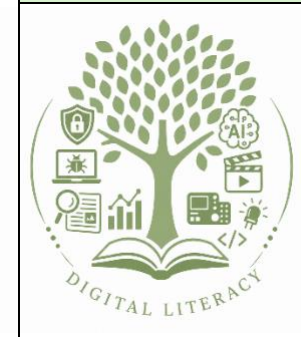
New Line Learning Academy
Believe and Achieve

Digital Literacy Curriculum Intent	Year 8



Year 8 Digital Literacy builds upon the foundations established in Year 7 by encouraging students to become more analytical, critical, and reflective users of technology. While Year 7 focuses on understanding digital systems, online safety, and the fundamentals of computing, Year 8 challenges students to evaluate how technology influences individuals, communities, and society. Students develop a deeper understanding of cybersecurity, information reliability, data analysis, artificial intelligence, digital creativity, and physical computing while continuing to strengthen their digital citizenship and employability skills.

Across six enquiry-led projects, students investigate how digital systems can be protected from cyber threats, how misinformation spreads online, how data can be used to support decision making, and how emerging technologies such as Artificial Intelligence are shaping the modern world. Students are encouraged to think critically about the opportunities and challenges presented by technology while developing the confidence to question, analyse, and evaluate digital information.

The Year 8 curriculum is built around the following enquiries:
- How can we defend ourselves against invisible digital threats?
- Can we trust everything we see online?
- How can data help us make better decisions?
- Should we trust Artificial Intelligence?
- How can technology tell stories?
- How can code bring ideas to life?

Students engage with a wide range of technologies including cybersecurity investigation tools, Microsoft Excel, Artificial Intelligence platforms, animation software, and BBC micro. Through practical projects, investigative enquiries, debates, presentations, and digital creation tasks, students develop increasingly sophisticated technical vocabulary and are expected to communicate their understanding using accurate subject-specific language.

The curriculum combines technical understanding with wider themes of ethics, responsibility, fairness, media literacy, and digital citizenship. Students explore contemporary issues including cybercrime, misinformation, algorithmic bias, automation, data-driven decision making, and the influence of technology on everyday life. These themes support the wider Citizenship and RSHE curriculum by helping students become informed, responsible, and resilient participants in an increasingly digital society.

A strong emphasis is placed on employability and transferable skills. Through data modelling, cybersecurity investigations, ethical debates, programming challenges, digital storytelling projects, and physical computing activities, students develop key Skills Builder competencies including Problem Solving, Planning, Creativity, Speaking, Listening, and Adapting. Students also investigate a wide range of careers within cybersecurity, data science, artificial intelligence, engineering, media production, software development, and digital communications.

New Line Learning Academy
Believe and Achieve

	Throughout the year, students encounter influential individuals, historical events, and technological developments that have shaped the digital world. They explore topics including major cybersecurity incidents, the rise of data-driven organisations, the development of Artificial Intelligence, local heritage through digital storytelling, and the growth of smart technologies and the Internet of Things. These wider perspectives help students understand that technology is not created in isolation but is deeply connected to society, culture, history, and human decision making. Digital Literacy in Year 8 encourages students to become thoughtful digital citizens who can analyse information critically, make informed decisions, solve complex problems, and communicate effectively using technology. By the end of the year, students should be able to evaluate digital systems confidently, understand the ethical implications of emerging technologies, apply computational thinking to real-world challenges, and reflect on the role technology plays within their own lives and future aspirations. The curriculum provides a strong foundation for future study at Key Stage 4 while preparing students to participate responsibly and successfully within an increasingly technological world.

Topic 1 Enquiry	**How can we defend ourselves against invisible digital threats?**

Big Picture
What are the main ideas and big questions in this topic?

Students move beyond Year 7 online safety and identity protection to develop a deeper understanding of cybersecurity and digital defence. Through the study of malware, phishing, social engineering, and cyber attacks, students investigate how digital systems are targeted and how individuals and organisations protect themselves from increasingly sophisticated threats.

The enquiry encourages students to think like cybersecurity professionals, analysing vulnerabilities, identifying risks, and developing defensive strategies. Students explore both the technical and human factors involved in cyber attacks while considering the importance of security within an increasingly connected world.

Zoom In
What knowledge, skills and key vocabulary will we learn step by step?

Students begin by exploring the history and development of cybersecurity, investigating how digital threats have evolved alongside technological advances. They study malware, viruses, ransomware, phishing attacks, and social engineering techniques, examining how cybercriminals exploit both technological weaknesses and human behaviour.

Through practical investigations and case studies, students learn how organisations defend themselves against cyber threats. They evaluate the effectiveness of security measures including firewalls, anti-malware software, encryption, authentication systems, and employee training.

New Line Learning Academy
Believe and Achieve

Students investigate the anatomy of digital attacks and explore how cybersecurity professionals use forensic analysis to identify vulnerabilities, investigate breaches, and develop protective solutions. They learn how digital evidence is collected and interpreted when responding to security incidents.

Throughout the enquiry students develop confidence using technical vocabulary including malware, ransomware, phishing, social engineering, cybercrime, vulnerability, network security, firewall, forensic analysis, authentication, encryption, and threat actor.
The enquiry is structured around a sequence of focused questions including:
- What is malware and how does it spread?
- Why do phishing attacks work?
- How do cybercriminals exploit human behaviour?
- How do organisations defend themselves against attacks?
- What can we learn from major cybersecurity incidents?

Pre-Requisite Knowledge
What have we already learned that will help us with this topic?

Students build upon the online safety, encryption, authentication, and cybersecurity foundations established in Year 7. They should already understand digital footprints, password security, personal data protection, and the role of encryption in protecting information.

