The computing curriculum is built around three main areas: -

1.Computer Science

Pupils learn how computers work and how to solve problems using programming. They develop their understanding of:

- Programming
- Algorithms (step-by-step instructions)
- Problem solving
- Computer systems

2.Information Technology

Pupils learn how to use technology for everyday tasks and creative projects. They develop skills in:

- Creating digital documents and media
- Organising and using data
- Digital communication
- Using a range of software confidently

3.Digital Literacy

Pupils learn how to use technology safely, responsibly and confidently. This includes:

- Online safety
- Digital citizenship
- Responsible use of technology
- Cyber awareness



Online Safety

Online safety is taught throughout every year group and is included in all areas of the computing curriculum as well as other subject areas such as PSHE.

Pupils learn about:

- Keeping personal information private.
- Creating strong passwords.
- Understanding digital footprints.
- Preventing and reporting cyberbullying.
- Spotting fake news and false information.
- Respecting copyright.
- Safe online relationships.
- Digital wellbeing and healthy screen use.
- Artificial intelligence (AI) and how it is used.
- Using social media responsibly.
- Protecting personal data.

Inclusion

In all year groups, the computing curriculum is designed so that every pupil can take part and experience success, regardless of their starting point. Teaching is adapted to meet individual needs through:

- Clear step-by-step instructions.
- Extra support and guidance where needed.
- Activities that provide the right level of challenge.
- Accessible learning resources.
- Assistive technology where appropriate.
- Practical and visual learning activities.

Pupils are encouraged to build confidence and resilience, work independently and celebrate their progress. All pupils will leave Lotus with a secure understanding of the key aspects of computers and digital technology. They will have the confidence to use a range of software and digital tools, understand how technology is used in everyday life and the workplace, and have the skills needed to support them in further education, training and future employment.

Curriculum Design

The ICT curriculum is planned so that pupils build their skills step by step from Key Stage 1 through to Key Stage 4. Learning starts with simple computer skills before moving on to programming, digital media and understanding how technology works.

Pupils revisit important skills and knowledge throughout each key stage. This helps them remember what they have learned and become more confident when using technology.

Lessons may include:

- Teacher demonstrations.
- Guided activities.
- Independent tasks.
- Working with a partner or small group.
- Practical programming activities.
- Short recap activities to remember previous learning.
- Time to review and improve their work.

Teaching includes:

- Hands-on activities away from the computer where appropriate.
- Block-based programming for younger pupils.
- Text-based programming from Key Stage 3.
- Real-life examples to show why ICT skills are important.
- Links with learning in other subjects where appropriate.

Assessment

Assessment takes place throughout each unit of work and helps teachers understand what pupils know and what they need to practise next.

Assessment includes:



- Short quizzes.
- Practical computer tasks.
- Teacher observation.
- Digital work completed by students.
- Self-assessment and peer assessment.
- End-of-unit tasks.

Teachers use assessment to plan future lessons and provide extra support where it is needed.



