



Chester-le-Street CE Primary School

Computing

INTENT

At Chester-le-Street CE Primary School, we recognise that technology is an integral part of modern life and will continue to play an increasingly important role in our pupils' futures. Our Computing curriculum aims to equip every child with the knowledge, skills and understanding needed to participate confidently, creatively and safely in an increasingly digital world.

Computing provides pupils with opportunities to become **digital creators, critical thinkers, problem-solvers and responsible users of technology**. We want children to understand not only how to use technology effectively, but also how digital systems work, how technology can be created and controlled, and how to make informed and safe choices when interacting in digital spaces.

Our Computing curriculum is rooted in our vision of **Our Community, Our World and Our Impact**. Through Computing, pupils explore how technology connects people and communities, how it shapes the wider world and how they can use digital tools responsibly and positively to communicate, create, collaborate and solve problems.

As a Church of England school, our approach to Computing is underpinned by our Christian ethos and the belief that technology should be used responsibly and with consideration for others. We encourage pupils to recognise the impact their actions can have both online and offline and to approach the digital world with respect, kindness, responsibility and care.

OUR AIMS

Our Computing curriculum aims to:

- develop pupils' understanding of the three key areas of **Computer Science, Information Technology and Digital Literacy**;
- ensure pupils develop secure and progressively deeper knowledge and skills as they move through the school;
- develop pupils' ability to **solve problems, think logically and create solutions**;
- introduce pupils to programming and computational thinking, enabling them to understand how instructions and algorithms can be used to control and create digital systems;
- develop confidence in using a range of digital tools, devices and software to create, organise, present and communicate information;
- enable pupils to understand how digital technology, hardware, software and networks work;
- develop pupils' ability to collect, organise, analyse and present data in appropriate ways;
- encourage creativity through the use of digital technology, including animation, music, presentations, digital art and multimedia;
- ensure that pupils become **responsible, respectful and safe users of technology**;

- develop pupils' understanding of online safety so that they can recognise risks, make informed choices and know how and when to seek help;
- develop critical thinking so that pupils can question, evaluate and use digital information appropriately;
- provide opportunities for pupils to apply Computing knowledge and skills across the wider curriculum;
- prepare pupils for the next stage of their education and for a future in which digital technology will continue to shape society and the workplace;
- ensure that Computing is inclusive and accessible so that every pupil can participate meaningfully and develop confidence in using technology.

A Broad and Progressive Computing Curriculum

Our Computing curriculum is carefully sequenced to build knowledge and skills progressively from Year 1 to Year 6. Learning builds upon prior knowledge, enabling pupils to revisit and deepen their understanding while applying their skills in increasingly complex contexts.

The curriculum is organised around the three interconnected strands of **Computer Science, Information Technology and Digital Literacy**. These strands are not taught in isolation; instead, pupils are given opportunities to make meaningful connections between them and apply their knowledge across a range of contexts.

Computer Science develops pupils' understanding of computational thinking, algorithms, programming and how digital systems work. As pupils progress through the school, they develop increasing confidence in creating, testing, debugging and improving programs.

Information Technology enables pupils to use technology purposefully to create, organise, manipulate, store and present information. Pupils develop experience with a range of digital tools and software, allowing them to communicate ideas creatively and effectively.

Digital Literacy equips pupils with the knowledge and understanding required to use technology safely, responsibly and respectfully. Online safety is embedded throughout the curriculum and is revisited regularly to reflect the changing nature of the digital world.

Our long-term plan provides a clear progression in these areas. Pupils begin by developing foundational skills in areas such as online safety, using digital tools, creating pictures, following instructions and coding. As they move through the school, they encounter increasingly sophisticated concepts including databases, spreadsheets, email, networks, hardware and software, animation, Micro, AI, Python and 3D modelling.

Developing Computational Thinkers

Computational thinking is a key element of our Computing curriculum. Pupils are encouraged to break problems into manageable steps, identify patterns, develop logical sequences and create solutions.

Through coding and programming, pupils learn that algorithms are precise sets of instructions and that programs can be designed, tested, debugged and improved. They develop resilience when things do not work as expected and learn to approach problems systematically.

As pupils progress through the school, they move from creating and following simple instructions to designing increasingly complex algorithms and programs. They develop greater independence in testing, debugging and evaluating their work, preparing them for more advanced Computing at secondary school.

