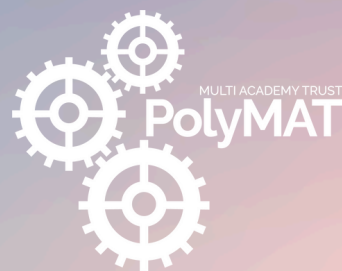


SPRING 2025



SUCCESS FOR EVERYONE

TRUST NEWSLETTER ISSUE 3





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Growing Together, Learning for Life



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Are you looking
to join PolyMAT?

OUR SHARED VISION



Our vision is “Success for Everyone”. We aspire for every member of our community, regardless of circumstances or background, to be the best version of themselves - confident, successful students, committed, successful staff, who are committed to growing and developing as practitioners, and engaged stakeholders who unite in celebration. We achieve our Vision through our two core values of CARE and UNITY.

01 CARE

The overriding feel within our Trust is that we care more than anyone else could expect. We care for all aspects of our practice and, in particular, we care for:

- Everyone's safety and happiness
- Everyone's personal development and growth
- Everyone's outcomes
- Everyone's standards
- Everyone's learning
- Everyone's well-being
- Everyone's relationships

This is reflected by the fact that we call ourselves the Poly Family and we are an organisation based on relationships above all else – we are individual people first and students, staff and parents second.

02 UNITY

The value that ensures that our impact is greater than it ever could be if we worked alone. This means that our schools, teams and individuals are always pulled together in ways which share the workload and create solutions from which everyone benefits. We are determined that nothing can divide us when we put the needs of our community before everything else.

MESSAGE FROM OUR CEO

Mr T Plumb



Welcome to the Spring 2025 edition of the PolyMAT Newsletter

It is a pleasure to introduce our Spring Newsletter, the theme of which is Artificial Intelligence (AI). AI is quickly becoming an unavoidable part of our daily lives, sometimes explicitly and sometimes without us necessarily being aware. Technology advances very quickly and the future that our young people will face as adults may be very different to that of today. It is therefore important that we are aware of how AI can improve our lives as well as being aware of some of the questions and potential dangers surrounding it.

All our schools are working hard to reap the benefits of AI to help the learning of our young people and this edition contains examples from each school. We hope that they will be interesting and engaging as well as guiding parents and carers towards how young people can be supported in the appropriate use of AI in their learning. The education profession will undoubtedly see more use of AI in the coming years, to support learning and also to support the delivery of teaching and the operation of our schools. We are lucky that one of our trustees, Jen King, works within the technology industry and has written a piece for this newsletter about how she is helping us face the challenges of digital transformation.

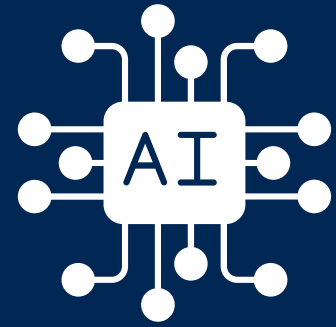
The history of AI stems from the creation of the first computers in the 1940s and the first centre for AI research was established in 1956. So, the idea is far from new. But some of the most significant developments have occurred more recently, particularly with the creation of Large Language models such as ChatGPT. The last 5 years have seen particularly rapid growth in the abilities of AI.

The young people of today will benefit from understanding and being able to use AI to help them learn and achieve – of course, this must be done in an ethical and safe way and these are the challenges that we face in schools and in our wider lives. As with all aspects of life, it pays to be as informed as possible. Here at PolyMAT, we are determined to give our young people the information to be able to use AI in an effective, ethical and safe way across all our schools. The journey ahead will be an exciting one!

We do hope that you enjoy our latest newsletter and we thank you all for your continued support of our trust and our schools. And, for the avoidance of doubt, this introduction was written entirely by a human – although could AI have done better??

Tim Plumb
CEO PolyMAT

REDEFINING EDUCATION



At PolyMAT, our commitment to excellence extends beyond traditional learning—we continuously embrace innovation to ensure our schools provide the highest quality education. One of the most significant developments in modern education is the integration of artificial intelligence (AI) into both teaching and day-to-day operations.

Recognising AI's potential to enhance learning, streamline administration, and support student engagement, we have taken a strategic approach to its adoption. However, as with any new advancement, it is essential to carefully evaluate its roles, risks, and responsibilities, particularly in an era where data protection and privacy remain a top priority.

Our approach to AI Integration

To ensure a thoughtful and informed implementation of AI across our trust, we have taken several key steps:

- **Policy Updates:** Our AI policies have been revised to reflect the latest ethical and practical considerations for safe and effective AI use.
- **Community Engagement:** Surveys were conducted among staff, students, and parents across our schools to assess familiarity with AI and identify areas where support and development are needed.
- **Curriculum Development:** Exploring ways AI can enhance teaching methods, personalise learning experiences, and assist educators in lesson planning.
- **Ethical Considerations:** Discussions around responsible AI use, protecting student data, and ensuring transparency remain central to our strategy.

