



TEMS | THE ENGLISH
MONTESSORI
SCHOOL

2026/2027

Digital Policy

Planning at TEMS integrates digital resources and expertise to enrich our teaching methods in line with both the national curriculum and the Montessori philosophy.

By incorporating digital tools and resources, teachers in TEMS create learning experiences that cater to the individual needs and interests of each child.

Montessori & Technology

Parents, teachers and experts are increasingly concerned about the effects of screen over-exposure, and it is essential that we reflect on the current research and ask ourselves daily, is there a place for technology in a Montessori education and if so, what is it?

The Montessori method of teaching children emphasizes the use of concrete materials and hands-on, tactile learning to support the natural development of a child's physical, social, emotional, and cognitive abilities. Traditional Montessori materials are usually open-ended and encourage creativity. Technology can be highly engaging, but it can also lead to a shorter attention span and increased distractibility, and overreliance on technology could lead to a situation where students do not receive the tailored attention they need to progress at their own pace.

At The English Montessori School we find that our families choose us as they value limited exposure to screens and technology for their children, often seeking a screen-free early childhood experience.

The integration of technology into Montessori education should be thoughtful, carefully planned, and aligned with the core principles of the Montessori philosophy and should be carefully introduced so that it accompanies the child through their natural learning process. Our teachers carefully consider the purpose and impact of technology to ensure it complements and enriches the child's journey of self-discovery and independence.

We believe that when technology is used judiciously, with a focus on screen usage rather than time, it can provide students with real-world applications and connections. Digital literacy is most certainly a skill our students will need to be prepared for the future – the goal of a Montessori education. Technology should only be used to complement hands on learning, not replace it and whilst we consider its benefits and challenges, we will always stay true to the core principles of the Montessori method.

The British National Curriculum

The use of digital technology is an integral part of the British national curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are just few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At TEMS we recognise that pupils are entitled to quality hardware and software and a structured, progressive approach to the learning of the skills needed to enable them to use it effectively. The purpose of this policy is to state how the school intends to make this requirement.

Planning at TEMS integrates digital resources and expertise to enrich our teaching methods in line with both the national curriculum and the Montessori philosophy. By incorporating digital tools and resources, teachers in TEMS create learning experiences that cater to the individual needs and interests of each child. For example, interactive educational apps and multimedia presentations can supplement traditional Montessori materials, providing additional approach for exploration and discovery. Teachers use digital platforms to track students' progress and tailor instruction to their unique learning profiles, ensuring that every child receives appropriate support and challenges.

Furthermore, digital technology enables teachers to differentiate instruction effectively, catering to the diverse needs of students, including those who are gifted and talented, have special educational needs (SEN). Through ongoing assessment and reflection, teachers identify areas where digital resources can enhance learning opportunities and incorporate them seamlessly into their planning. By creating a collaborative and inclusive learning environment, we uphold our commitment to meeting the diverse needs of all our students, in alignment with our school's inclusion policy.

Our Aims for Digital Learning

- **Confident and Independent Learners:** We pledge to use technology with intention, ensuring it supports learning, digital literacy and creative exploration. Our approach encourages students to become confident, independent learners who can navigate the digital world responsibly while also giving them the tools to be creators rather than just consumers of digital content.
- **Caring and Balanced Learning Experiences:** We prioritise a balance between hands-on, real-life learning and then think about digital literacy. We add digital tools thoughtfully to our curriculum and ensure that students develop diverse skills through tactile, social and outdoor experiences. This balanced approach aligns with Montessori values and promotes a well-rounded, caring educational environment.
- **Personalised and Safe Digital Engagement:** We use our digital devices to tailor the learning experience to each student's unique needs, making education more accessible and empowering. Our focus on ethical use, safety, and well-being ensures that digital engagement is meaningful. Importantly, we emphasise quality over quantity in screen usage, ensuring that digital tools do not replace traditional Montessori methods.

What we do in the Infant Department

Children in infants do not have 1:1 devices. Screen usage is limited to the use of the interactive smart board for presentations, images, texts etc that support the lesson's objective e.g. an image of a painting, a short video of the emperor penguins in Antarctica. Interactive phonic and maths resources are also used at times, in particular Floppy's Phonics.

When not in use, the screen is covered with a white blind to minimize distractions.

What we do in the Junior Department

Junior students have a dedicated IT suite equipped with desktop computers giving them access to a full keyboard, mouse and screen from Year 3 onwards. They also have a 1-hour ICT lesson each week using an iPad. Details of the curriculum can be found further on in this document. Additionally, teachers may use the smartboard for presentations, displaying texts or programs that enhance a lesson or warm up such as Learning by Questions, Nrich online and phonics games.