This enquiry develops those foundations further by introducing more advanced threats, defensive strategies, and the growing importance of cybersecurity within society.

Pitch Up
How will we challenge ourselves?

Students are challenged to make contextual links between the technical methods used in cyber attacks and real-world system vulnerabilities. They investigate how social engineering exploits human behaviour and evaluate the effectiveness of different defensive approaches.

More confident students develop their own cybersecurity recommendations in response to realistic scenarios, applying forensic thinking and technical understanding to complex problems.

Throughout the project, students continue to develop their ability to "Say it Better" by using increasingly sophisticated technical language when explaining cybersecurity concepts and evaluating digital threats.

Wider Framework
How does this learning connect to future topics and bigger goals?

This enquiry provides essential foundations for future study of cybersecurity, network defence, ethical hacking, artificial intelligence security, and digital ethics. The analytical skills developed here support future learning across Digital Literacy, Computing, Business, and Media Studies.

Curriculum Hinterland
What wider knowledge will deepen our understanding of this topic?

Students investigate significant moments in cybersecurity history, including the Morris Worm, the ILOVEYOU virus, and the WannaCry ransomware attack. They explore how cybersecurity threats have evolved as technology has become more interconnected.

The project also develops critical thinking, risk management, and responsible decision making, which are increasingly important within modern society.	Students also revisit the work of Alan Turing and the codebreakers of Bletchley Park, considering how the principles of cryptography and codebreaking continue to influence modern digital security. The enquiry encourages students to recognise that cybersecurity is not simply a technical issue, but a global challenge that affects governments, businesses, healthcare systems, and individuals.

Authentic connections

How does this topic connect to real life, careers, other subjects and important values?

Students investigate real-world examples of cybercrime, data breaches, ransomware attacks, and phishing scams. They explore how individuals, businesses, governments, and international organisations work to defend themselves against digital threats.

The enquiry develops digital citizenship by encouraging students to take responsibility for their online behaviour, protect their personal information, and recognise risks within digital environments.

The project also contributes to the wider RSHE curriculum through exploration of online safety, managing risk, personal responsibility, digital wellbeing, informed decision making, and recognising manipulation within online spaces.

Spiritual: Students reflect on the invisible systems that protect information and enable trust within digital environments.
Moral: Students explore the ethical implications of cybercrime, hacking, surveillance, and data protection.
Social: Students investigate how digital attacks can affect communities, organisations, and individuals on a local and global scale.
Cultural: Students examine how different societies and nations respond to cybersecurity threats and digital crime.

Students explore careers including:
- Cyber Security Analyst
- Ethical Hacker
- IT Forensic Investigator
- Data Protection Officer
- Cyber Security Consultant

Students investigate how cybersecurity professionals protect individuals, businesses, governments, and critical infrastructure from digital threats.

New Line Learning Academy
Believe and Achieve

The enquiry also supports employability and career related skills through the Skills Builder Universal Framework, particularly:

- Problem Solving through analysing threats and developing protective solutions.
- Listening through evaluating guidance, case studies, and security advice.
- Adapting through responding to evolving technologies and emerging threats.

Resources
What books, websites, videos and materials will support our learning?

- National Curriculum: Computing Programmes of Study KS3.
- Cyber Education & Defence: NCSC (National Cyber Security Centre) – Cyber First program frameworks.
- Data Literacy & Modelling: The Raspberry Pi Foundation (NCCE) data management guidelines.
- Algorithmic Logic & Ethics: Code.org (AI & Machine Learning units) and AI for Good global initiatives.
- Digital Media & Animation: Microsoft Support for advanced Morph transitions and graphic asset layering tools.
- Physical Computing Mastery: BBC micro: bit Foundation and Microsoft Make Code advanced script repositories.

Assessment
How will we show what we know, remember and can apply?

Assessment is designed to evaluate both students' knowledge and their ability to apply that knowledge within meaningful digital contexts. Throughout the enquiry, students demonstrate their understanding through practical activities, investigations, discussions, digital creations, presentations, and reflection.

Approximately 60% of assessment focuses on substantive knowledge, including key concepts, technical vocabulary, and subject-specific understanding. Approximately 40% focuses on disciplinary knowledge, assessing how students analyse information, evaluate evidence, solve problems, create digital outcomes, communicate ideas, and make informed digital decisions.

Each enquiry culminates in a significant outcome or Digital Deep-Dive Challenge, allowing students to bring together their knowledge, skills, and understanding in response to the project's central question.

Topic 2
Enquiry

Can we trust everything we see online?

Big Picture
What are the main ideas and big questions in this topic?

Students develop critical thinking skills by investigating how information is created, shared, and consumed online. Through the study of bias, reliability, misinformation, disinformation, and echo chambers, students explore how digital content can influence perceptions, beliefs, and behaviours.

The enquiry encourages students to become informed and analytical consumers of information by questioning sources, evaluating evidence, and recognising the ways in which digital platforms shape public understanding.

New Line Learning Academy
Believe and Achieve

Zoom In

What knowledge, skills and key vocabulary will we learn step by step?

Students investigate the concepts of bias and reliability, exploring how information can be influenced by personal opinions, political perspectives, commercial interests, and algorithmic systems. They learn how to evaluate sources using structured verification checklists and critical questioning techniques.

Students examine how misinformation and disinformation spread online and investigate the role of social media platforms, recommendation algorithms, and echo chambers in shaping public perception. Through contemporary case studies, students explore how digital content can influence opinions, reinforce beliefs, and contribute to misinformation.

The enquiry encourages students to evaluate evidence, compare sources, and recognise the difference between fact, opinion, interpretation, and manipulation. Students learn to challenge assumptions and make informed judgements about the information they encounter online.

