Manor Hall Academy

ICT
E-SAFETY
POLICY

CICELY HAUGHTON SCHOOL

Building Relationships

Celebrating Success

Promoting Change

CICELY HAUGHTON SCHOOL

ICT POLICY

The ICT Coordinator is: Mr Paul Cooper

Introduction

- **THIS DOCUMENT IS** a statement of the aims, principals and strategies for teaching and learning of ICT at Cicely Haughton Primary School.
- **THIS POLICY WILL BE REVIEWED** annually.

What is ICT?

ICT is a body of knowledge and a range of practical skills contributing to a broad and balanced curriculum. It is concerned with:

- finding things out
- developing ideas and making things happen
- exchanging and sharing information
- reviewing, modifying and evaluating work as it progresses.

Aims

Our aims in teaching ICT are that all children will be offered the opportunity to:

- develop IT capability, including their knowledge and understanding of the importance of information and of how to select and prepare it
- develop their skills in using hardware and software to manipulate information in their processes of problem solving, recording and expressive work
- develop their ability to apply their IT capability and ICT to support their use of language and communication, and their learning in other areas
- explore their attitudes towards ICT, its value for themselves, others and society, and their awareness of its advantages and limitations.

Principles of the Teaching and Learning of ICT

ICT is important because it gives children the opportunity to understand how ICT can be used to communicate and handle information, control and monitor events and model real and imaginary situations. Most of these activities have larger-scale applications in commerce or industry, and children need to be aware of this. Children will become skilled in the use of IT as a tool, and quality output will only follow the development of their IT skills. Children must also come to realise that technology will fail and let them down – this is the nature of the subject – they will come to understand that even if preventative measures are taken, we can never rely totally on this form of technology.

ICT is a foundation/core subject in the National Curriculum. The fundamental skills knowledge and concepts of the subject are set out in "ICT in the National Curriculum" where they are categorised into 4 Attainment Targets.

1. finding things out
2. developing ideas and making things happen
3. exchanging and sharing information
4. reviewing, modifying and evaluating work as it progresses.

Teaching of ICT

- THE ICT CURRICULUM IS ORGANISED on a subject specific basis
- a year group programme is followed
- ICT is studied by each year group for at least 40 minutes per week (linked to topic work in some areas)

- THE PREDOMINANT MODE OF WORKING IN ICT is individual work and small group work supervised by teaching or support staff as necessary.
- groups are usually of mixed/matched ability
- relevant discussion is encouraged.

- The class teacher teaches skills to each year group who are then given opportunity to apply this knowledge and understanding in other areas of the curriculum during their class teaching.

- SCHEMES OF WORK. The Scheme of Work adopted by the school will be: Purple Mash, Subscribed to by the school
- This is split into individual year groups for the teacher to follow and use.
- code.org is used by many classes for teaching code.

- PUPILS WITH SPECIAL NEEDS IN ICT have the same entitlement and have access to a range of software appropriate to their needs. They will be provided with specific hardware should the need arise.
- pupils with difficulties in learning ICT will be given extra support by the classroom assistant
- pupils with particular ability and flair for ICT who work more quickly through the levels of the National Curriculum will be given extension activities which recognise their particular skill(s)

- EXCELLENCE IN ICT IS CELEBRATED through display of work throughout the school, display of individual work to school assembly, demonstration to other members of staff.

Progress and Continuity

- planning in ICT is the responsibility of the class teacher and will follow the SoW. Class teachers will be responsible for ensuring ICT is integrated into other curriculum subjects based on the advice given by the ITC. The ITC will be responsible for collecting evidence of the use of ICT in different subject areas
- schemes of work for ICT are developed by the coordinator (in collaboration with the whole staff)
- staff meeting will be used to discuss ICT curriculum and ensure consistency of approach and of standards
- work plans (including detailed lesson plans) are drawn up by individual teachers for each half term and monitored by the Head teacher

The role of the ICT coordinator is to:

- take the lead in policy development and the production of schemes of work designed to ensure progression and continuity in ICT throughout the school
- support colleagues in their development of detailed work plans and implementation of the scheme of work and in assessment and record keeping activities
- monitor progress in ICT and advise the Head teacher on action needed
- take responsibility for the purchase and organisation of central resources for ICT
- keep up to date with developments in ICT education and disseminate information to colleagues as appropriate
- monitor and advise on the presentation ICT to KS1

FEEDBACK TO PUPILS about their own progress in ICT is achieved through the marking of work and discussion.