Our school prioritises the development of internet safety skills through our implementation of the Common Sense Media curriculum. As a Common Sense School since 2021, we are recognised for our excellence in teaching students how to navigate the online world responsibly.

By end of Juniors, students will have learnt to:

Design and Write Programs:

Pupils could work on coding projects where they design and write programs to accomplish specific tasks, such as creating a program to control a virtual robot. They might decompose complex problems, like creating a game, into smaller, manageable parts to solve them effectively.

To use Sequence, Selection, and Repetition:

Students will learn to use sequencing, selection, and repetition in programming through activities like creating interactive stories linked with literacy using Scratch or Blockly. They will work with variables to store data and manipulate it, and they will use input and output to interact with their programs. For example, they might create a program to calculate and display the average score of a set of test results, incorporating loops and conditional statements.

To Apply Logical Reasoning:

Pupils will develop logical reasoning skills by explaining how simple algorithms work and identifying errors in them. They might work on tasks like sorting a list of numbers using bubble sort and explaining the steps involved in the process. Through debugging exercises, they'll correct errors in algorithms and programs, such as fixing a loop that does not terminate correctly.

Understand Computer Networks:

Through lessons and activities, students will understand the basics of computer networks, including the internet, and the services they provide. They might explore concepts such as IP addresses, domains, and how data is transmitted across networks.

Evaluate Internet Search Engines and Digital Content:

Pupils will learn how internet search engines find and store data, and they'll develop skills in effective searching and evaluating digital content. They might analyse search engine results to understand how algorithms determine ranking and relevance. Through discussions and activities, they'll learn to critically evaluate online content for reliability and bias, respecting individuals' rights and intellectual property.

Use Software and Internet Services:

Students will select, use, and combine various software and internet services to accomplish tasks such as data analysis and presentation. For example, they might use spreadsheet software to collect and analyse data from a science experiment, then create a presentation using slides to communicate their findings.

For further information on the ICT curriculum in Juniors see appendix 1

Digital Usage

Outside of the timetabled weekly ICT class students may use their devices for other activities including research, photographic evidence of their work to create a portfolio and to create presentations. Below is an outline of the average device usage for each year group:

YEAR GROUP	APPROXIMATE USE PER WEEK OUTSIDE ICT CLASS	EXAMPLES OF USE
Year 3	5% - 8%	Mental maths practice Taking photos of work to post to Seesaw Taking photos of artwork to create an art portfolio Research
Year 4	8% - 11%	Mental maths practice Taking photos of work to post to Seesaw Taking photos of artwork to create an art portfolio 2 Research Presentations
Year 5	11% - 14%	Learning by Questions for personalised revision Google Classroom Research Presentations
Year 6	14%-17%	Learning by Questions and Century Tech for personalised revision Google Classroom Research Presentations Innovation in Talk for writing to provide immediate teacher feedback

Devices at Home and Homework

All homework up to Year 10 will be non-digital.

Digital Cut - off times

Devices will be automatically switched off at:

Year 10: 10:00 - 06:30

Year 11 to Year 13: 11:00 - 06:30

Appendix 1: The ICT Curriculum in Juniors

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Digital Usage

Outside of the timetabled weekly ICT class students may use their devices for other activities including research, photographic evidence of their work to create a portfolio and to create presentations. Below is an outline of the average device usage for each year group:

Year Group	Device Usage	Devices Used	Activities
Year 3	5% to 8%	Desktop computer and iPad	Mental maths practice, taking photos of work to post to Seesaw, taking photos of artwork for an art portfolio and research
Year 4	8% to 11%	Desktop computer and iPad	Mental maths practice, taking photos of work to post to Seesaw, taking photos of artwork for an art portfolio, research and presentations
Year 5	11% to 14%	Desktop computer and iPad	Learning by Questions for personalised revision, Google Classroom, research and presentations
Year 6	14% to 17%	Desktop computer and iPad	Learning by Questions for personalised revision, Google Classroom, research, presentations and Innovation in Talk for writing to provide immediate teacher feedback