Throughout the enquiry students develop confidence using technical vocabulary including bias, reliability, misinformation, disinformation, verification, source evaluation, echo chamber, algorithm, credibility, evidence, and media literacy.

The enquiry is structured around a sequence of focused questions including:
- What makes a source trustworthy?
- How can bias influence information?
- What is an echo chamber?
- How does misinformation spread online?
- Why is critical thinking important in the digital age?

Pre-Requisite Knowledge

What have we already learned that will help us with this topic?

Students build upon the digital citizenship and online safety concepts explored in Year 7. They should already understand how digital systems operate and have experience evaluating online risks and protecting personal information.

This enquiry extends that understanding by focusing on information quality, media literacy, and the ways in which digital platforms shape perceptions and beliefs.

Pitch Up

How will we challenge ourselves?

Students are challenged to analyse information critically and justify their evaluations using evidence. They investigate how different audiences may interpret the same information in different ways and evaluate the influence of algorithms on digital experiences.

More confident students develop sophisticated arguments about media influence, algorithmic recommendations, and the responsibilities of technology companies in combating misinformation.

New Line Learning Academy
Believe and Achieve

	Throughout the project, students continue to develop their ability to "Say it Better" by using accurate technical language when evaluating sources and discussing information reliability.

Wider Framework *How does this learning connect to future topics and bigger goals?*	**Curriculum Hinterland** *What wider knowledge will deepen our understanding of this topic?*
This enquiry provides essential foundations for future learning about Artificial Intelligence, algorithmic bias, digital ethics, media studies, and data analysis. The critical thinking skills developed here support success across the wider curriculum, particularly in Humanities, Science, Business Studies, Geography, and English.	Students investigate major examples of misinformation and media influence, including the development of mass media, social media algorithms, and contemporary examples of online misinformation. They explore the concept of echo chambers and examine how recommendation systems can shape the information individuals encounter online. Students investigate how digital platforms influence culture, politics, and public debate. The enquiry encourages students to recognise that information literacy is one of the most important skills required within modern democratic societies.

Authentic connections
How does this topic connect to real life, careers, other subjects and important values?

Students investigate real-world examples of misinformation, fake news, online influence, and media manipulation. They explore how journalists, researchers, governments, and technology companies work to verify information and maintain public trust.

The enquiry develops digital citizenship by encouraging students to evaluate information critically, engage respectfully with differing viewpoints, and make informed decisions when interacting with digital content.

The project also contributes to the wider RSHE curriculum through media literacy, critical thinking, healthy online behaviours, understanding influence and persuasion, and developing resilience when encountering misleading information.

Spiritual: Students reflect upon how beliefs, values, and experiences influence the way individuals interpret information.
Moral: Students consider the ethical responsibilities associated with sharing information and the consequences of spreading misinformation.
Social: Students discuss how information influences communities, relationships, and public debate.
Cultural: Students investigate how different societies, cultures, and media systems shape the way information is communicated and understood.

Students explore careers including:
- Journalist
- Data Analyst

- Intelligence Analyst
- Fact Checker
- Media Researcher

Students investigate how professionals evaluate information, verify sources, analyse evidence, and communicate findings accurately.

The enquiry also supports employability and career related skills through the Skills Builder Universal Framework, particularly:

- Listening through evaluating multiple viewpoints and sources.
- Problem Solving through verifying information and identifying misinformation.
- Speaking through presenting evidence-based conclusions and reasoned arguments.

Resources *What books, websites, videos and materials will support our learning?*	**Assessment** *How will we show what we know, remember and can apply?*
• National Curriculum: Computing Programmes of Study KS3. • Cyber Education & Defence: NCSC (National Cyber Security Centre) – Cyber First program frameworks. • Data Literacy & Modelling: The Raspberry Pi Foundation (NCCE) data management guidelines. • Algorithmic Logic & Ethics: Code.org (AI & Machine Learning units) and AI for Good global initiatives. • Digital Media & Animation: Microsoft Support for advanced Morph transitions and graphic asset layering tools. • Physical Computing Mastery: BBC micro: bit Foundation and Microsoft Make Code advanced script repositories.	Assessment is designed to evaluate both students' knowledge and their ability to apply that knowledge within meaningful digital contexts. Throughout the enquiry, students demonstrate their understanding through practical activities, investigations, discussions, digital creations, presentations, and reflection. Approximately 60% of assessment focuses on substantive knowledge, including key concepts, technical vocabulary, and subject-specific understanding. Approximately 40% focuses on disciplinary knowledge, assessing how students analyse information, evaluate evidence, solve problems, create digital outcomes, communicate ideas, and make informed digital decisions. Each enquiry culminates in a significant outcome or Digital Deep-Dive Challenge, allowing students to bring together their knowledge, skills, and understanding in response to the project's central question.

Topic 3
Enquiry

How can data help us make better decisions?

Big Picture
What are the main ideas and big questions in this topic?

New Line Learning Academy
Believe and Achieve

Students transition from Year 7 data representation and binary systems to the practical manipulation and analysis of real-world data. Through the study of spreadsheets and data modelling, students learn how organisations use data to identify patterns, automate calculations, and support decision making.
The enquiry encourages students to think like data analysts, using Microsoft Excel to organise information, apply formulas, and create efficient systems for managing increasingly complex datasets. Students develop an understanding of how data drives decisions within business, industry, science, healthcare, and government.

Zoom In

What knowledge, skills and key vocabulary will we learn step by step?

Students begin by exploring the structure of spreadsheets and learning how data is organised using cells, rows, columns, worksheets, and workbooks. They investigate why spreadsheets have become one of the most widely used tools in business, education, and industry.