Creative and Purposeful Use of Technology

We want pupils to see technology as something they can **create with**, rather than simply consume.

The curriculum provides opportunities for pupils to use digital technology creatively through areas such as digital art, animation, presentations, music, blogging, game creation and 3D modelling. Pupils learn to select and use appropriate tools for different purposes and audiences.

Technology is also used to support learning across the wider curriculum. Where meaningful links can be made, pupils apply their Computing knowledge and skills to communicate ideas, present information, analyse data and create digital content connected to their wider learning.

Digital Literacy and Online Safety

Online safety is an essential and integral part of our Computing curriculum. We recognise that children are growing up in an increasingly connected world and need the knowledge and confidence to navigate digital spaces safely.

Pupils are taught how to use technology responsibly and respectfully and are supported to understand the potential risks associated with the online world. They learn about areas including privacy, personal information, digital communication, online relationships, appropriate online behaviour and knowing when and how to seek help.

Online safety is revisited regularly as pupils progress through the school, allowing learning to build in an age-appropriate way. It is also reinforced beyond discrete Computing lessons as part of our wider commitment to safeguarding and preparing pupils for life in a digital society.

We aim to develop pupils who do not simply follow rules online but who can **think critically, make informed decisions and recognise the impact of their actions on themselves and others**.

Computing and Our World

Computing helps pupils understand the role technology plays in their everyday lives and in the wider world. They explore how digital technology enables communication, supports learning, solves problems and drives innovation.

The curriculum also enables pupils to consider the opportunities and challenges created by emerging technologies. As part of this, pupils are introduced to contemporary developments, including artificial intelligence, and are encouraged to develop an appropriate understanding of how technology can be used responsibly and effectively. Our long-term plan includes an explicit introduction to AI in Year 4, building awareness of emerging technology within the wider Computing curriculum.

Through meaningful experiences, pupils are encouraged to consider how they can use technology to make a positive contribution to their **community, their world and their impact**.

Inclusion and Future Readiness

We believe that every pupil should have access to a high-quality Computing education. The curriculum is designed to be inclusive and accessible, with teaching adapted to meet the needs of individual learners while maintaining high expectations.

Pupils are supported to develop confidence and independence in their use of technology. Appropriate scaffolding, modelling, practical support, accessibility features and adaptive teaching are used to remove barriers and enable all pupils, including those with SEND, to participate meaningfully.

Computing also develops important transferable skills that will support pupils beyond primary school. These include **problem-solving, creativity, logical reasoning, communication, collaboration, resilience and critical thinking**.

As pupils move through Chester-le-Street CE Primary School, they build the knowledge and skills needed for the next stage of their education. They leave with a secure foundation in Computer Science, Information Technology and Digital Literacy, alongside an understanding of how to use technology safely, responsibly and purposefully.

Our Vision

Ultimately, we want every child to leave Chester-le-Street CE Primary School as a **confident, capable and responsible digital citizen**.

We want pupils to understand that Computing is not simply about using devices. It is about **understanding, creating, questioning, solving and communicating**.

Through our Computing curriculum, pupils will develop the knowledge and confidence to engage with technology creatively and critically, navigate the digital world safely and responsibly, and use their skills to make a positive contribution to **their community, their world and their impact**.

“Let all that you do be done with love.”

IMPLEMENTATION

CURRICULUM

Our Computing curriculum is carefully planned and sequenced from EYFS through to Year 6 to ensure that pupils develop a secure and progressive understanding of **Computer Science, Information Technology and Digital Literacy**. Learning builds upon prior knowledge and experience, with key concepts, knowledge and skills revisited and developed with increasing complexity and independence.

The curriculum is organised around our whole-school themes of **Our Community, Our World and Our Impact**, providing meaningful contexts in which pupils can understand the purpose and impact of Computing within their lives and the wider world.

Progressive curriculum design

Our long-term plan provides a clear progression of Computing knowledge and skills across each year group. Pupils encounter a broad range of digital technologies and applications, allowing them to develop both breadth and depth in their Computing understanding.

Learning progresses from developing confidence with technology and simple instructions in Key Stage 1 towards increasingly sophisticated digital, computational and programming concepts in Key Stage 2.

