St Giles C.E. Primary School
Computing Policy

'You must love one another as I have loved you.' John 13 v 34.

Working together with love we will provide a happy and nurturing environment where all will, *'learn to love and love to learn'*, making outstanding progress through an enriched and creative curriculum. Through our strong Christian ethos we will celebrate and embrace the richness of our community.

Learn to Love - Love to Learn
'You must love one another as I have loved you.' John 13 v 34

Article 2 (non-discrimination)
The Convention applies to every child without discrimination, whatever their ethnicity, sex, religion, language, abilities or any other status, whatever they think or say, whatever their family background.

Article 28 (right to education)
Every child has the right to an education. Primary education must be free and different forms of secondary education must be available to every child. Discipline in schools must respect children's dignity and their rights. Richer countries must help poorer countries achieve this.

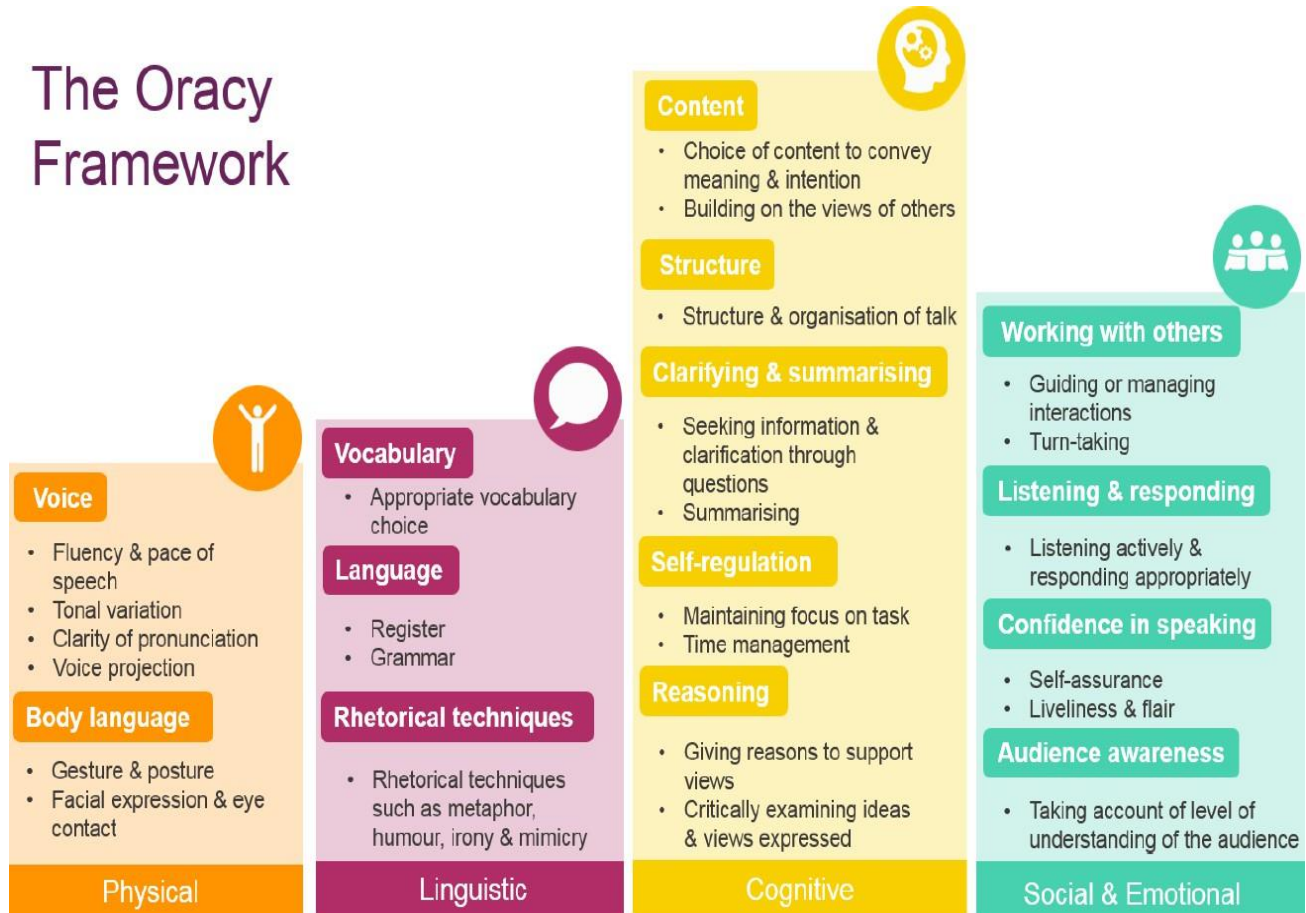### Article 29 (goals of education)
Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for human rights, as well as respect for their parents, their own and other cultures, and the environment.