We want to thank everyone who participated in our surveys and shared their insights. Your feedback is invaluable and is currently being collated to inform our AI strategy moving forward.

At PolyMAT, we are committed to harnessing the power of technology responsibly while ensuring that AI serves as a tool for empowering educators and enhancing student success.

Stay tuned as we continue this exciting journey to redefine education in a digital age.

MESSAGE FROM OUR LEAD TRUSTEE FOR IT STRAEGY

Ms J King



Although I currently lead the Education team at Adobe and before that at Microsoft, my real passion is supporting PolyMAT as a Trustee and helping provide advice on Digital Transformation. I have had the privilege of working with numerous schools, MATs, and countries to enhance their digital strategies and integrate cutting-edge technologies into their curricula. My journey in education began as a teacher, with a deep passion for leveraging technology to create more engaging and effective learning environments. My transition into Industry has brought with it so many insights into the world of work and the pace at which technology evolves. I love that I can combine both my knowledge of the education sector and the tech sector to support PolyMAT. As society begins to think about AI- I have always been fascinated by the potential of AI to transform the way we teach and learn.

One of the most exciting aspects of AI in education is its ability to personalise learning experiences for students. AI-powered tools can analyse individual learning patterns and provide tailored content that meets each student's unique needs. This not only helps in addressing learning gaps but also ensures that students remain engaged and motivated. For instance, adaptive learning platforms can adjust the difficulty level of exercises based on a student's performance, providing a customised learning path that fosters continuous improvement.

AI can significantly reduce the administrative burden on educators, allowing them to focus more on teaching and less on paperwork. Automated grading systems, for example, can quickly assess student assignments and provide instant feedback, saving valuable time for teachers. Additionally, AI-driven analytics can offer insights into student performance, helping educators identify areas where students may need additional support.

At PolyMAT, we are just embarking on a robust IT Strategy to integrate AI and other technologies into our schools. We aims to create a seamless digital ecosystem that supports both teaching and learning. We plan to enhance our data-driven decision-making processes, improve student outcomes, and streamline administrative tasks.

This process requires a long-term implementation plan beginning with getting our infrastructure up to date and future proofed across all our sites. Next will be the investment in regular access to digital devices for students and staff. This will also be an investment in digital skills education for everyone in the PolyMAT community - a dedication to using technology to empower and improve learning. This will then be followed by bringing digital learning into the classroom. Utilising a powerful suite of tools to engage and enhance the experience of our students while also increasing teacher feedback and student collaboration.

The integration of AI and technology in education holds immense potential to revolutionise the way we teach and learn. At PolyMAT, we are committed to harnessing the power of AI to create a more personalised, efficient, and secure educational experience for our students. As we continue to innovate and explore new possibilities, I am excited about the future of education and the transformative impact that AI will have on our schools.