1 class per week

Year 3

Unit	Unit Name	Focus
1	Digital Literacy and Use of AI	The Digital Literacy and Use of AI unit equips students with the critical thinking skills needed to navigate the digital world responsibly, evaluate online content and understand their digital footprint. Students are introduced to the role of artificial intelligence

		in everyday life, exploring how AI tools work, their benefits and limitations and how to use them ethically and safely.
2	Computer Skills	In Computer Skills students take their first steps with a desktop computer and learn how to use a mouse, keyboard and basic applications in fun hands-on ways. From typing up their own stories to saving and organising their work, students begin to see how computer skills connect to everything they do across the school day.
3	Introduction to iPad	Introduction to iPads unit provides students with foundational skills for using iPads effectively, encouraging digital literacy and enhancing their ability to access educational resources across subjects.
4	Computer Networks	The Computer Networks unit introduces students to the fundamentals of networking, enabling them to understand how devices communicate and share resources. This understanding extends to various subjects like science, mathematics and social studies.
5	Google Slides	The Google Slides: Making Presentations unit empowers students to create visually engaging presentations, enhancing their communication skills across subjects such as history, literature and science.
6	Book Creator	Book Creator: Non-fiction Creation — Students craft their own non-fiction books, feeding creativity, research and effective presentation skills. This interdisciplinary skill set supports learning across social studies, science and language arts.
7	Data and Information: Branching Databases	Data and Information: Branching Databases unit teaches students to organise and analyse data effectively, nurturing critical thinking skills applicable across subjects like mathematics, science and geography.
8	Programming with Scratch	Programming with Scratch unit introduces students to coding basics, supporting problem-solving and coding skills applicable across subjects such as mathematics, science and language arts.

Year 4

Unit	Unit Name	Focus
1	Digital Literacy and Use of AI	The Digital Literacy and Use of AI unit equips students with the critical thinking skills needed to navigate the digital world responsibly, evaluate online content and understand their digital footprint. Students are introduced to the role of artificial intelligence in everyday life, exploring how AI tools work, their benefits and

		limitations and how to use them ethically and safely.
2	Computer Skills	In Computer Skills students build on their growing confidence with computers and explore word processing and simple spreadsheets through real everyday tasks like writing up a project, creating a class newsletter or organising information into a table. These skills are practised throughout the year and applied across all subjects so students feel capable and independent every time they sit down at a screen.
3	Photo Editing	Photo Editing unit instructs students in editing skills, enhancing their ability to manipulate images for various subjects like art, journalism and history.
4	Programming: Repetition in Shapes	Programming: Repetition in Shapes unit teaches students how to use repetition in coding to create geometric shapes, developing logical thinking applicable across subjects such as mathematics, art and computer science.
5	Editing Audio	Editing Audio unit instructs students in refining sound recordings, developing skills useful in subjects like music, multimedia projects and language studies.
6	Programming: Repetition in Games	Programming: Repetition in Games unit instructs students in utilising repetition techniques to develop interactive games, fostering problem-solving abilities applicable across subjects like mathematics, logic and computer science.
7	Data Logging	Data Logging unit teaches students to collect and analyse data systematically, enhancing skills applicable in subjects such as science experiments and statistical analysis.

Year 5

Unit	Unit Name	Focus
1	Digital Literacy and Use of AI	The Digital Literacy and Use of AI unit equips students with the critical thinking skills needed to navigate the digital world responsibly, evaluate online content and understand their digital footprint. Students are introduced to the role of artificial intelligence in everyday life, exploring how AI tools work, their benefits and limitations and how to use them ethically and safely.
2	Computer Skills	In Computer Skills students get hands-on with the kinds of tools used in real working life. They write and format documents, build simple spreadsheets to track data or plan a budget and apply these skills throughout the year across all areas of learning. These sessions give

		students the confidence to use a computer as a natural part of how they work, create and communicate.
3	Computing Systems and Networks	Computing Systems and Networks unit introduces students to the study of both the hardware and software components that comprise computer systems as well as the infrastructure and protocols that enable communication between these systems over networks.
4	Creating Media	In Creating Media students learn to craft movie trailers and videos, developing skills essential for storytelling and visual communication across subjects like media studies, language arts and digital literacy.
5	Programming	In Programming students advance their block coding skills using Scratch, empowering them to develop complex projects and problem-solving abilities applicable across subjects like mathematics, science and computer science.
6	Data and Information	In Data and Information students harness Google Sheets to manipulate data and craft formulas, developing analytical skills crucial for subjects like mathematics, economics and data-driven research.
7	Animation with Keynote	In Animation with Keynote students explore animation techniques, fostering creativity and visual storytelling skills applicable across subjects like digital arts, presentations and multimedia projects.
8	Stop Motion Video	In Stop Motion Video students delve into the mechanics of stop motion animation, crafting their own videos using modelling clay and assorted materials, nurturing creativity and visual storytelling abilities useful across subjects like art, filmmaking and storytelling.