Introduction
Through teaching Computing, we equip pupils to participate in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. We enable them to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for pupils to be able to use information in a discriminating and effective way. Pupils are taught the principles of information technology and computation and how digital systems work. We aim to enable our pupils to use information technology to create programs, systems and a range of media. In doing so, we ensure that pupils become digitally literate, confident, creative and independent learners – at a level suitable for the future workplace.

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This policy document sets out the school's aims, principles and strategies for the delivery of the 'Computing Curriculum.' It is underpinned by our Oracy policy.

The Oracy Framework

Physical

Voice
- Fluency & pace of speech
- Tonal variation
- Clarity of pronunciation
- Voice projection

Body language
- Gesture & posture
- Facial expression & eye contact

Linguistic

Vocabulary
- Appropriate vocabulary choice

Language
- Register
- Grammar

Rhetorical techniques
- Rhetorical techniques such as metaphor, humour, irony & mimicry

Cognitive

Content
- Choice of content to convey meaning & intention
- Building on the views of others

Structure
- Structure & organisation of talk

Clarifying & summarising
- Seeking information & clarification through questions
- Summarising

Self-regulation
- Maintaining focus on task
- Time management

Reasoning
- Giving reasons to support views
- Critically examining ideas & views expressed

Social & Emotional

Working with others
- Guiding or managing interactions
- Turn-taking

Listening & responding
- Listening actively & responding appropriately

Confidence in speaking
- Self-assurance
- Liveliness & flair

Audience awareness
- Taking account of level of understanding of the audience

Aims
It is the aim of St Giles CE Primary School:-

- To provide all pupils with their National Curriculum entitlement including: Understanding and applying the fundamental principles and concepts of computer science including abstraction, logic, algorithms and data representation.
- Analysing problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems
- To ensure pupils computing education is progressive, coherent and relevant as they move through our school.

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- To apply their digital literacy skills and knowledge to their learning in other areas.
- To allow pupils to become responsible, confident, competent and creative users of information and communication.
- To be able to evaluate and apply information technology, including new or unfamiliar technologies, and analytically to solve problems
- To ensure that technology is used to continue and extend learning outside of school.
- To use technology to keep parents informed of all aspects of school life.
- To develop staff so that they are able to adapt to the continually changing challenges presented by technology and in so doing ensure that our pupils receive a computing education in line with their ability, access and needs.

Principles for the Teaching and Learning of Computing

It is the Computing Leader's responsibility to plan for the development of a computing education that equips pupils to understand and change the world through logical thinking and creativity, including making links with all areas of the curriculum. In order to ensure progression and continuity throughout the school and to ensure the delivery of a broad and balanced curriculum, the school uses a Computing Curriculum Map (See appendix A) which includes links to the detailed planning documents found in the Scheme of Work (Purple Mash). This map and planning documents are to be used in conjunction with the Purple Mash 'Progression of Skills' (Appendix B) to ensure the appropriate development of information technology and computing skills across the school. Teachers use the Computing Curriculum Map and Progression of Skills to inform planning. From the Curriculum Map for their year group, teachers map which topics that the children study in each term during each year. They detail the key skills to be taught in each lesson (taken from Progression of Skills) in their creative planning. The Computing subject leader is responsible for reviewing these plans.

When teaching computing, teachers are encouraged to use a variety of teaching styles to introduce new programmes and skills including:
- Planning activities that allow sufficient time for all individuals to take part.
- Effective teaching input to allow completion of tasks with minimum teacher intervention.
- Taking account of previous pupil knowledge/skills/understanding when planning for activities, especially for lower achieving and upper ability groups.
- Flexible groupings to ensure equal opportunities and that appropriate differentiation is maintained at all times to meet the needs of individual children.
- Planning short, time limited focused activities with some setting of tasks of increasing difficulty (not all children complete all tasks);
- Working individually, in pairs or small groups.