EPIC AI TITLES FOR YOUR READING LIST



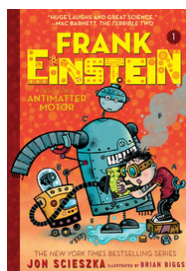
SUITABLE FOR PRIMARY SCHOOL READERS



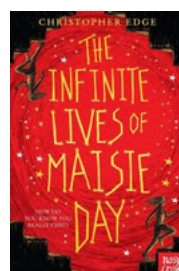
The Wild Robot
Peter Brown



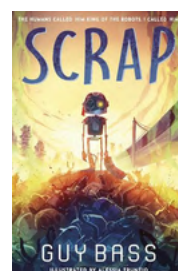
Future Friend
David Baddiel



Frank Einstein
and the
Antimatter
Motor
Jon Scieszka



The Infinite
Lives of Maisie
Day
Christopher
Edge

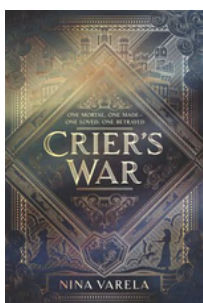


Scrap
Guy Bass

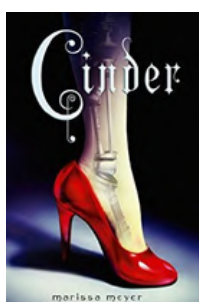


The Last
Storyteller
Donna Barba
Higuera

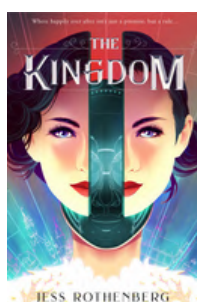
SUITABLE FOR SECONDARY SCHOOL READERS



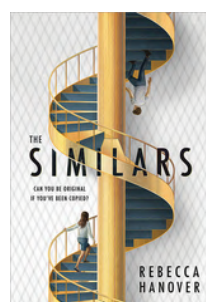
Crier's War
Nina Varela



Cinder
Marissa Meyer



The Kingdom
Jess
Rothenberg



The Similars
Rebecca
Hanover

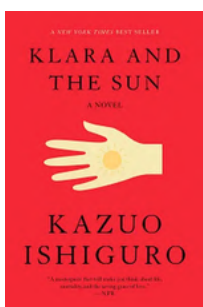


Defy the Stars
Claudia Gray

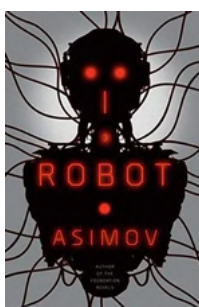


MILA 2.0
Debra Driza

SUITABLE FOR ADULT READERS



Klara and the
Sun
Kazuo Ishiguro



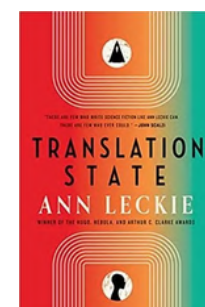
I, Robot
Isaac Asimov



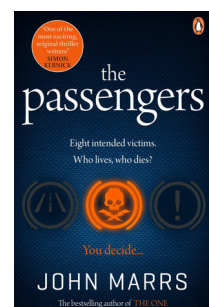
We Have
Always Been
Here
Lena Nguyen



The Infinity
Particle
Wendy Xu

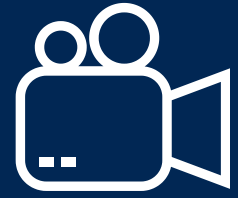


Translation
State
Ann Leckie



The
passengers
John Marrs

TOP AI-THEMED FILMS: A JOURNEY INTO ARTIFICIAL INTELLIGENCE IN CINEMA



SUITABLE FOR PRIMARY SCHOOL STUDENTS

WALL-E - A heartwarming story about a small waste-collecting robot who embarks on an adventure that teaches lessons about technology, environmental care, and friendship.

Big Hero 6 - A fun and emotional film featuring Baymax, a lovable healthcare robot, and a young inventor navigating AI and robotics.

The Iron Giant - A classic animated film about a giant robot and a boy who form an unlikely friendship, exploring themes of AI, humanity, and kindness.

Astro Boy - A sci-fi adventure about a robot boy with emotions, tackling themes of AI ethics and identity.

Robots - A lighthearted animated movie about a world of robots, showcasing creativity, innovation, and teamwork.

SUITABLE FOR SECONDARY SCHOOL STUDENTS

A.I. Artificial Intelligence - A thought-provoking sci-fi film about a humanoid robot boy seeking acceptance and love.

The Mitchells vs. The Machines - A hilarious animated adventure where a family must stop an AI-powered robot uprising.

I, Robot - A futuristic thriller inspired by Isaac Asimov's work, exploring AI ethics and robotics.

Tron: Legacy - A visually stunning sci-fi film about a young man who enters a digital world controlled by AI.

The Matrix - A sci-fi classic exploring AI, virtual reality, and the nature of human existence.

SUITABLE FOR ADULTS

Robot & Frank - A heart-warming story about an elderly man and his AI-powered companion.

Blade Runner - A thought-provoking film exploring AI, identity, and humanity.

Ghost in the Shell - A cyberpunk classic questioning AI, identity, and human augmentation.

The Creator - A recent sci-fi film exploring AI and its impact on humanity.

The Terminator - A sci-fi classic about AI-driven machines taking over the world.



AI IN EVERYDAY LIFE: HOW AI IS ALREADY HELPING YOU



Artificial intelligence is no longer just a futuristic concept - it is quietly shaping our daily lives in ways we may not even realise yet. From convenience to efficiency, AI is working behind the scenes to make tasks smoother and smarter. Here's how it's already assisting you every day:



Smart Assistants: Your digital helpers

Virtual assistants like Alexa, Siri, and Google Assistant can respond to voice commands, answer questions, set reminders, and control smart home devices. They help with everyday tasks, from checking the weather to managing schedules.



Recommendation algorithms: Personalised content

Whether you are browsing Netflix, Spotify, or YouTube, AI curates content based on your preferences. By analysing viewing and listening habits, these platforms suggest movies, music, or videos tailored to your tastes.



Automated Tasks: Efficiency without the effort

AI powers automation, from email sorting and predictive text on smartphones to smart thermostats adjusting temperatures based on your habits. Even spam filters in your inbox rely on AI to recognise and block unwanted messages.



Shopping and Customer Support

Online retailers use AI to recommend products, manage inventory, and improve customer experiences with chatbots that provide instant assistance. AI also helps detect fraud and enhance security for digital transactions.



Navigation and Transportation: Smarter travel choices

AI helps apps like Google Maps and Waze provide real-time traffic updates and suggest the best routes. In addition, rideshare services like Uber use AI to optimise pickups, predict demand, and ensure efficient travel.