Across their time at Chester-le-Street CE Primary School, pupils experience areas including:

- online safety and responsible digital citizenship;

- the use of digital devices and applications;
- coding and programming;
- algorithms and computational thinking;
- data handling, spreadsheets and databases;
- digital imagery and animation;
- presentations and communication;
- email and effective searching;
- hardware and software;
- sound and digital music;
- physical computing using Micro;
- networks and the internet;
- blogging and digital publishing;
- artificial intelligence;
- Python programming;
- 3D modelling.

This ensures that pupils develop a broad and relevant range of knowledge and skills rather than becoming dependent upon a single piece of software or technology.

Computer Science

Computer Science is progressively developed through opportunities for pupils to understand algorithms, programming and computational thinking.

Children begin by following and creating simple instructions and sequences before developing their ability to design, create, test and debug programs. As they progress through the school, pupils increasingly use logical reasoning to identify problems, predict outcomes, find errors and improve their solutions.

Coding is revisited throughout the curriculum, with pupils developing increasing independence and complexity in their programming. In Key Stage 2, this is extended through experiences such as **Micro, coding and an introduction to Python**, allowing pupils to apply computational thinking to increasingly challenging problems.

Information Technology

Pupils are taught how technology can be used purposefully to create, organise, manipulate, store, retrieve and communicate information.

The curriculum provides opportunities for pupils to develop practical skills using a range of applications and digital tools. These include creating pictures and animations, working with spreadsheets and databases, producing presentations, creating music, word processing, blogging, graphing and 3D modelling.

The progression ensures that pupils move from developing basic familiarity and confidence towards selecting and using appropriate digital tools independently for particular purposes and audiences.

Digital Literacy and Online Safety

Online safety is embedded within the Computing curriculum and is explicitly revisited throughout each year group.

Pupils are taught how to use technology safely, respectfully and responsibly and are given opportunities to apply this knowledge to situations that are relevant to their lives.

Online safety is taught as a progressive body of knowledge rather than as a one-off unit. This enables pupils to revisit important concepts and develop increasingly sophisticated understanding as their independence and use of technology increases.

Every year group begins the Computing curriculum with a dedicated **Online Safety** unit, reinforcing the importance of responsible digital behaviour from the outset.

Practical and purposeful learning

Computing is taught through practical experiences wherever appropriate. Pupils are given regular opportunities to use technology, explore its possibilities, test ideas, solve problems and create digital outcomes.

Lessons are structured so that pupils understand **why** they are learning a particular skill as well as **how** to use it. Teachers model processes clearly before pupils have opportunities to practise and apply their learning independently.

Where appropriate, pupils are encouraged to experiment, make mistakes, debug and refine their work. This develops resilience and reinforces the understanding that Computing is a subject based upon problem-solving and continuous improvement.

Progression through applications and technology

We recognise that specific software and hardware will change over time. Consequently, while pupils are given regular opportunities to develop familiarity with key platforms and applications, teaching focuses on the underlying knowledge and transferable skills that allow pupils to apply their understanding in new contexts.

Purple Mash provides an important platform within our curriculum, supporting pupils in developing a wide range of Computing skills across the three strands.

Alongside this, pupils experience a range of other digital technologies, ensuring that their Computing education is broad, varied and reflective of the changing technological world.

Computing across the curriculum

Where appropriate, Computing is connected meaningfully with learning in other curriculum areas.

Pupils may use technology to:

- research and communicate information;
- collect, organise and analyse data;
- create digital representations;
- present their learning to different audiences;
- develop multimedia outcomes;
- solve problems;
- model ideas;
- create and evaluate digital products.

These opportunities help pupils understand that Computing is not simply a discrete subject but a powerful tool that can support learning, creativity and communication across the curriculum.

Emerging technology

Our curriculum recognises that technology continues to develop rapidly. Pupils therefore have opportunities to encounter emerging technologies and consider their uses and implications.

This includes an **Introduction to AI** unit in Year 4, alongside further opportunities to use and discuss technology throughout the curriculum.

Teaching about emerging technologies focuses on developing understanding, curiosity and responsible use rather than simply learning how to operate a particular tool.

Computing vocabulary

Subject-specific vocabulary is explicitly developed throughout the curriculum. Teachers model and reinforce appropriate terminology so that pupils can articulate their understanding accurately.

Vocabulary is revisited as pupils progress through the school, allowing them to move from everyday descriptions towards increasingly precise Computing language.