Effective marking

- aims to help children learn, not to find fault, and comments aim to be positive and constructive are often done while a task is being carried out through discussion between child and teacher
- of written work is used sensitively and with discretion so that a child can assimilate a limited number of corrections at one time- this will vary according to age and ability
- FORMATIVE ASSESSMENT is used to guide the progress of individual pupils in ICT. It involves identifying each child's progress in each aspect of the subject, determining what each child has learned and what therefore should be the next state in his/her learning. Formative assessment is carried out both informally and formally. End of teaching unit assessment pieces will be used and annotated as appropriate.
- A Skills Record Sheet will be kept throughout both Key Stages for each pupil.
- An Attainment Target Record Sheet will be kept through both Key Stages for each pupil.

Recording and Reporting

- records of progress in IT are kept for each child (see above) and a portfolio of selected work, dated and annotated as appropriate. Children will be encouraged to be involved in recording their own progress. Reporting to parents will be done as part of each pupil's end of year report.

Resources

- resources in ICT is the responsibility of the ITC. Software will be allocated around the school and designated to particular year groups as appropriate. A bank of software will also be kept in the ICT room. All staff will have a copy of the software audit.
- each classroom will have a curriculum PC, printer and access to the internet.
- the ITC will be responsible for replacing, renewing or updating software in line with the National Curriculum and advances in technology.
- the school has a commitment and obligation to update and renew hardware whenever possible. Funding will be reviewed with each annual budget referring to and updating the school development plan.

- a contract will be maintained with Staffs Tech Ltd for the maintenance and upkeep of hardware.
- Staffs Tech Ltd are our school technicians, looking after the management and maintenance of all technology.

Health and safety issues in ICT

In accordance with the National Curriculum requirements children will be taught:

- about hazards, risks and risk control
- to recognise hazards
- to control the risks to themselves and others
- to use information to assess the immediate and cumulative risks
- to manage their environment to ensure the health and safety to themselves and to others
- to explain the steps, they take to control risks+

In addition:

- metal computer trolleys must be earthed
- a computer should not be linked to the mains through a four-way extension lead beyond the computer trolley
- children should not be responsible for plugging in electrical equipment

Admissions packs include information regarding E-Safety this includes E-Safety Rules document (Appendix A) which we ask parents/carers and pupils to sign, A parent's guide (Appendix B) and a Children, ICT & E-Safety booklet (Appendix C)

The school has achieved dyslexia friendly full status and as such will give due regard to dyslexia friendly strategies and objectives.

Subject Curriculum Review

Subject	Subject Leader	Completed By	Date
Computing	Mr P Cooper	Mr P Cooper	Sept 2022

Our Intentions

Pupils leave with:

- with improved positive physical and mental health
- with life skills enabling them to access the world around them
- as enriched individuals
- with improved self-regulation
- with improved independence
- as responsible and respectful citizens

Intent	
How is our school's **intent** represented throughout the curriculum for this subject?	Our curriculum intent for computing is that every child will: · Know how to use technology safely, respectfully and responsibly. · Understand and apply the fundamental principles and concepts of computer science. · Gain practical experience of writing computer programs in order to solve problems. Mental Health – use of technology to enable and support the children in their learning. Positive feelings of achievement and progress. Direct link to life skills, the wider world and home. Enriched Individuals – Use of technology to advance and enrich their lives. Used so vastly across all areas of their lives. Life skills enabling them to access the world around them At Cicely Haughton School we believe that Computing and the use of ICT is central to the education of all children. We aim to give each pupil the opportunity to apply and develop their technological understanding and skills across a