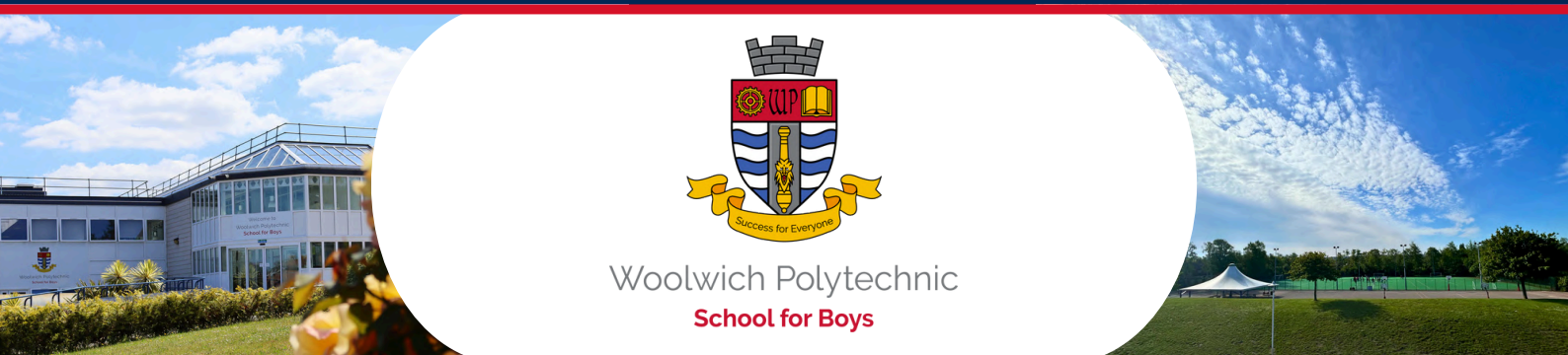
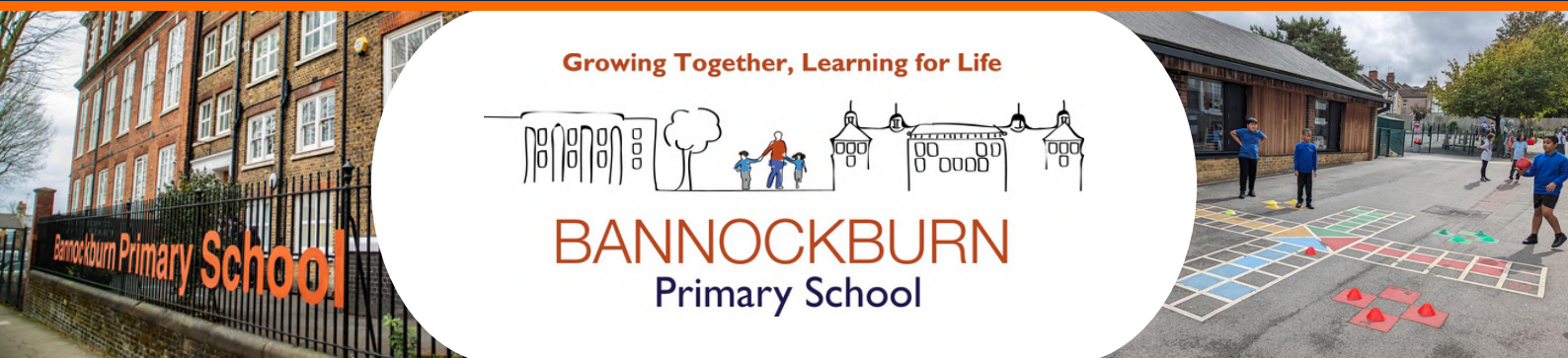
AI-Assisted Wellness

Wearable fitness trackers use AI to monitor heart rates, sleep patterns, and activity levels, offering personalised health insights. AI is also assisting in medical diagnostics, helping doctors detect diseases more accurately.

Artificial intelligence is seamlessly integrated into everyday life, making tasks more convenient, efficient, and personalised. As AI continues to evolve, its role in our daily routines will only grow.



OUR FAMILY OF SCHOOLS







Technology at Bannockburn Primary School

With global technology evolving at an unprecedented rate, Bannockburn is adapting and integrating different digital skills into its curriculum. The current curriculum covers 5 key areas:

- Technology around us
- Data and information
- Creating Media
- Programming
- E-Safety

With a developing approach, the school has introduced a technology program that includes 3D computer-aided design (CAD), podcasting, and data manipulation. These additions aim to equip students with broader, essential skills for the future while nurturing creativity, problem-solving, and digital literacy from an early age. The aim is not just teaching students about coding and technology, it is empowering them to become creators, problem-solvers, and forward-thinkers in an increasingly digital world.

One of the most exciting aspects of Bannockburn's new curriculum is the introduction of 3D CAD tools to year 6. Traditionally used in industries such as engineering and architecture, CAD software enables students to design and visualise objects in a digital space before bringing them to life through 3D printing. Year 6 were tasked with creating a navigation tool and additionally created code to operate a Micro:bit as a compass. This hands-on approach not only fostered creativity but also developed spatial awareness, collaboration and logical thinking. The children thoroughly enjoyed the lessons and feedback from both students and teachers has been overwhelmingly positive.