This supports pupils to discuss processes, explain how systems work, describe algorithms, evaluate digital products and communicate their ideas effectively.

Inclusion and adaptive teaching

Computing is planned and taught so that all pupils can access the curriculum and achieve highly. Teachers identify barriers to learning and adapt resources, instructions, equipment and activities where appropriate.

Adaptations may include:

- clear modelling and step-by-step instructions;
- visual prompts and worked examples;
- repeated practice and retrieval of key skills;
- pre-teaching Computing vocabulary;
- adapted software or resources;
- accessibility features and assistive technology;
- alternative methods of recording or communicating understanding;
- additional processing time;
- carefully planned adult support.

Adaptive teaching is used to provide access to the curriculum without unnecessarily reducing the ambition of the intended learning.

Building independence

As pupils progress through the school, responsibility for their learning increasingly shifts from teacher modelling towards independent application.

Teachers explicitly model new skills and concepts before providing guided and independent opportunities. Pupils are encouraged to select appropriate tools, make decisions about their digital work, troubleshoot problems and evaluate their outcomes.

By the end of Year 6, pupils should be increasingly able to use technology independently, solve problems using computational thinking, create purposeful digital content and make safe and responsible choices when using technology.

Our curriculum therefore provides a clear journey from **supported exploration in the early years to confident, independent and responsible digital participation by the end of Key Stage 2.**

CURRICULUM COVERAGE

	Our community		Our World		Our Impact	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	It's my life	This is our school	Royal Patrons – Story of Elizabeth and Victoria	We are united	King of the Castle	Beside the Seaside
	Unit 1 – Online Safety & (4 Weeks) Unit 2 Introduction to Purple Mash (3 Weeks)	Unit 3 - Creative Computing (4 Weeks) Unit 4 - Data Explorers (6 Weeks)	Unit 5 - Creating & Following Instructions (3 Weeks) Unit 6: Animated Stories (3 Weeks)	Unit 6: Animated Stories (3 Weeks)	Unit 7: Coding (6 Weeks) Unit 8: Technology Around Us (1 Week)	Unit 8: Technology Around Us (3 Weeks) Unit 9: Making Beats (4 Weeks)
Year 2	Made in Durham	There's no place like home	Medicine Women	Adventures around the world	Fire! Fire!	Going Wild
	Unit 1 - Online Safety 4 Weeks Unit 2 - Route Explorers (4 Weeks)	Unit 3 - The Internet (4 Weeks) Unit 4 - Creating Pictures (3 weeks)	Unit 4 - Creating Pictures (1 weeks) Unit 5 - Spreadsheets (6 Weeks)	Unit 6 - Questioning (4 Weeks) Unit 7 - Coding (2 weeks)	Unit 7 - Coding (4 weeks) Unit 8 - Presenting Ideas (3 Weeks)	Unit 8 - Presenting Ideas (1 Week) Unit 9 Making Music (3 Weeks)
Year 3	May the force be with you	The Lambton worm	Captain Caveman	Pack your bags	Who Let the Gods out	Where Land Meets Sea
	Unit 1 - Online Safety Unit 2 - Email (6 Weeks)	Unit 3: Route Planners (5 Weeks) Unit 4: Branching Databases (2 Weeks)	Unit 4: Branching Databases (2 Weeks) Unit 5: Spreadsheets (6 Weeks)	Unit 6: Coding (6 Weeks) Unit 7: Presentations (1 Week)	Unit 7: Presentations (4 Weeks) Unit 8: Touch Typing (2 Weeks)	Unit 8: Touch Typing (2 Weeks) Unit 9: Micro:bit - Additional Unit (4 Weeks)
Year 4	You're Not Invited	The Uk uncovered	Revolting Rebels	The Rhythm of the Rain	Walk like an Egyptian	Spiritual rivers