Students develop confidence using Microsoft Excel by entering, formatting, and organising data. They learn how formulas and functions can automate calculations and improve efficiency when working with large datasets. Core functions such as SUM, AVERAGE, MIN, MAX, and COUNT are introduced and applied to realistic scenarios.

The enquiry develops students' understanding of data modelling and analytical thinking. Students act as data analysts, identifying trends, interpreting results, and using spreadsheets to answer questions and solve problems. They explore how businesses and organisations use data to inform decision making and improve performance.

As confidence develops, students construct increasingly sophisticated spreadsheet models that combine multiple formulas and logical processes. They learn how to troubleshoot errors, improve accuracy, and refine models to meet specific purposes.

Throughout the enquiry students develop confidence using technical vocabulary including spreadsheet, workbook, worksheet, cell, row, column, formula, function, dataset, data modelling, automation, analysis, calculation, and data validation.

The enquiry is structured around a sequence of focused questions including:
- Why are spreadsheets used around the world?
- How can formulas save time and improve accuracy?
- What patterns can data reveal?
- How can data help organisations make decisions?
- What makes an effective spreadsheet model?

Pre-Requisite Knowledge

What have we already learned that will help us with this topic?

Students build upon the analytical thinking skills developed through Year 7 Digital Literacy and the critical evaluation skills explored in Topics 1 and 2. They

Pitch Up

How will we challenge ourselves?

Students are challenged to use algorithmic experimentation in increasingly detailed and accurate ways when constructing spreadsheet models. They are

should already understand how digital systems organise information and have experience using digital platforms for communication and collaboration.
This enquiry extends those foundations by introducing data manipulation, automation, and analytical workflows.

encouraged to create formulas independently, automate calculations, and use data to solve complex problems.

More confident students develop ambitious spreadsheet models that combine multiple functions and logical processes. They are expected to justify their design choices and explain how their models support decision making within realistic business and organisational scenarios.

Throughout the project, students continue to develop their ability to "Say it Better" by using precise technical language when discussing data workflows and spreadsheet functionality.

Wider Framework
How does this learning connect to future topics and bigger goals?

This enquiry introduces many of the data handling and analytical skills that underpin Key Stage 4 study in Business Studies, Media Studies, Geography, and other data-driven subjects. Students develop confidence working with structured information and using digital tools to support decision making.

The project also provides important foundations for future study of databases, data science, business analytics, and artificial intelligence.

Curriculum Hinterland
What wider knowledge will deepen our understanding of this topic?

Students explore the development of modern data systems and the rise of spreadsheet software as one of the most influential digital tools in the modern workplace. They investigate how businesses transitioned from paper-based record keeping to digital data modelling and how this transformed industries around the world.

The enquiry also explores the growth of data-driven decision making and the role that data engineers, analysts, and organisations play in managing increasingly large datasets. Students consider how modern businesses, governments, healthcare providers, and scientists rely upon data to understand patterns and make informed decisions.

This project celebrates and embraces an analytical awareness of industrial data structures, automation, and algorithmic frameworks while helping students understand the role of the data engineer within society.

Authentic connections
How does this topic connect to real life, careers, other subjects and important values?

Students investigate how spreadsheets and data modelling are used throughout modern society. From business forecasting and financial planning to scientific research and healthcare management, students discover how data is used to support decision making and solve real-world problems.

New Line Learning Academy
Believe and Achieve

The enquiry develops digital citizenship by encouraging students to consider the importance of data accuracy, reliability, and responsible handling of information. Students explore how poor-quality data can lead to flawed decisions and why careful analysis is essential in many professional contexts.

The project also contributes to the wider RSHE curriculum through decision making, financial awareness, critical thinking, and problem solving. Students develop confidence interpreting information and using evidence to support conclusions while recognising the role data plays in everyday life.

Spiritual: Students explore the hidden patterns and relationships that data can reveal, developing curiosity about how information can be used to understand the world.
Moral: Students consider the importance of accuracy, honesty, and responsibility when handling and interpreting data.
Social: Students collaborate when analysing datasets and discussing how information can be used to solve problems and support decision making.
Cultural: Students investigate how data is collected and used globally, exploring how different societies and industries rely on information systems.

Students explore careers including:
- Data Analyst
- Business Analyst
- Financial Analyst
- Database Administrator
- Data Engineer

Students investigate how organisations use data to improve efficiency, identify trends, and support strategic decision making. They explore how spreadsheet modelling, analysis, and automation are used across business, healthcare, science, engineering, and government sectors.

The enquiry also supports employability and career related skills through the Skills Builder Universal Framework, particularly:
- Planning through organising datasets and constructing spreadsheet models.
- Problem Solving through analysing information and automating calculations.
- Creativity through designing effective and user-friendly data systems.

Resources *What books, websites, videos and materials will support our learning?*	**Assessment** *How will we show what we know, remember and can apply?*
• National Curriculum: Computing Programmes of Study KS3. • Cyber Education & Defence: NCSC (National Cyber Security Centre) – Cyber First program frameworks. • Data Literacy & Modelling: The Raspberry Pi Foundation (NCCE) data management guidelines.	Assessment is designed to evaluate both students' knowledge and their ability to apply that knowledge within meaningful digital contexts. Throughout the enquiry, students demonstrate their understanding through practical activities, investigations, discussions, digital creations, presentations, and reflection.