Technology at Bannockburn Primary School

Another innovative feature of the school's curriculum is the integration of creating podcasts in year 5, which allowed students to create and share their ideas with an audience. The podcast development was cross-curricular in approach and linked to the topic of World War 2. The lessons encouraged literacy skills, critical thinking, digital communication and helped children articulate their ideas clearly and confidently. By developing their podcast scripts during English lessons, students learned to express themselves in a structured manner.

Understanding and working with data is becoming an essential skill in today's digital world. Bannockburn ensures that children are introduced to the concept of data - whether that is labelling and counting in year 1, creating branching databases in year 3 or comparing paper and computer databases in year 5. The school has additionally incorporated cross-curricular learning by linking data projects with subjects such as Science and Geography. This approach not only enhances their understanding of computational thinking but also prepares them for future technological advancements in artificial intelligence and automation.

Bannockburn's commitment to embracing these topics is a significant step forward in preparing our young minds for the digital age. By integrating 3D design, podcasting, and data manipulation into its curriculum, the school is ensuring that students develop skills that will be highly valuable in future careers, whether in technology-driven fields or beyond.

By giving students the tools and knowledge they need to navigate the digital landscape confidently, the school is not only enhancing their learning experience but also shaping the innovators of tomorrow. As technology continues to shape our world, Bannockburn's adaptation in curriculum highlights its dedication to future-proofing education. We are already looking at ways to further enhance its technology offerings, including artificial intelligence (AI) learning tools.



Creating a design in
tinkerCAD



Example of design



Programming a Micro:bit

WOOLWICH POLYTECHNIC SCHOOL FOR GIRLS



Headteacher
Ms L Williams

Our AI journey

The world is changing. As educators, we must also adapt to the changing world that we, and our students, find ourselves in. Artificial Intelligence (AI) is one of the most powerful, perplexing and problematic creations of the early 21st century. As a school, we have a responsibility to develop policy and practice that supports the safe and ethical use of AI for both students and staff.

Earlier in the year, we conducted a staff survey to inform our developing AI strategy. There were several key takeaways from our staff voice:

Strengths:

Staff feel most confident in leveraging AI for impact and are beginning to monitor its effectiveness within their practice.

Developing Areas:

Confidence dips around choosing AI tools wisely and receiving formal training, showing the importance of structured CPD and guidance around which AI tools to use.

High Priorities:

The lowest confidence areas of staff were:

- Knowledge of AI policy and strategy
- Understanding potential AI threats
- Evaluating the educational value of AI tools



Empowering our staff to use AI

Following the PolyMat Collab led by Mr King and Mr Sudjaitham, we have focused on regular AI CPD at whole school and departmental levels. Below are some examples from the History Department CPD training:

Key Thinking Points: Model Answers

- You must explicitly tell the AI how to write (vocabulary)
- You must give it guidance on the desired reading age of the answer
- You may want to give it guidance on how many specific examples to include and what type of historical knowledge to include
- You should provide at least a generic mark scheme so it can provide precise answers in the style expected at GCSE for our specification

Source 1 is significant for historians studying the cholera epidemic of the 19th century because it offers insights into the beliefs and public health challenges of that time. The cartoon shows a crowded and filthy street with waste and poorly dressed individuals. Such conditions played a critical role in the spread of cholera, which was widely believed to be caused by miasma, or bad air. The image also reflects the high death rates due to the disease, highlighting the vulnerability of the population. The source also illustrates how society associated cholera with inadequate sanitation, even though the actual cause—contaminated water—was not yet recognized. During this time, figures such as Edwin Chadwick promoted sanitation reforms based on the idea that bad smells or 'miasma' caused disease, while John Snow's research in 1854 had yet to demonstrate that cholera was waterborne. Thus, the source is valuable for understanding the prevalent anti-contagion perspective and the challenges faced in addressing the epidemic.

The origin of the source adds additional perspective. Being from the same time period, it reflects the beliefs and conditions of 1832. However, its purpose as a cartoon may impact its reliability, as it could exaggerate or oversimplify situations for dramatic or satirical effect. Nevertheless, the representation of overcrowding and poor sanitation is consistent with other historical evidence, making it a credible depiction.

In summary, Source 1 is extremely valuable for historians as it underlines the factors that enabled cholera to flourish and reveals the leading public health theories of the time. While its purpose may influence its accuracy, the content aligns well with broader historical understandings of the cholera epidemic in the 19th century.

You Do: Model Answer Creation

15 minutes

Prompt: Create 3 model answers for the following GCSE History exam question: "Which of the following was the most important reason why there were more opportunities for Britain in the 1920s?"

• economic growth
• social changes

Explicit instructions: Read the provided 'Mark Scheme' and create model answers that would be graded at 9 marks, 7 marks, 5 marks, 3 marks and 1 mark using the provided 'Mark Scheme'.

Parameters: Provide students with a table that is completed and shows what each answer does well, per the mark scheme and how it could be improved. Also include a second table that is completed and shows what each answer does well, and if any improvements could be made.