- Splitting larger projects into clearly defined pieces with different groups or individuals taking on responsibility for specific parts.
- Using teaching support staff to support the work of individual children or groups of children.
- Allowing opportunities for work to be printed for display, publishing on the schools Learning Platform and on Purple Mash display boards.

Cross Curricular Links
Staff incorporate a range of opportunities for computing skills to be taught and developed across all curriculum areas, as well as to support learning at home (homework and remote learning)

Access to Technology
The school have class-based Chromebooks, networked to a central printer with wireless Internet connection. Each class has its own PC which is connected to the interactive whiteboard. Each teacher also has a staff iPad. Each classroom is equipped with 8 PCs to enable pupils to access educational software like IXL, MathsWatch Purple Mash and more to apply their learning in all subjects. Tutoring sessions (Third Space and Action Tutoring) also have access to class sets of Chromebooks and headsets. Chromebooks are also available for loan, should a child not have access to technology at home. Furthermore, each phase group has a shared set (15) of iPads which can be booked out and used for a range of activities. All classes have a timetabled session in the STEM suite that has 15 PCs. The school also has shared resources such as: headphones, microphones, calculators, scanners, printers and roamers. In addition, the school also owns a range of hardware such as: 15x sets of Lego Spike, 30x Micro:bits and 15x Spheros.

Assessment
Children are continually assessed throughout each unit of work and future teaching input is adapted according to the needs of the class and individual children. At the end of the unit of work, children are assessed against the key skills taught (in most cases using Purple Mash assessments) and these are recorded, detailing those children achieving the expected, above or below expected level of skills. This is completed by each class teacher, using Insight. These are then reviewed and used when planning future lesson on the skills taught either by the current class teacher or subsequent teachers. Examples of children's work should be found on the relevant Google Classroom page, as well as in the Purple Mash folders.

Equal Opportunity
We are committed to providing a teaching environment conducive to learning. Each child is valued, respected and challenged regardless of ability, race, gender, religion, social background, culture or disability. All pupils, regardless of

race or gender, shall have the opportunity to develop computing capability. The school will promote equal opportunities for computer usage and fairness of distribution of computing resources. Children with a computer at home are encouraged to use it for educational benefit and parents are offered advice about what is appropriate. The school will monitor the level of access to computers in the home environment to ensure no pupils are unduly disadvantaged. Positive images of computer use by people of both sexes will be promoted. The school recognises the advantages of the use of technology by children with special educational needs.

Using technology can:
• address children's individual needs
• increase access to the curriculum
• enhance language skills
• allow children to learn from home
• allow children to learn at a much smaller adult: child ratio

Health and Safety

The following guidelines are in place to promote high standards in health and safety:

- Trailing leads should be made safe behind the equipment
- Liquids must not be taken near the computers or be taken into the STEM suite.
- Magnets must be kept away from all equipment.
- The recommended guideline for the maximum time a child should work at a computer is 2 hours a day with frequent breaks.
- Computer keyboards are a recognised source of RSI and suitable advice is available from the H&S coordinator.
- All hardware will undergo a safety check annually by a team of technicians.
- Appropriate risks assessments are carried out and reviewed annually for the use of technology equipment e.g. computer suite, projectors, tablets etc.
- All staff carry out necessary risk assessments when using additional technology equipment.

We also recognise it is fundamentally important to ensure children are safe when using technology and have systems in place for achieving this. We are committed to teaching children a systematic approach to Online Safety when using the Internet (see Online-safety Policy-Acceptable Use- for full details.)

Monitoring and Review

The monitoring of the standards of the children's work and of the quality of teaching in computing is the responsibility of the Computing leader who reports

to the Leadership Team. This is achieved through: work sampling, monitoring of planning and lessons, discussion with staff and pupils and looking at information technology and computing displays. The Computing subject leader is also responsible for supporting colleagues in the teaching of computing, for keeping informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school. The Computing subject leader regularly discusses the information and technology situation with the Head Teacher and develops an action plan based on the strengths and weaknesses in the subject and areas for further improvement. This is shared with staff and Governors and forms the basis for improving computing in the school.