• Algorithmic Logic & Ethics: Code.org (AI & Machine Learning units) and AI for Good global initiatives. • Digital Media & Animation: Microsoft Support for advanced Morph transitions and graphic asset layering tools. • Physical Computing Mastery: BBC micro: bit Foundation and Microsoft Make Code advanced script repositories.	Approximately 60% of assessment focuses on substantive knowledge, including key concepts, technical vocabulary, and subject-specific understanding. Approximately 40% focuses on disciplinary knowledge, assessing how students analyse information, evaluate evidence, solve problems, create digital outcomes, communicate ideas, and make informed digital decisions. Each enquiry culminates in a significant outcome or Digital Deep-Dive Challenge, allowing students to bring together their knowledge, skills, and understanding in response to the project's central question.

Topic 4
Enquiry

Should we trust Artificial Intelligence?

Big Picture
What are the main ideas and big questions in this topic?

Students explore one of the most significant technological developments of the modern world: Artificial Intelligence. Building upon their understanding of data modelling and logical systems, students investigate how machines learn from data, make decisions, and increasingly influence everyday life.

The enquiry encourages students to think critically about the opportunities and challenges presented by Artificial Intelligence and Machine Learning. Students explore how intelligent systems are transforming industries across the world while considering important ethical questions surrounding automation, algorithmic bias, and fairness.

Zoom In
What knowledge, skills and key vocabulary will we learn step by step?

Students begin by exploring the concept of Artificial Intelligence and investigating how computers can be trained to identify patterns, process information, and make decisions. They examine examples of AI systems used in everyday life, including recommendation algorithms, virtual assistants, facial recognition systems, navigation software, and automated customer support.

Students investigate the principles of Machine Learning and discover how intelligent systems learn from datasets rather than relying solely on pre-programmed instructions. Through practical activities and case studies, students explore how the quality of data can influence the decisions that AI systems make.

A significant focus is placed upon algorithmic bias and the ethical implications of automated decision making. Students investigate examples where biased datasets have produced unfair outcomes and consider how technology companies, governments, and developers can reduce bias within intelligent systems. The enquiry encourages students to evaluate both the benefits and risks of Artificial Intelligence. They consider how AI is transforming healthcare, transport, education, entertainment, manufacturing, and business while discussing the social, economic, and ethical consequences of increasing automation.

New Line Learning Academy
Believe and Achieve

Throughout the enquiry students develop confidence using technical vocabulary including Artificial Intelligence, Machine Learning, algorithm, dataset, algorithmic bias, automation, training data, neural network, predictive modelling, ethics, and automated decision making.
The enquiry is structured around a sequence of focused questions including:

- What is Artificial Intelligence?
- How do machines learn?
- Can computers think like humans?
- What causes algorithmic bias?
- Should we trust decisions made by AI systems?

Pre-Requisite Knowledge
What have we already learned that will help us with this topic?

Students build upon the analytical skills developed through cybersecurity, source evaluation, and spreadsheet modelling. They should already understand how data can be collected, organised, analysed, and used to support decision making.

This enquiry extends those concepts by exploring how machines use data to identify patterns and make automated decisions.

Pitch Up
How will we challenge ourselves?

Students are challenged to understand in detail how automated decision-making systems influence modern infrastructure and society. They investigate how different datasets can produce different outcomes and evaluate the impact of algorithmic bias on individuals and communities.

More confident students develop their own proposals for reducing bias within AI systems and communicate their ideas using precise technical language. Students are encouraged to justify their viewpoints using evidence gathered through research and discussion.

Throughout the project, students continue to develop their ability to "Say it Better" by using accurate technical vocabulary when discussing Artificial Intelligence, Machine Learning, and digital ethics.

Wider Framework
How does this learning connect to future topics and bigger goals?

This enquiry prepares students for future study of emerging technologies, data science, Computer Science, Business Studies, and Media Studies. Students develop critical thinking skills that enable them to evaluate technological developments rather than simply accepting them at face value.

The project also introduces many of the ethical questions that will shape future technological innovation and employment.

Curriculum Hinterland
What wider knowledge will deepen our understanding of this topic?

Students explore the historical development of Artificial Intelligence, tracing the journey from Alan Turing's famous Turing Test to modern Machine Learning systems and generative AI technologies. They investigate how ideas that once existed only in science fiction have become part of everyday life.

Students also explore the role of Ada Lovelace as one of the earliest thinkers to recognise the potential of programmable machines. They consider how

	advances in computing power, data collection, and algorithm design have accelerated the development of intelligent systems. The enquiry encourages students to recognise that Artificial Intelligence is part of a much larger story of innovation, experimentation, and technological progress.

Authentic connections

How does this topic connect to real life, careers, other subjects and important values?

Artificial Intelligence is increasingly shaping the world that students experience every day. From social media algorithms and online shopping recommendations to facial recognition technology, navigation systems, healthcare diagnostics, and self-driving vehicles, students investigate how AI systems are becoming embedded within modern life. The enquiry encourages students to question how these systems work, who designs them, and how they influence the decisions people make.

The project has strong links to Citizenship through its exploration of fairness, equality, accountability, privacy, and responsible technological development. Students investigate how algorithmic bias can affect different groups within society and consider whether governments, technology companies, and individuals have a responsibility to ensure that AI systems are fair and transparent. Students explore contemporary debates surrounding automation, surveillance, and the ethical use of personal data.

The enquiry contributes significantly to the RSHE curriculum through the development of critical thinking, informed decision making, media literacy, and preparation for future careers. Students explore how algorithms influence the content they see online and consider how digital technologies can shape beliefs, opinions, and behaviours. They develop the confidence to question information, evaluate sources critically, and make informed choices within increasingly automated digital environments.

The project also supports students' understanding of future pathways by exploring the rapidly growing role of Artificial Intelligence within education, healthcare, engineering, business, entertainment, and scientific research. Students reflect on the opportunities and challenges that emerging technologies may create for future generations and consider the skills they will need to thrive in a changing workplace.