Mark Scheme:

Level 4 (13-15 marks): Complete explanation of stated factor leading to a sustained judgement based on a range of evidence and detailed knowledge and understanding of the reasons for the question. Students may progress to a detailed explanation of all aspects by complete explanation of the relationship between cause and effect, and a sustained judgement based on a range of evidence and detailed knowledge and understanding of the reasons for the question.

- Create model answers for 2 styles of GCSE questions you will be teaching your students how to approach in the next 7 days
- We will then discuss the outcomes and how this can be used to move our students forward and save us time

Extension:
Try adding a WWW and EBI grid to each answer to support student evaluation

Thinking Point: AI Generated Images

What do you notice about the infographic?
What does this mean for us as teachers using AI to generate images?

CAUSES
DIVIDED AIRLIFT
GERMANY
SOVIET UNION
CONSEQUENCES
COLD WAR TENSION

BERLIN Airlift 1948-49
NATO
SOVIET UNION
CONSEQUENCES
COLD WAR TENSION

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Thinking Point: AI Generated Images

This was created using explicit prompts on ChatGPTs DALL-E

Be mindful of using AI to create images. Even at a professional level, it is very unreliable

Prompt: Engage students in visual learning and support long-term memory recall by utilising dual coding.

Role: An experienced GCSE History teacher who is able to develop long-term memory and high levels of recall in students.

Explicit: Design an infographic covering the key causes, events and consequences of the Berlin Airlift. Parameters: Must contain verified historical facts. Must only include images that can be verified as being historically accurate and sourced from non-AI generated sources.

Suggested Strategies: Magic School AI

10 minutes

- YouTube Video Question Generator
- Text Leveler
- Revision quiz creation
- Lesson plan outlines
- Worksheet creation

Task – Create 2 of the above

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In summary, Source 1 is extremely valuable for historians as it underlines the factors that enabled cholera to flourish and reveals the leading public health theories of the time. While its purpose may influence its accuracy, the content aligns well with broader historical understandings of the cholera epidemic in the 19th century.

Advanced AI Use: Marking Work

This is quite labour intensive if you plan to do it for more than 1 question per student

Prompt: Mark the GCSE question response included as an uploaded pdf or image.

Role: You are an experienced GCSE History examiner who is able to mark student responses with precision and well within AQA examination tolerance.

Explicit instructions: Read the provided 'Mark Scheme' and provide a mark out of 16 for the student response to the question 'Has the role of the individual been the main factor in the development of public health in Britain?' uploaded.

Parameters: Provide students with a table that is completed and shows what their answer did well and if any improvements could be made, based on the criteria of the mark scheme. This feedback should include examples of indicative content that could have been included to strengthen responses. All feedback must be in student-friendly language and written using second person pronouns.

Mark Scheme:

Level 4 (13-15 marks): Complete explanation of stated factor and other factor(s) leading to a sustained judgement based on a range of evidence and detailed knowledge and understanding of the reasons for the question. Students may progress to a detailed explanation of all aspects by complete explanation of the relationship between cause and effect, and a sustained judgement based on a range of evidence and detailed knowledge and understanding of the reasons for the question.

There are advantages however

- Produce high-quality written feedback faster than can be written
- Can be used to standardise
- Can be stored centrally and used to inform planning and intervention

Prompt: Create 4 model answers for the following GCSE History exam question

“Has the role of government been the main factor in the development of treatments in the late twentieth century? [16 marks]”.

Role: You are an experienced GCSE History teacher who wants to use high-quality model answers as a means of modelling and scaffolding for students to develop the ability to use factors within their extended answers as a method of responding to exam questions.

Explicit instructions: Read the provided ‘Mark Scheme’ and create model answers that would be graded at 8 marks, 10 marks, 12 marks and 15 marks. Use written language typical of Y11 students (aged 15) still developing their academic writing skills and without a range of tier 2 and tier 3 vocabulary. Answers must use vocabulary that is accessible to students with a reading age of 14. Answers should be of the length typical of a student spending 20 to 25 minutes writing under exam conditions. Include 2 to 3 specific examples for each factor discussed and extended historical knowledge.

Parameters: Provide students with a table to write down what each answer does well, per the mark scheme and how it could be improved. Also create a second table that is completed and shows what each answer did well and if any improvements could be made.

Mark Scheme:

Level 4 (13-16 marks): Complex explanation of stated factor and other factor(s) leading to a sustained judgement Answer demonstrates a range of accurate and detailed knowledge and understanding that is relevant to the question Answer demonstrates a complex, sustained line of reasoning which has a sharply-focused coherence and logical structure that is fully substantiated, with well-judged relevance. Extends Level 3. Students may progress from a developed explanation of factors by analysis of the relationship between factors supported by factual knowledge and understanding.