Artificial Intelligence

St. Giles recognises the potential benefits of integrating artificial intelligence (AI) into our educational programs and staff workload. We prioritise the privacy and security of student and staff data. Any data collected through AI technologies is handled in accordance with relevant data protection laws, including the General Data Protection Regulation (GDPR) and generally through the third-party software/application being used. AI will be integrated into the curriculum where appropriate, enhancing students' learning experiences. Staff are expected to critically evaluate anything that is AI generated in order to ensure it its ethical, multi-cultural, factually accurate and viable. The school seeks professional development opportunities for our teachers to familiarise them with AI technologies and their applications in education. Teachers will be equipped with the knowledge and skills to effectively integrate AI tools into their teaching practices and workload. Any inappropriate conduct that breaches our acceptable use policies, code of conduct or safeguarding practices will be enforced using the behaviour policy, staff disciplinary procedures or any other relevant policies.

Article 28 (right to education)

Article 29 (goals of education

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Computing Curriculum Map 2024-2026 (Appendix A)

St Giles Computing & Online Safety Curriculum 2025-26

Coding and Computational Thinking	Spreadsheets	Online Safety	Art and Design	Music	Databases and Graphing	Writing and Presentation	Communication and Networks

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS Online Safety	**Project Evolve**					
	Objectives assessed and planned through the knowledge map.					
	Privacy & security	Health, wellbeing and lifestyle	Online Reputation	Self-image and identity	Managing Online Information	Copyright & ownership
	Online bullying	(ANTIBULLYING WEEK)	(SAFER INTERNET DAY)			Online relationships
EYFS Computing	General Computing Skills Purple Mash		Communication & Language Purple Mash		Understanding the World Purple Mash	
Year 1 Computing	Databases Purple Mash Unit 1.3 – Pictograms (2Count)	Coding Purple Mash Unit 1.4 – Lego Builders (2DIY)	Art and Design Purple Mash Unit 1.6 – Animated Storybooks (2Create a story)	Coding Purple Mash Unit 1.5 – Maze Explorers (2Go)	Coding Purple Mash Unit 1.7 – Coding (2Code)	Spreadsheets Purple Mash Unit 1.8 – Spreadsheets (2Calculate) Communication and Networks Purple Mash Unit 1.9 – Technology Outside of School (Various)
Year 1 Online Safety	**Project Evolve**					
	Objectives assessed and planned through the knowledge map.					
	Privacy & security	Health, wellbeing and lifestyle	Online Reputation	Self-image and identity	Managing Online Information	Copyright & ownership
	Online bullying	(ANTIBULLYING WEEK)	(SAFER INTERNET DAY)			Online relationships
Year 2 Computing	Coding Purple Mash Unit 2.1 – Coding (2Code)	Spreadsheets Purple Mash Unit 2.3 – Spreadsheets (2Calculate)	Databases Purple Mash Unit 2.4 – Questioning (2Question, 2Investigate)	Creating Pictures Purple Mash Unit 2.6 – Creating Pictures (2Paint a picture)	Making Music Purple Mash Unit 2.7 – Making Music (2Sequence)	Coding Micro:bit Lessons Y3 Nature Art (Lessons 1 – 5) https://microbit. org/lessons/natu re-art-unit-of-work/
Year 2	**Project Evolve**					

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Online Safety	Objectives assessed and planned through the knowledge map.					
	Privacy & security / Online bullying	Health, wellbeing and lifestyle (ANTIBULLYING WEEK)	Online Reputation (SAFER INTERNET DAY)	Self-image and identity	Managing Online Information	Copyright & ownership / Online relationships
Year 3 Computing	Coding Purple Mash Unit 3.1 - Coding (2Code)	Spreadsheets Purple Mash Unit 3.3 - Spreadsheets (2Calculate)	Databases Purple Mash Unit 3.6 - Branching Databases (2Question)	Coding Microbit Lessons y4 Volcano Animations (Lessons 1 - 5) https://microbit.org/lessons/volcano-animations-unit-of-work/	Lego Great Adventures unit	Simulations Purple Mash Unit 3.7 - Simulations (2Simulate)
Year 3 Online Safety	Project Evolve					
	Objectives assessed and planned through the knowledge map.					
	Privacy & security / Online bullying	Health, wellbeing and lifestyle (ANTIBULLYING WEEK)	Online Reputation (SAFER INTERNET DAY)	Self-image and identity	Managing Online Information	Copyright & ownership / Online relationships
Year 4 Computing	Coding Purple Mash Unit 4.1 - Coding (2Code)	Spreadsheets Purple Mash Unit 4.3 - Spreadsheets (2Calculate)	Coding Microbit Lessons y4 Electrical Conductors (Lessons 1 - 5) https://microbit.org/lessons/electrical-conductors-unit-of-work/	Lego Amazing Amusement Park unit	Hardware Purple Mash Unit 4.8 - Hardware Investigators (2Code)	Animation Purple Mash Unit 4.6 - Animation (2Animate)
Year 4 Online Safety	Project Evolve					
	Objectives assessed and planned through the knowledge map.					
	Privacy & security / Online bullying	Health, wellbeing and lifestyle (ANTIBULLYING WEEK)	Online Reputation (SAFER INTERNET DAY)	Self-image and identity	Managing Online Information	Copyright & ownership / Online relationships
Year 5 Computing	Coding Purple Mash	Coding Microbit Lessons y5	Lego Happy Traveller unit	Databases Purple Mash	Spreadsheets Purple Mash	Art & Design Purple Mash Unit 5.6 - 3D