Spiritual: Students reflect on what makes human intelligence unique and consider whether machines can ever truly think, create, or make moral decisions.
Moral: Students explore ethical issues including algorithmic bias, privacy, accountability, surveillance, and the responsible development of Artificial Intelligence.
Social: Students discuss how AI is changing communication, employment, healthcare, education, and everyday interactions within communities.
Cultural: Students investigate how Artificial Intelligence is being developed and used around the world, considering how different societies and cultures respond to emerging technologies.

New Line Learning Academy
Believe and Achieve

The enquiry also supports employability and career related skills through the Skills Builder Universal Framework, particularly:
- Problem Solving through evaluating AI systems and proposing solutions to bias.
- Speaking through debating ethical issues and presenting informed viewpoints.
- Creativity through designing and evaluating intelligent digital solutions.

Resources
What books, websites, videos and materials will support our learning?

- National Curriculum: Computing Programmes of Study KS3.
- Cyber Education & Defence: NCSC (National Cyber Security Centre) – Cyber First program frameworks.
- Data Literacy & Modelling: The Raspberry Pi Foundation (NCCE) data management guidelines.
- Algorithmic Logic & Ethics: Code.org (AI & Machine Learning units) and AI for Good global initiatives.
- Digital Media & Animation: Microsoft Support for advanced Morph transitions and graphic asset layering tools.
- Physical Computing Mastery: BBC micro: bit Foundation and Microsoft Make Code advanced script repositories.

Assessment
How will we show what we know, remember and can apply?

Assessment is designed to evaluate both students' knowledge and their ability to apply that knowledge within meaningful digital contexts. Throughout the enquiry, students demonstrate their understanding through practical activities, investigations, discussions, digital creations, presentations, and reflection.

Approximately 60% of assessment focuses on substantive knowledge, including key concepts, technical vocabulary, and subject-specific understanding. Approximately 40% focuses on disciplinary knowledge, assessing how students analyse information, evaluate evidence, solve problems, create digital outcomes, communicate ideas, and make informed digital decisions.

Each enquiry culminates in a significant outcome or Digital Deep-Dive Challenge, allowing students to bring together their knowledge, skills, and understanding in response to the project's central question.

Topic 5
Enquiry

How can technology tell stories?

Big Picture
What are the main ideas and big questions in this topic?

Students explore the power of digital storytelling by combining creativity, historical enquiry, and technical skill. Through the creation of animated narratives, students investigate how technology can be used to preserve, communicate, and reimagine important stories from the past.

The enquiry is centred around the famous 1834 discovery of the Iguanodon ("Iggy the Dinosaur") in Maidstone. Students learn how digital technologies can bring local history to life and explore how animation, design, and narrative can be combined to engage audiences and communicate ideas effectively.

New Line Learning Academy
Believe and Achieve

Zoom In

What knowledge, skills and key vocabulary will we learn step by step?

Students begin by exploring the story of the Maidstone Iguanodon discovery and investigating why it remains an important part of local history. They examine how stories can be communicated through visual media and consider the role that technology plays in preserving cultural heritage.

Students learn the principles of digital storytelling, including audience, narrative structure, sequencing, storyboarding, and visual communication. They develop planning skills by designing a storyboard that communicates a clear narrative and purpose.

Using presentation and animation software, students create their own digital narrative based on the Iguanodon discovery. A significant focus is placed upon the use of Morph transitions and advanced presentation techniques to create smooth movement, visual continuity, and engaging storytelling experiences.
As confidence develops, students refine their animations through evaluation and feedback. They learn how digital creators review, adapt, and improve their work to ensure that technical execution supports narrative intention.

Throughout the enquiry students develop confidence using technical vocabulary including narrative, storyboard, animation, transition, Morph, audience, sequencing, digital preservation, visual communication, and technical intention.

The enquiry is structured around a sequence of focused questions including:
- How can technology bring history to life?
- What makes a story engaging?
- How do animators communicate meaning?
- How can digital tools improve storytelling?
- How can we preserve local heritage using technology?

Pre-Requisite Knowledge

What have we already learned that will help us with this topic?

Students build upon the communication, presentation, and digital creation skills developed throughout Year 7 and the analytical thinking developed through earlier Year 8 projects.

They should already understand audience, purpose, digital communication, and presentation design. This enquiry extends those skills by introducing narrative construction, animation techniques, and creative digital production.

Pitch Up

How will we challenge ourselves?

Students are challenged to create original digital narratives rather than relying upon pre-made templates or simple transitions. They are encouraged to make creative decisions that support the story they wish to tell while demonstrating increasing control over animation tools and visual communication.

More confident students develop ambitious digital outcomes that combine historical understanding with sophisticated animation techniques. They are