	Unit 1: Online Safety (4 Weeks) Unit 2: Unpacking Hardware & Software (4 Weeks)	Unit 3: Animation (6 Weeks) Unit 4: Logo (1 Week)	Unit 4: Logo (3 weeks) Unit 5: Sound Stories (4 weeks)	Unit 5: Effective Searching (4 weeks) Unit 6: Coding (3 weeks)	Unit 6: Coding (4 weeks) Unit 7: Micro:Bit Additional Unit (4 Weeks)	Unit 8: Composing Beats (4 Weeks) Unit 9: Introduction to AI (4 weeks)
Y e a r 5	Saxon Raiders	Awesome Alps	Viking Warriors	Guardians of the Gorge	Mysteries of the Maya	Rainforest Rescue
	Unit 1: Online Safety (4 Weeks) Unit 2: Micro:Bit Additional Unit (4 Weeks)	Unit 3: Quizzing (5 Weeks) Unit 4: Databases (2 Weeks)	Unit 4: Databases (2 Weeks) Unit 5: Game Creator (2 Weeks)	Unit 5: Game Creator (3 Weeks) Unit 6: Spreadsheets (4 Weeks)	Unit 6: Spreadsheets (2 Weeks) Unit 7: Coding (6 Weeks)	Unit 8: Word Processing (6 Weeks) Unit 9: Concept Maps (4 Weeks)
Y e a r 6	Mining's Footprint	Extreme Earth	Battle of Britain	The Place inbetween	Achievements of the ancients	Planet Earth
	Unit 1 - Online Safety (4 Weeks) Unit 2 - Networks (4 Weeks)	Unit 3 - Graphing (4 Weeks) Unit 4 - Blogging (4 Weeks)	Unit 5 - Micro:Bit - Additional Unit (4 Weeks) Unit 6 - Data Detectives (4 Weeks)	Unit 7 - Coding (6 Weeks) Unit 7 - Introduction to Python (1 Week)	Unit 7 - Introduction to Python (3 Weeks) Unit 8 - Spreadsheets (3 Weeks)	Unit 8 - Spreadsheets (3 Weeks) Unit 9 - 3D Modelling (4 Weeks)
	Our community		Our World		Our Impact	

SKILLS PROGRESSION

Our Computing curriculum provides a clear progression of knowledge and skills from EYFS to Year 6. Pupils revisit and build upon previous learning, developing increasing **confidence, independence, accuracy and complexity** in their use and understanding of technology.

Progression is organised around the three core areas of **Computer Science, Information Technology and Digital Literacy**, with online safety and responsible digital citizenship embedded throughout.

EYFS – Exploring Technology

In the Early Years, children begin to develop an understanding of technology through exploration, play and everyday experiences.

Children are encouraged to:

- recognise and explore technology in their environment;
- use a range of digital devices with adult support;
- explore cause and effect;
- follow simple instructions and sequences;
- use technology to communicate and express ideas;
- develop early problem-solving skills;
- explore digital creativity;
- talk about how technology can be used;
- begin to understand that technology should be used safely and appropriately.

The emphasis is on **exploration, curiosity, communication and purposeful use** rather than formal Computing terminology.

COMPUTER SCIENCE

EYFS

Children begin to:

- recognise that instructions can be followed in a particular order;
- follow simple sequences;
- explore cause and effect;
- identify simple problems and attempt solutions;
- recognise patterns and repetition through play;
- use technology to explore and investigate.

Year 1

Pupils develop their understanding of instructions, algorithms and simple programming.

They learn to:

- give and follow simple instructions;
- put instructions into the correct sequence;
- recognise that algorithms are sets of instructions;
- create simple algorithms;
- predict what may happen when instructions are followed;
- identify simple errors;
- begin to understand that programs are created to achieve a particular outcome;
- use simple coding tools to create sequences and animations.

Year 2

Pupils build upon their understanding of algorithms and begin to develop greater independence when programming.

They learn to:

- create and follow increasingly detailed algorithms;
- sequence instructions accurately;
- predict outcomes;
- use repetition within simple programs;
- identify and correct errors;
- understand that programs can be changed to achieve different outcomes;
- create simple programs using coding software;
- use logical reasoning to explain how a program works;
- begin to understand how technology can be used to solve problems.

Years 3–4

Pupils develop more sophisticated computational thinking and programming skills.

They learn to:

- design algorithms to solve problems;
- use sequencing, repetition and selection within programs;
- predict the behaviour of programs;
- identify, locate and correct errors through debugging;
- break problems into smaller, manageable parts;
- use logical reasoning to explain algorithms and programs;
- create programs for a specific purpose;
- test and refine their solutions;
- understand that different solutions can be developed for the same problem;
- use physical computing, including Micro, to develop understanding of how programs can control devices.

Year 4 also provides opportunities to develop understanding of how hardware and software work together.

Years 5–6

Pupils develop increasing independence and sophistication in computational thinking and programming.