	Unit 5.1 – Coding (2Code)	Data Handling (Lessons 1 – 5) https://microbit.org/lessons/data-handling-unit-summary/		Unit 5.4 – Databases (2Question)	Unit 5.3 – Spreadsheets (2Calculate)	Modelling
Year 5 Online Safety	**Project Evolve** *Objectives assessed and planned through the knowledge map.*					
	Privacy & security Online bullying	Health, wellbeing and lifestyle (ANTIBULLYING WEEK)	Online Reputation (SAFER INTERNET DAY)	Self-image and identity	Managing Online Information	Copyright & ownership Online relationships
Year 6 Computing	Coding Microbit Lessons Y6 Getting Active (Lessons 1 – 5) https://microbit.org/lessons/getting-active-unit-overview/	Coding Purple Mash Unit 6.1 – Coding (2Code)	Spreadsheets Purple Mash Unit 6.3 – Spreadsheets (2Calculate)	Networks Purple Mash Unit 6.6 – Networks	Blogging Purple Mash Unit 6.4 – Blogging (2Blog)	Lego Crazy Carnival Games unit
Year 6 Online Safety	**Project Evolve** *Objectives assessed and planned through the knowledge map.*					
	Privacy & security Online bullying	Health, wellbeing and lifestyle (ANTIBULLYING WEEK)	Online Reputation (SAFER INTERNET DAY)	Self-image and identity	Managing Online Information	Copyright & ownership Online relationships

Computing Progression of Skills (Appendix B)

Computing Progression
N.C. Statements KS1 Year 1

Y1

	Computer Science			Information Technology	Digital Literacy	
Statement	Understand what algorithms are: how they are implemented as programs on digital devices: and that programs execute by following precise and unambiguous instructions.	Create and debug simple programs.	Use logical reasoning to predict the behaviour of simple programs.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Recognise common uses of information technology beyond school.	Use technology safely and respectfully, keeping personal information private: identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
Outcome	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that an algorithm written for a computer is called a program.	Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code.	When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.	Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.	Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.	Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.

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Computing Progression
N.C. Statements KS1 Year 2

	Computer Science			Information Technology	Digital Literacy	
Statement	Understand what algorithms are: how they are implemented as programs on digital devices: and that programs execute by following precise and unambiguous instructions.	Create and debug simple programs.	Use logical reasoning to predict the behaviour of simple programs.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Recognise common uses of information technology beyond school.	Use technology safely and respectfully, keeping personal information private: identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.
Outcome	Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.	Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps.	Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.	Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.	Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.	Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.

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Computing Progression
N.C. Statements KS2 Year 3

Y 3

	Computer Science				Information Technology		Digital Literacy
Statement	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet: how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.
Outcome	Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. Their design shows that they are thinking of the desired task and how this translates into code. Children can identify an error within their program that prevents it following the desired algorithm and then fix it.	Children demonstrate the ability to design and code a program that follows a simple sequence. They experiment with timers to achieve repetition effects in their programs. Children are beginning to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects. Children understand how variables can be used to store information while a program is executing.	Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They make good attempts to 'step through' more complex code in order to identify errors in algorithms and can correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can 'read' programs with several steps and predict the outcome accurately.	Children can list a range of ways that the internet can be used to provide different methods of communication. They can use some of these methods of communication, e.g. being able to open, respond to and attach files to emails using 2Email. They can describe appropriate email conventions when communicating in this way.	Children can carry out simple searches to retrieve digital content. They understand that to do this, they are connecting to the internet and using a search engine such as Purple Mash search or internet-wide search engines.	Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails, e.g. 2Respond.	Children demonstrate the importance of having a secure password and not sharing this with anyone else. Furthermore, children can explain the negative implications of failure to keep passwords safe and secure. They understand the importance of staying safe and the importance of their conduct when using familiar communication tools such as 2Email in Purple Mash. They know more than one way to report unacceptable content and contact.