New Line Learning Academy
Believe and Achieve

	expected to justify their design decisions and explain how their technical choices support audience engagement and narrative impact. Throughout the project students continue to develop their ability to "Say it Better" by using accurate technical vocabulary when evaluating creative and technical decisions.
Wider Framework *How does this learning connect to future topics and bigger goals?*	**Curriculum Hinterland** *What wider knowledge will deepen our understanding of this topic?*
This enquiry develops skills that are highly transferable across Media Studies, Business Studies, History, English, and creative subjects. Students learn how to communicate ideas effectively through digital media while developing confidence in planning, evaluating, and presenting creative work. The project also provides foundations for future study of animation, media production, marketing, digital content creation, and visual communication.	Students investigate the 1834 discovery of the Iguanodon in Maidstone and explore its significance within both local and international scientific history. They learn about Gideon Mantell and the role that the discovery played in developing our understanding of prehistoric life. The enquiry also explores how technology is increasingly used to preserve cultural heritage and historical narratives. Students examine how museums, archives, historians, and educators use digital technologies to make history accessible to wider audiences. This project develops pupils' awareness of digital preservation and technological storytelling, demonstrating how modern computing platforms can bring regional history and culture to life.
Authentic connections *How does this topic connect to real life, careers, other subjects and important values?*	
Students explore how animation, storytelling, and digital content creation are used across a wide range of industries including film, television, gaming, education, marketing, heritage, and museum services. They investigate how digital creators communicate information and engage audiences through visual storytelling. The project has strong cross-curricular links with History, as students explore a significant local historical event, and English, through narrative construction, audience awareness, and communication. Students recognise that technology can be used not only to solve problems but also to preserve stories, celebrate culture, and communicate meaning. The enquiry contributes to the wider RSHE curriculum through self-expression, confidence, communication, creativity, and personal development. Students learn how to present ideas effectively, respond constructively to feedback, and develop confidence in sharing creative work with others.	

New Line Learning Academy
Believe and Achieve

The project also supports Citizenship by encouraging students to value local heritage, understand the importance of cultural preservation, and recognise how technology can strengthen community identity and engagement.
Spiritual: Students explore curiosity, imagination, and creativity while bringing historical stories to life through digital media.
Moral: Students consider the importance of preserving cultural heritage and communicating historical narratives accurately and respectfully.
Social: Students collaborate during planning, peer review, and evaluation activities, developing communication and teamwork skills.
Cultural: Students investigate an important part of Maidstone's local heritage and explore how technology helps preserve and celebrate cultural stories for future generations.

Students explore careers including:
- Animator
- Digital Content Creator
- Graphic Designer
- Museum Education Officer
- Games Designer

Students investigate how creative and technical skills combine within modern digital industries. They explore how storytelling, animation, and visual communication support careers in media, education, entertainment, marketing, and heritage sectors.

The enquiry also supports employability and career related skills through the Skills Builder Universal Framework, particularly:
- Creativity through designing and producing original digital narratives.
- Planning through storyboarding and project development.
- Speaking through presenting and evaluating creative outcomes.

Resources
What books, websites, videos and materials will support our learning?

- National Curriculum: Computing Programmes of Study KS3.
- Cyber Education & Defence: NCSC (National Cyber Security Centre) – Cyber First program frameworks.
- Data Literacy & Modelling: The Raspberry Pi Foundation (NCCE) data management guidelines.
- Algorithmic Logic & Ethics: Code.org (AI & Machine Learning units) and AI for Good global initiatives.
- Digital Media & Animation: Microsoft Support for advanced Morph transitions and graphic asset layering tools.

Assessment
How will we show what we know, remember and can apply?

Assessment is designed to evaluate both students' knowledge and their ability to apply that knowledge within meaningful digital contexts. Throughout the enquiry, students demonstrate their understanding through practical activities, investigations, discussions, digital creations, presentations, and reflection.

Approximately 60% of assessment focuses on substantive knowledge, including key concepts, technical vocabulary, and subject-specific understanding. Approximately 40% focuses on disciplinary knowledge, assessing how students analyse information, evaluate evidence, solve problems, create digital outcomes, communicate ideas, and make informed digital decisions.

New Line Learning Academy
Believe and Achieve

• Physical Computing Mastery: BBC micro: bit Foundation and Microsoft Make Code advanced script repositories.	Each enquiry culminates in a significant outcome or Digital Deep-Dive Challenge, allowing students to bring together their knowledge, skills, and understanding in response to the project's central question.

Topic 6
Enquiry

How can code bring ideas to life?

Big Picture
What are the main ideas and big questions in this topic?

Students conclude their Year 8 Digital Literacy journey by returning to physical computing and applying the advanced logical thinking, programming, and problem-solving skills developed throughout the year. Using BBC micro, students move beyond simple coding tasks and develop increasingly sophisticated programs that interact with users, sensors, and real-world environments.

The enquiry encourages students to think like software engineers and systems designers. Students investigate how code can control physical devices, automate processes, and solve real-world problems while developing independence, resilience, and confidence as digital creators. The project culminates in students presenting their Year 8 Digital Journey, reflecting upon how their skills have developed across the year.

Zoom In
What knowledge, skills and key vocabulary will we learn step by step?

Students revisit the principles of computational thinking and programming developed in Year 7, applying these skills to increasingly complex physical computing challenges. They investigate how algorithms, logic structures, and digital systems can be combined to control physical devices and respond to user input.
Using BBC micro, students create and test advanced programs that utilise inputs, outputs, variables, sensors, loops, and conditional statements. They investigate how data can be collected from the environment and used to trigger automated responses.

A significant focus is placed upon debugging and independent problem solving. Students learn how professional programmers identify faults, test solutions, and refine systems through an iterative process of development and evaluation. They are encouraged to view mistakes as opportunities for improvement and develop resilience when tackling complex challenges.

As confidence develops, students design increasingly sophisticated physical computing solutions that combine multiple programming concepts. They move beyond simply following instructions and begin making independent design decisions that reflect their own technical intentions and creative ideas.
The enquiry concludes with students reflecting on their Year 8 Digital Journey, considering how their knowledge of cybersecurity, data analysis, Artificial Intelligence, digital storytelling, and physical computing has developed throughout the year.

New Line Learning Academy
Believe and Achieve

Throughout the enquiry students develop confidence using technical vocabulary including algorithm, variable, sensor, input, output, iteration, debugging, conditional statement, physical computing, automation, computational thinking, and system design.

The enquiry is structured around a sequence of focused questions including:
- How can code control physical devices?
- How do sensors collect and use information?
- Why is debugging an important part of programming?
- How can algorithms solve real-world problems?
- How have my digital skills developed this year?