Level 3 (9-12 marks): Developed explanation of the stated factor and other factor(s) Answer demonstrates a range of accurate knowledge and understanding that is relevant to the question Answer demonstrates a developed, sustained line of reasoning which has coherence and logical structure; it is well substantiated, and with sustained, explicit relevance. Extends Level 2. Answers may suggest that one factor has greater merit. Students may progress from a simple explanation of factors with extended reasoning supported by factual knowledge and understanding which might be related, for example, to the identified consequences

And some further examples for Prompt creation from the Science Department:

Prompt 1:

"As an expert secondary school science teacher specialising in **AQA GCSE Physics**, create a detailed guide covering all required practicals. For each practical, include:

1. **Title:** Name of the practical.
2. **Objective:** Purpose and learning outcomes.
3. **Equipment List:** All necessary apparatus and materials.
4. **Method:** Step-by-step procedure, ensuring clarity and adherence to AQA guidelines.
5. **Hazards and Controls:** Potential risks associated with the practical and measures to mitigate them.
6. **Common Exam Questions:** Typical questions that may appear in exams related to this practical.
7. **Mathematical Applications:** Relevant formulas, calculations, and data analysis techniques pertinent to the practical.

Ensure the guide is structured, concise, and aligned with the **AQA GCSE Physics** specification.

Prompt 2: Adapt AQA GCSE **DENSITY** required practical for students who need support in describing methods, include the following:

• **Sentence Starters:**

- Offer prompts to guide students in articulating each step. For example:

- "First, we measured the..."
- "Then, we recorded the..."
- "After that, we calculated..."
- "Finally, we plotted a graph of..."

• **Fill-in-the-Blanks with Word Banks:**

- Provide sentences with missing keywords and a corresponding word bank.
- Example: "Use the electronic balance to measure the ____ of the object."
(Word bank: mass, volume, length)

Following our Spring Term whole-school CPD on the use of AI, we asked staff to reflect on what they would like to explore within AI. Several key areas were highlighted, which will form the basis of our AI strategy for the summer and, crucially, next academic year:

Content creation tools:

- Making podcasts and study guides (especially adapted or exam-specific)
- Using AI to generate worksheets and speed up presentation creation
- Developing storyboards for lessons

Adaptation and inclusion:

- Creating inclusive guides and learning walk tools
- Support for adapted resources

Assessment & feedback:

Help with marking and creating questions

Curriculum and planning:

- Input on long-term term planning
- AI use on inset days to build resources

Data and learning analysis:

- Exploring AI to support data analysis of student performance

Top AI tips

Mr. Sudjaitham, our KS4 Science Coordinator, has some excellent tips for using Google's NotebookLM more effectively. As one of our leading experts on AI, I felt it appropriate to close with his thoughts.

Google has launched a new AI tool called NotebookLM. Here are some reasons why it's a powerful tool for educators that you should be using right now:

- 1.You can ensure the reliability of results: Notebook LM allows you to upload materials such as lesson resources, PDFs and notes, and Notebook LM will use only those resources to produce answers. No more concerns surrounding the accuracy of information sourced to produce results.
- 2.Referencing is provided: No more guessing where something came from. Every answer includes a clickable reference to the original source—perfect for those with attention to detail!
- 3.Works in Multiple Languages: Need something to be translated from another language into English, or the reverse? You can do that easily! It supports over 30 languages, making it one of the most diverse AI tools on the market.
- 4.It can reduce hours of workload: Just upload your documents, and it can create a full study guide with quizzes, key terms, and even essay questions in seconds, saving you hours of resource generation – freeing you up to focus on how to use materials effectively in the classroom.

WOOLWICH POLYTECHNIC SCHOOL FOR BOYS



**Headteacher
Mr T Lawrence**

With the invaluable expertise of our ICT Lead Practitioner, Jacqueline Austin, I had the privilege of reviewing her comprehensive and well-researched report. Her insights and detailed analysis provided a deeper understanding of key areas, offering valuable recommendations that will significantly contribute to our ongoing initiatives. If, like me, you find AI perplexing, I trust you will benefit from her clear and insightful explanations below. Thank you, Jacqueline.

AI in Education: Unlocking Potential and Navigating Challenges

Education has been through several phases over the decades, but nothing rivals the unprecedented reach of Artificial Intelligence in its ever-evolving dynamism and scope. Artificial Intelligence (AI) is redefining the tenets of education, not from within the confines of a classroom outwards, but from the outward pace of discoveries and developments in society which are currently driving educational transformation across the globe. This article explores the potential of AI in education, its benefits for both teachers and students in enhancing teaching and learning experiences while streamlining administrative tasks, key considerations for responsible AI use and our use of robotics in inspiring learners.



Our staff and student policies set out clear guidelines on acceptable use so parties can utilise the various AI tools, once introduced, with confidence. We aim to ensure that, within our nurturing culture for all, open mindedness, integrity, independence and collaboration remain at the heart of what we do.