	wide range of situations and tasks. Pupils are encouraged to develop a confident and safe approach to Computing and the use of ICT, with the understanding of the capabilities and flexibility of their resources. With the knowledge that Computing and ICT will undoubtedly continue to form a major part in the children's life at home, in further education and places of work, we ensure the Computing and ICT experiences and abilities that the children are equipped with at Cicely Haughton, are effective and transferrable life skills. Cicely Haughton is committed to ensuring all children have full access to a high-quality computing education. We have a range of excellent resources to support children in their learning across the whole curriculum as well as in their discrete computing lessons. In the long term I would like to have a dedicated ICT Suite which each class is timetabled to use each week. In addition, the school also makes use of shared resources such as iPads and laptops which can be used within lessons or as part of group work. Improved independence / self-regulation – Builds resilience through challenge Our aim is to support children in becoming confident users of technology who have an understanding of how computers and the web work and have experience of using computational thinking to solve problems by writing programs. Challenging themselves on various software programmes and independent learning. Responsible and respectful citizens - Internet Safety It is a priority for us to teach children how to stay safe online and a considerable amount of curriculum time is dedicated to this. Children learn how to be respectful and responsible when using technology online at home and at school. It is important that the children know that the internet is an extremely useful and time saving resource whilst understanding that, if not used properly, it can have its risks. In computing lessons, we teach children to be **SMART** when using the internet and we positively reinforce these messages when they are using the internet across the curriculum. Our online safety lessons are taught in every year group and are supplemented with messages in assemblies. Children learn to use the internet safely, responsibly and how to report any concerns they have.

Implementation

How is the subject timetabled? How do we know this happens?	A lesson of Computing carried out and timetabled once a week.
How is the subject mapped out? How are we ensuring coverage?	As a school, we have chosen the Purple Mash Computing Scheme of Work from Reception to Year 6. The scheme of work supports our teachers in delivering fun and engaging lessons which help to raise standards and allow all pupils to achieve to their full potential. We are confident that the scheme of work more than adequately meets the national vision for Computing. It provides immense flexibility, strong cross-curricular links and integrates perfectly with the 2Simple Computing Assessment Tool. Furthermore, it gives excellent supporting material for less confident teachers.
Can we see progression across the school within pupils' books?	Monitoring standards of teaching and learning within Computing is the primary responsibility of the Computing Leader. All teachers are expected to keep an online portfolio or track children's work using Purple Mash. This portfolio must contain work samples from all areas of the curriculum taught for the year group.
How is assessment used to impact learning? How do we know it is accurate?	Pupil attainment is assessed using the 2Simple Computing Assessment Tool for Years 1 to 6. The tool enables staff to accurately identify attainment of pupils through the detailed exemplification it has for each key learning intention. Teachers keep accurate records of pupil attainment by entering data using the 2Simple Computing Assessment Tool. Tracking of attainment by using the 2Simple Computing Assessment Tool is used to inform future planning.
How confident are staff with the subject? How do we know?	Staff at Cicely Haughton are confident to deliver the Computing curriculum. As we follow the Purple Mash Scheme for Computing the assessment and lessons and curriculum intentions are already mapped out for staff. There are fantastic supporting guides for less confident teachers.

Impact	
Do all groups have equal access to the curriculum? How do we know?	All class groups in school from Early Years through to Year 6 have access to the Computing curriculum. The infrastructure and software are now in place to enable all classes to access the computers or laptops to enable groups to carry out the lessons with ease.
How does varying staff confidence impact on the curriculum?	Constant updates on Curriculum coverage and Staff CPD is needed by the Subject leader to ensure staff feel confident and empowered to teach Computing across the school.
How does Computing impact the curriculum?	Computing is used across all areas of the school through cross curricular links. It is used to enhance and develop all of the curriculum subjects and prepare all out children in Basic Skills for use in later life.

Things to celebrate

- Computers and other IT can help pupils make accelerated progress. We support pupils to develop their skills such as researching, typing, editing and art skills. Then we use those skills in cross-curricular work. Computer programming, we use various methods including Scratch, Code club and Purple Mash.
- Every child will leave school being able to use code in a programme and use the basic fundamentals of Microsoft Office to enable them to progress their skills in later life.
- New Broadband speed and ICT infrastructure purchased to enable better Curriculum access for all.
- Staff use of the Technology available in school
- Children gaining positive feelings of success.
- Use of Purple Mash Scheme of work and assessments.
- Whole school 'SMART' Internet Safety Assembly.
- Use of technology software to promote ACTIVE lifesyle – Go Noodle etc

Purple Mash Progression of Skills

N.C. Statements KS1 Year 1

Computer Science			Information Technology	Digital Literacy	
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.

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.*

Computing Progression

N.C. Statements KS1 Year 13

Y 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.*

Contact us
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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.*

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.*

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.*

N.C. Statements KS2 Year 6

	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.*