Pre-Requisite Knowledge
What have we already learned that will help us with this topic?

Students build upon the programming and computational thinking skills introduced during Year 7 and the analytical thinking developed throughout Year 8. They should already understand algorithms, decomposition, pattern recognition, debugging, data modelling, and logical decision making.

This enquiry provides an opportunity to consolidate and apply those skills within increasingly complex programming and physical computing challenges.

Pitch Up
How will we challenge ourselves?

Students are challenged to design their own unique physical computing solutions rather than relying solely on pre-existing code blocks or templates. They are encouraged to think creatively about how programming can be used to solve problems and automate processes.

More confident students create ambitious micro programs that combine multiple inputs, outputs, sensors, and logical structures. They are expected to justify programming decisions, troubleshoot problems independently, and refine their solutions through testing and evaluation.

Students continue to develop their ability to "Say it Better" by using increasingly sophisticated technical language when explaining algorithms, debugging processes, and programming decisions.

Wider Framework
How does this learning connect to future topics and bigger goals?

This enquiry prepares students for future study in Computer Science, Engineering, Robotics, Electronics, and Software Development. The logical reasoning and computational thinking skills developed here provide important foundations for Key Stage 4 study and future technological careers.

Curriculum Hinterland
What wider knowledge will deepen our understanding of this topic?

Students explore the development of physical computing technologies and investigate how programmable devices have evolved from simple control systems into the sophisticated smart technologies that shape modern life. They examine how microcontrollers underpin many everyday technologies including wearable devices, smart homes, automated transport systems, healthcare technologies, and the Internet of Things (IoT). Students investigate

The project also reinforces many of the core skills developed throughout Year 8, encouraging students to apply knowledge from multiple areas of Digital Literacy within a practical context.	how advances in computing have enabled devices to communicate, respond to environmental data, and make autonomous decisions. This project develops pupils' understanding of the role technological creators, engineers, and programmers play in designing the systems that increasingly support everyday life. It highlights how logical thinking and creativity combine to drive technological innovation.

Authentic connections

How does this topic connect to real life, careers, other subjects and important values?

Students explore how physical computing underpins many of the technologies they encounter every day, including wearable fitness trackers, smart watches, automated lighting systems, robotics, environmental monitoring devices, and smart home technologies. They investigate how programmers and engineers use code to create systems that respond intelligently to real-world conditions.

The project has strong links to Mathematics, Science, Design Technology, and Engineering, as students apply logical reasoning, problem solving, and system design principles to practical challenges. Students learn that programming is not simply about writing code but about creating solutions that improve efficiency, safety, and quality of life.

The enquiry contributes significantly to the wider RSHE curriculum through resilience, confidence, self-reflection, aspiration, and future career awareness. Students learn how perseverance, adaptability, and responding positively to setbacks are essential skills within both education and employment. Through presenting their Year 8 Digital Journey, students also develop confidence in communicating achievements and reflecting upon personal growth.
The project also supports Citizenship by encouraging students to consider how emerging technologies affect communities and society. Students reflect on the opportunities and challenges presented by automation and explore the responsibilities associated with designing technologies that impact people's lives.

Spiritual: Students experience curiosity and wonder as they create physical systems that respond to the world around them, reflecting on the possibilities of human innovation and technological creativity.
Moral: Students consider the responsibilities associated with designing technologies that influence people's lives and discuss how technology should be developed ethically and responsibly.
Social: Students collaborate on programming challenges, share solutions, provide feedback, and learn from one another throughout the design and debugging process.
Cultural: Students investigate how physical computing technologies are used across different countries and industries, exploring how innovation helps address global challenges and improve quality of life.

Students explore careers including:
- Software Engineer
- Robotics Engineer

New Line Learning Academy
Believe and Achieve

- Systems Designer
- Electronics Engineer
- Internet of Things (IoT) Developer

Students investigate how physical computing, automation, and programming are used across industries including engineering, healthcare, manufacturing, transport, and technology. They explore how logical thinking, creativity, and resilience support success within these professions.

The enquiry also supports employability and career related skills through the Skills Builder Universal Framework, particularly:

- Problem Solving through designing, testing, and debugging physical computing solutions.
- Adapting through refining programs and responding to technical challenges.
- Creativity through developing original digital and physical solutions.

Resources *What books, websites, videos and materials will support our learning?*	**Assessment** *How will we show what we know, remember and can apply?*
• National Curriculum: Computing Programmes of Study KS3. • Cyber Education & Defence: NCSC (National Cyber Security Centre) – Cyber First program frameworks. • Data Literacy & Modelling: The Raspberry Pi Foundation (NCCE) data management guidelines. • Algorithmic Logic & Ethics: Code.org (AI & Machine Learning units) and AI for Good global initiatives. • Digital Media & Animation: Microsoft Support for advanced Morph transitions and graphic asset layering tools. • Physical Computing Mastery: BBC micro: bit Foundation and Microsoft Make Code advanced script repositories.	Assessment is designed to evaluate both students' knowledge and their ability to apply that knowledge within meaningful digital contexts. Throughout the enquiry, students demonstrate their understanding through practical activities, investigations, discussions, digital creations, presentations, and reflection. Approximately 60% of assessment focuses on substantive knowledge, including key concepts, technical vocabulary, and subject-specific understanding. Approximately 40% focuses on disciplinary knowledge, assessing how students analyse information, evaluate evidence, solve problems, create digital outcomes, communicate ideas, and make informed digital decisions. Each enquiry culminates in a significant outcome or Digital Deep-Dive Challenge, allowing students to bring together their knowledge, skills, and understanding in response to the project's central question.