They learn to:

- design and develop increasingly complex algorithms;
- use sequence, selection, repetition and variables where appropriate;
- decompose problems into smaller components;
- use logical reasoning to predict and explain program behaviour;
- debug systematically;
- test programs using different inputs and scenarios;
- evaluate and refine solutions;
- use physical computing to develop and test programs;
- develop increasingly sophisticated coding projects;
- understand how programming languages are used to create solutions;
- begin to use Python to develop simple programs.

By the end of Year 6, pupils should be able to approach a problem computationally, design a logical solution, create and test a program, identify errors and refine their work.

The Year 6 curriculum includes **Coding, an introduction to Python and Micro**, providing opportunities for pupils to apply their computational thinking in increasingly complex contexts.

INFORMATION TECHNOLOGY

EYFS

Children begin to:

- explore digital devices and resources;
- use technology to create and communicate;
- explore images, sounds and other digital content;
- use technology for a range of purposes;
- begin to recognise that technology can help them complete tasks.

Year 1

Pupils learn to:

- use digital devices with increasing confidence;
- access and navigate familiar software;
- create simple digital content;
- use technology to draw and create images;
- explore simple data collection and representation;
- create and follow instructions;

- create simple animations and digital stories;
- use technology to make music and beats;
- recognise technology in their everyday environment.

Year 2

Pupils develop their ability to use technology to create, organise and present information.

They learn to:

- create and edit digital images;
- use spreadsheets to enter and organise information;
- collect and represent simple data;
- use technology to answer questions;
- create digital presentations;
- use digital tools to communicate ideas;
- create digital music;
- use coding and digital creativity together;
- select appropriate tools for a particular purpose.

The Year 2 curriculum provides specific opportunities in **creating pictures, spreadsheets, questioning, coding, presenting ideas and making music.**

Years 3–4

Pupils develop greater control and independence when creating digital content.

They learn to:

- create and edit digital content for different purposes;
- organise and present information;
- use databases to search and organise information;
- use spreadsheets to collect and manipulate data;
- create presentations for particular audiences;
- use email appropriately;
- use effective search strategies;
- create animations and digital stories;
- use digital music and sound;
- use word-processing tools effectively;
- use technology to communicate and collaborate;
- explore how different hardware and software work together.

Pupils increasingly make decisions about the most appropriate digital tools for the task.

Years 5–6

Pupils develop increasingly sophisticated Information Technology skills and greater independence.

They learn to:

- create, edit and publish digital content;
- manipulate and analyse data;
- use spreadsheets for increasingly complex purposes;
- create and use databases;
- create blogs and digital publications;
- use word-processing tools effectively;
- create and edit multimedia content;
- create and manipulate graphs;
- use digital tools to communicate with different audiences;
- create and refine 3D models;
- select appropriate applications independently;
- evaluate the effectiveness and suitability of their digital products.

The Year 6 curriculum culminates in opportunities including **graphing, blogging, data handling, spreadsheets and 3D modelling**.

DIGITAL LITERACY

EYFS

Children begin to:

- recognise that technology should be used safely;
- understand simple rules when using devices;
- seek adult help when unsure;
- begin to recognise appropriate and inappropriate use of technology.

Year 1

Pupils learn to:

- identify ways to use technology safely;
- recognise that some information should remain private;
- understand that they should tell a trusted adult if something worries them online;
- recognise that people communicate using technology;
- begin to understand that not everything encountered online is appropriate;
- use technology respectfully.

Year 2

Pupils develop a stronger understanding of responsible digital behaviour.

They learn to:

- recognise potential online risks;

- understand how to keep personal information safe;
- communicate respectfully online;
- identify when something online makes them uncomfortable;
- know who they can talk to if they need help;
- recognise that online content may not always be reliable;
- use digital technology responsibly;
- understand that their actions online can affect other people.

Years 3–4

Pupils develop greater independence and critical awareness.

They learn to:

- use online communication appropriately;
- understand the importance of passwords and personal information;
- recognise a wider range of online risks;
- understand how to report concerns;
- distinguish between reliable and unreliable information;
- use effective searching strategies;
- understand that online content can be created for different purposes;
- communicate respectfully and responsibly;
- understand their responsibilities as digital citizens;
- recognise that digital footprints can have lasting consequences.

Years 5–6

Pupils develop the knowledge and judgement needed to become increasingly independent digital citizens.