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Computing Progression
N.C. Statements KS2 Year 4

	Computer Science				Information Technology		Digital Literacy
Statement	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.
Outcome	When turning a real-life situation into an algorithm, the children's design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs.	Children's use of timers to achieve repetition effects are becoming more logical and are integrated into their program designs. They understand 'if statements' for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. As well as understanding how variables can be used to store information while a program is executing, they are able to use and manipulate the value of variables. Children can make use of user inputs and outputs such as 'print to screen'. e.g. 2Code.	Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They can trace code and use step-through methods to identify errors in code and make logical attempts to correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can 'read' programs with several steps and predict the outcome accurately.	Children recognise the main component parts of hardware which allow computers to join and form a network. Their ability to understand the online safety implications associated with the ways the internet can be used to provide different methods of communication is improving.	Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and information at a basic level. .	Children are able to make improvements to digital solutions based on feedback. Children make informed software choices when presenting information and data. They create linked content using a range of software such as 2Connect and 2Publish+. Children share digital content within their community, i.e. using Virtual Display Boards	Children can explore key concepts relating to online safety using concept mapping such as 2Connect. They can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact.

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Computing Progression
N.C. Statements KS2 Year 5

Y 5

	Computer Science				Information Technology		Digital Literacy
Statement	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems: solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programs: work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet: how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly: recognise acceptable/ unacceptable behaviour: identify a range of ways to report concern about content and contact.
Outcome	Children may attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable parts. Children are able to test and debug their programs as they go and can use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code.	Children can translate algorithms that include sequence, selection and repetition into code with increasing ease and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures. They are combining sequence, selection and repetition with other coding structures to achieve their algorithm design.	When children code, they are beginning to think about their code structure in terms of the ability to debug and interpret the code later, e.g. the use of tabs to organise code and the naming of variables.	Children understand the value of computer networks but are also aware of the main dangers. They recognise what personal information is and can explain how this can be kept safe. Children can select the most appropriate form of online communications contingent on audience and digital content, e.g. 2Blog, 2Email, Display Boards.	Children search with greater complexity for digital content when using a search engine. They are able to explain in some detail how credible a webpage is and the information it contains.	Children are able to make appropriate improvements to digital solutions based on feedback received and can confidently comment on the success of the solution. e.g. creating their own program to meet a design brief using 2Code. They objectively review solutions from others. Children are able to collaboratively create content and solutions using digital features within software such as collaborative mode. They are able to use several ways of sharing digital content, i.e. 2Blog, Display Boards and 2Email.	Children have a secure knowledge of common online safety rules and can apply this by demonstrating the safe and respectful use of a few different technologies and online services. Children implicitly relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others.

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Computing Progression
N.C. Statements KS2 Year 6

Y6

	Computer Science				Information Technology		Digital Literacy
Statement	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.
Outcome	Children are able to turn a more complex programming task into an algorithm by identifying the important aspects of the task (abstraction) and then decomposing them in a logical way using their knowledge of possible coding structures and applying skills from previous programs. Children test and debug their program as they go and use logical methods to identify the cause of bugs, demonstrating a systematic approach to try to identify a particular line of code causing a problem.	Children translate algorithms that include sequence, selection and repetition into code and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures, including nesting structures within each other. Coding displays an improving understanding of variables in coding, outputs such as sound and movement, inputs from the user of the program such as button clicks and the value of functions.	Children are able to interpret a program in parts and can make logical attempts to put the separate parts of a complex algorithm together to explain the program as a whole.	Children understand and can explain in some depth the difference between the internet and the World Wide Web. Children know what a WAN and LAN are and can describe how they access the internet in school.	Children readily apply filters when searching for digital content. They are able to explain in detail how credible a webpage is and the information it contains. They compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. Children use critical thinking skills in everyday use of online communication.	Children make clear connections to the audience when designing and creating digital content. The children design and create their own blogs to become a content creator on the internet, e.g. 2Blog. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.	Children demonstrate the safe and respectful use of a range of different technologies and online services. They identify more discreet inappropriate behaviours through developing critical thinking, e.g. 2Respond activities. They recognise the value in preserving their privacy when online for their own and other people's safety.

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