Core Curriculum	Autumn		Spring		Summer	
Year 3/4 – Cycle A	<u>Information Technology</u> – Using a Computer	<u>Digital Literacy</u> – Online Safety	<u>Computer Science</u> – Botley Programming	<u>Information Technology</u> - Digital Photography	<u>Digital Literacy</u> – Searching the internet safely	<u>Computer Science</u> – Basic programming with Scratch
Year 3/4 – Cycle B	<u>Digital Literacy</u> - Cyberbullying	<u>Information Technology</u> – Desktop Publishing	<u>Computer Science</u> – Introduction to Algorithms	<u>Digital Literacy</u> – Media Balance and Screen Time	<u>Information Technology</u> – Digital Music	<u>Computer Science</u> - Using Kodable (Programming)
Year 5/6 – Cycle A	<u>Computer Science</u> – Coding with Micro:bit	<u>Information Technology</u> - Creating an E-Book	<u>Digital Literacy</u> – Social Media Awareness	<u>Information Technology</u> - Healthy Eating (Spreadsheets)	<u>Computer Science</u> – Computer Systems & Networks	<u>Digital Literacy</u> – AI and Digital Responsibility
Year 5/6 – Cycle B	<u>Information Technology</u> – Creating a Gaming Cover (Image Editing)	<u>Digital Literacy</u> – Online Reputation	<u>Information Technology</u> - Stop Motion Animation	<u>Computer Science</u> – Minecraft Education (Programming)	<u>Digital Literacy</u> - Preparing for Life in a Digital World	<u>Computer Science</u> – Programming with Variables in Games
Year 7/8 – Cycle A	<u>Information Technology</u> – Audio Recoding & Podcasting	<u>Computer Science</u> – Programming with Scratch (Games)	<u>Information Technology</u> – Website Design	<u>Digital Literacy</u> – Online Relationships	<u>Computer Science</u> – Cyber Security Fundamentals	<u>Digital Literacy</u> – Reliable Information Online
Year 7/8 – Cycle B	<u>Digital Literacy</u> – Magazine & Poster Design	<u>Information Technology</u> – Video Production	<u>Computer Science</u> – Python Programming	<u>Information Technology</u> - Interactive Game (Presentation Software)	<u>Digital Literacy</u> – Digital Communication & Media	<u>Computer Science</u> – Creating your own app
Year 10	<u>Computer Basics</u> - Understanding hardware, software, operating systems, logging in securely, using peripherals, accessibility features	<u>Internet Research</u> - Effective searching, keywords, identifying reliable sources, saving information.	<u>Word Processing</u> - Creating and formatting documents, fonts, paragraphs, images, tables, page layout, spell checking	<u>Email & Digital Communication</u> - Writing professional emails, attachments, subject lines, etiquette	<u>Online Safety</u> - Passwords, privacy, cyberbullying, digital footprint, recognising scams	<u>Employability & Digital Skills</u> - Keyboard skills, using workplace software, teamwork using digital tools
Year 11	<u>Computer Basics</u> - Troubleshooting common problems, managing settings, understanding cloud	<u>Internet Research</u> - Evaluating websites, recognising misinformation, referencing sources,	<u>Word Processing</u> - Professional documents such as CVs, letters, reports, templates, styles,	<u>Email & Digital Communication</u> - Managing inboxes, calendars, collaborative communication,	<u>Online Safety</u> - Data protection, phishing, malware, safe online behaviour, responsible social media use, AI.	<u>Employability & Digital Skills</u> - Creating CVs, job applications, interview presentations, digital



Core Curriculum	Autumn		Spring		Summer	
	computing, maintaining devices.	ethical use of information.	references and collaboration tools.	online meetings, workplace communication.		portfolios, workplace expectations.

Qualifications Curriculum	Autumn		Spring		Summer	
Year 9	Entry Level/Level 1 Essential Digital Skills Qualification (EDSQ)	Entry Level/Level 1 Essential Digital Skills Qualification (EDSQ)	Entry Level/Level 1 Essential Digital Skills Qualification (EDSQ)	Entry Level/Level 1 Essential Digital Skills Qualification (EDSQ)	Entry Level/Level 1 Essential Digital Skills Qualification (EDSQ)	Entry Level/Level 1 Essential Digital Skills Qualification (EDSQ)
Year 10	OCR Cambridge National Creative iMedia - R096: Animation with Audio	OCR Cambridge National Creative iMedia - R096: Animation with Audio	OCR Cambridge National Creative iMedia - R094: Visual Identity and Digital Graphics.	OCR Cambridge National Creative iMedia - R094: Visual Identity and Digital Graphics.	OCR Cambridge National Creative iMedia - R093: Creative iMedia in the Media Industry	OCR Cambridge National Creative iMedia - R093: Creative iMedia in the Media Industry
Year 11	OCR Cambridge National Creative iMedia - R096: Animation with Audio	OCR Cambridge National Creative iMedia - R096: Animation with Audio	OCR Cambridge National Creative iMedia - R094: Visual Identity and Digital Graphics.	OCR Cambridge National Creative iMedia - R094: Visual Identity and Digital Graphics.	OCR Cambridge National Creative iMedia - R093: Creative iMedia in the Media Industry	OCR Cambridge National Creative iMedia - R093: Creative iMedia in the Media Industry