They learn to:

- evaluate the reliability and credibility of digital information;
- recognise misleading or inappropriate online content;
- understand how personal information can be collected and used;
- make informed decisions about sharing information;
- understand digital footprints and their potential impact;
- communicate responsibly with different audiences;
- recognise and respond appropriately to online risks;
- understand how technology can influence behaviour and communication;
- consider the positive and negative impacts of digital technologies;
- understand how networks and the internet support communication;
- critically consider emerging technologies, including artificial intelligence.

Online safety is revisited throughout the Computing curriculum, with a dedicated Online Safety unit at the beginning of each year group in the current long-term plan.

COMPUTATIONAL THINKING PROGRESSION

Alongside the three strands, pupils develop the key habits of thinking that underpin successful Computing.

EYFS

Explore → Notice → Try → Solve

Children explore technology, notice patterns and cause and effect, try different approaches and begin to solve simple problems.

Year 1–2

Sequence → Predict → Test → Correct

Pupils learn to put instructions into order, predict outcomes, test solutions and correct simple errors.

Year 3–4

Decompose → Design → Test → Debug

Pupils break problems into smaller parts, design solutions, test programs and debug errors.

Year 5–6

Analyse → Design → Create → Evaluate → Refine

Pupils independently analyse problems, design computational solutions, create and test them, evaluate their effectiveness and refine their work.

This progression supports pupils to become increasingly **independent computational thinkers and problem-solvers**.

PROGRESSION IN INDEPENDENCE

The level of independence expected from pupils increases throughout the curriculum.

EYFS:

Explore technology with adult support.

Year 1:

Use familiar technology and follow clear instructions.

Year 2:

Apply taught skills with increasing independence.

Year 3:

Select and apply appropriate skills with guidance.

Year 4:

Make increasingly independent decisions about digital tools and solutions.

Year 5:

Apply knowledge to unfamiliar problems and evaluate solutions.

Year 6:

Independently select appropriate technologies, solve problems, create digital products, debug programs and make responsible decisions about digital technology.

By the end of Year 6, pupils should be able to draw together their knowledge of **Computer Science, Information Technology and Digital Literacy** to use technology creatively, critically, safely and purposefully.

End of Key Stage 2 outcome

By the end of Year 6, we want pupils to be:

- **Confident** – able to use a range of digital technologies independently.
- **Creative** – able to use technology to create, design and communicate.
- **Computational thinkers** – able to break down problems and develop logical solutions.
- **Problem-solvers** – able to test, debug, evaluate and improve their work.
- **Critical users** – able to question and evaluate digital information.
- **Responsible** – able to use technology safely, respectfully and appropriately.
- **Independent learners** – able to select suitable digital tools for different purposes.
- **Future-ready** – equipped with transferable digital skills and an understanding of how technology continues to develop.

Our progression therefore ensures that pupils move from **exploring technology to understanding, creating, evaluating and responsibly shaping their use of technology**.

EARLY YEARS FOUNDATION STAGE (EFYS)

Computing is taught in the Early Years as part of the seven areas of learning. Children in our Early Years setting are taught computing in a wide variety of ways and in different contexts. Computing is not just computers therefore; we use equipment such as iPads. Children gain confidence with everyday technology through Role Play areas and non-computer based resources such as metal detectors. All children have access to a wide range of technology throughout the day.

We aim to provide our pupils with a broad, play-based experience of Computing in a range of contexts. We believe the following:

- Early Years learning environments should feature ICT scenarios based on experience in the real world, such as in roleplay.
- Pupils gain confidence, control and language skills through opportunities to 'paint' on the interactive board/devices or control remotely operated toys.
- Outdoor exploration is an important aspect, supported by ICT toys such as metal detectors, controllable traffic lights and walkie-talkie sets.
- Recording devices can support children to develop their communication skills. This is especially useful for children who have English as an additional language

SPECIAL EDUCATIONAL NEEDS AND DISABILITY (SEND)

The Computing curriculum at CLS is inclusive: children with SEND can access the curriculum. Teachers will adapt teaching to meet the individual needs of children with SEND as outlined in their Support Plan or EHCP, in which learning needs and individualised targets are set in conjunction with the SENDCo and parents. Adaptations may include modified or scaffolded tasks, the effective use of resources or appropriate deployment of support staff / teacher time.