Year 6

Unit	Unit Name	Focus
1	Digital Literacy and Use of AI	The Digital Literacy and Use of AI unit equips students with the critical thinking skills needed to navigate the digital world responsibly, evaluate online content and understand their digital footprint. Students are introduced to the role of artificial intelligence in everyday life, exploring how AI tools work, their benefits and limitations and how to use them ethically and safely.
2	Computer Skills	In Computer Skills students apply their growing digital toolkit to meaningful real world tasks like typing up reports, managing information in spreadsheets, communicating through email and producing polished professional looking work. Woven throughout the year and across all subjects this unit ensures every student leaves Year

		6 feeling genuinely confident and capable at a computer and ready for the demands of Senior School.
3	Website Design	In Website Design students master the art of building their own websites while developing graphic design skills, empowering them to create visually appealing and functional online platforms applicable across subjects like digital marketing, communication and technology.
4	Programming Variables in Games	In Programming Variables in Games students explore algorithms and block coding to manipulate variables, enhancing problem-solving skills crucial for game development and applicable across subjects like mathematics, logic and computer science.
5	3D Modelling	In 3D Modelling students utilise software to design three-dimensional shapes, supporting spatial reasoning and creative design skills applicable across subjects like engineering, architecture and digital arts.
6	Creating Media: Podcast	In Creating Media: Podcast students produce their own podcasts, planning and scripting dialogues, nurturing communication and storytelling skills applicable across subjects like language arts, literacy and digital communication.
7	Gamification	In Gamification students delve into algorithms to understand how they power game mechanics, promoting computational thinking skills applicable across subjects like mathematics, computer science and game design.

What we do in the Senior Department

KS3

In KS3, we will follow the learning strands from Infants and Juniors and extend, expand, and consolidate. There are four main branches to the learning in KS3 and these are outlined in the table below:

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• Safety and security • Rights and Responsibilities • Digital Footprints Data permanency AI • The elusive Metaverse Virtual selves • Intellectual property	• Application literacy • Format, presentation and style • Collaborative documents • Teamwork • Planning workflow	• Generating concepts • Design methods • Mastering tools • Layers • The timeline • Composition • Pixel vs Vector • Postproduction • Multimedia artefacts • Keyframe animation • Scripted interaction	• Binary as a language • Processing • Storing • Input • Output • Decisions and logic • The CPU • Python fundamentals
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Device Usage at KS3

Students have 1 hour of timetabled lessons per week and during their exploration of the IT and Creative Media topics they may be using devices for the whole lesson. Any device use in lessons is carefully planned with clear intent, tied to specific learning outcomes rather than open ended screen time. Devices are not used for homework at KS3.

Alongside this, students will take part in online safety education, with a focus on areas such as AI and online bullying, using resources from Common Sense Media.

Device usage during the other, more theoretical, topics will be less intense and some lessons will not require them at all.

KS4 and 5

In KS4 and KS5, students will be following a Computer Science GCSE or 'A' Level. The main areas covered are:

COMPUTATIONAL THINKING	PROGRAMMING	BINARY: REPRESENTATION AND MANIPULATION	HARDWARE AND SOFTWARE
Learning how to apply logical processes to problems to reach robust and potentially programmable outcomes.	Producing coded solutions to problems with pseudocode and Python. Including: Logical flow Sequence	Producing coded solutions to problems with pseudocode and Python. Including: Logical flow Sequence	How the hardware and firmware receive and are controlled by the binary instructions and data. Including:

1. Abstraction 2. Decomposition 3. Repetition and recursion 4. Pattern recognition 5. Algorithm	• Selection • Iteration • Procedural Programming • Declarative programming • OOP • A smattering of SQL	• Iteration • Video • Numbers: Integers, floats, negative vs positive. Hexadecimal • The manipulation of bits using logic	• The CPU • Memory and storage • Networks • The OS and the kernel • The logic of electronics
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Device Usage at KS4 and 5

At present, all of the GCSE exams and 3 of the 4 A level exams are paper-based and lesson time will address the need to produce written answers using physical paper and pens. However, as is true for many subjects, at some point soon, all the exams will be device-based.

The programming aspect is basically the acquisition of a language and as with all languages, this requires constancy and repetition of practice for fluency. Essentially, this involves continued device usage inside and outside of lessons.

Computer Science is technology dependent but up to 20% of the theoretical content is accessible and deliverable without the necessity for device usage and these non-screen opportunities will always be taken.