AI for Teachers: Enhancing Efficiency and Creativity

We know that AI tools are revolutionising the way some educators work, making lesson planning and administrative tasks more efficient while enhancing student engagement. We also know that educators' level of trust and use of AI is at varying stages of acceptance and utilisation and so would like to emphasise some of the key benefits:

Lesson Planning and Lesson Resource Creation:

AI-powered platforms can generate lesson plans, quizzes, and worksheets tailored to curriculum standards, saving teachers valuable time. Some of these lesson planning tools are ChatGPT (OpenAI), MagicSchool AI which we have already been introduced to in-house along with a subscription, Curipod, LessonUp as well as Copilot for Education (Microsoft). For quiz and worksheet generation, Quizizz is a go-to tool, utilised as a PolyPop in lessons at all key stages. Other tools available are Kahoot! AI, Quizlet, Formative, EdPuzzle and Teachermatic to name a few. Tools that are suitable for adaptive learning and easily aligned with the curriculum are Century Tech, Khan Academy AI (Khanmigo), ScribeSense, and Google for Education (Gemini AI). There are a host of other tools available, subscription based and free, but educators can select those that suit their subject area in specific ways.



Personalised Learning:

This is an area that teachers and students can utilise to great effect. Individual student progress is improved where students receive customised support and AI can adapt educational content based on needs. Homework help is available with the use of Socratic by Google, MindSpark and EdApp. In addition, there is the free tool [GeoGebra](#) that offers teachers and students a wealth of resources to explore and learn maths in an innovative way. The Photomath app is useful for step-by-step Maths problem-solving but the downside is that students may use this tool as an easy way out rather than as a tool to reinforce learning. Otter.ai for note taking and Knowji to help students retain vocabulary are some additional tools.

Grading & Feedback: In addition to Turnitin UK, utilised by the teachers who oversee coursework here at Woolwich Polytechnic Boys, other assessment tools that provide instant feedback, identifying student strengths and areas for improvement are Gradescope and, of course, Formative.

Brainstorming & Idea Generation: AI can suggest creative approaches for lesson delivery, making learning more engaging and effective. Padlet is an interactive bulletin board and teachers can set up a Padlet to collect ideas from students in a structured format. Microsoft Whiteboard is a digital canvas that integrates with Microsoft 365 for an interactive environment.

We also encourage students to use tools like draw.io, creately, the free portion of Lucidchart and Kahoot! for diagrams, interactive learning games and quizzes to gather ideas from students in a fun and engaging way.

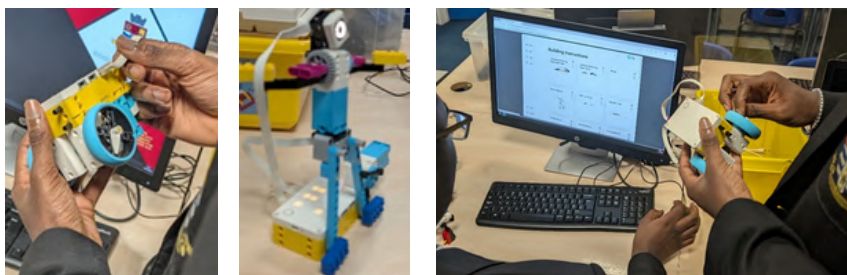
AI and Robotics: Engaging Learners and Assisting with Transitions:

Robotics are playing an increasingly vital role in education, particularly in engaging students with hands-on learning experiences. AI-powered robots can assist in STEM education, fostering creativity and problem-solving skills. In addition, they support students with special educational needs (SEN) by providing interactive and adaptive learning experiences. For learners transitioning between educational stages, such as moving from primary to secondary school, robotics can offer familiarity, guidance, and comfort, helping to reduce anxiety and boost confidence.

To date, we offer Robotics to primary school students at least three times per term to engage them in building, coding, and managing robots. We also have a KS3 Robotics Club on Tuesdays at lunch time in Room 16, where they are already looking at how to deploy drones in addition to coding and deploying the robots they have designed and developed.

Navigating AI Risks: Caution and Ethical Considerations

Do be aware of potential risks, including bias in AI algorithms as mentioned previously, which is evident in results of certain types of searches and has been widely discussed in public forums. Another risk concerns data privacy and security where student data protection must be a priority. Data Protection (DPA/GDPR) principles, require compliance with ethical and legal standards. There are some concerns about AI replacing educators but any such over reliance would not be beneficial nor sustainable. The aim is that it should complement, not replace, human instruction and interaction. The additional ethical consideration surrounds the digital divide that exists and currently negatively impacts students based on socioeconomic background due to inequitable access to AI tools.





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BECOMING A POLYMAT SCHOOL:

If our vision and values strike a chord, we would welcome the opportunity to work with you and see if you would like to become part of our trust. We are open to collaborations with schools in the South East, if your school is interested in becoming part of PolyMAT, please reach out to: contactus@polymat.co.uk

ARE YOU LOOKING FOR A NEW CHALLENGE?

At PolyMAT, we place great emphasis on creating a workplace that is happy and fulfilling and puts people on a journey of development, both professionally and personally. We feel truly blessed with the amazing staff that we work with and their never-ending drive to do special things to help our students. We are ambitious and dedicated and will always place the quality of education before any other desires. If you are interested in working with us, please contact one of our schools directly, and we will be very happy to discuss opportunities with you.

If we do not have any vacancies matching your interests, please join our Talent Pool at [MyNewTerm](#) and we will review your application.

Tim Plumb
CEO of PolyMAT





