Westleigh Methodist Primary School
Computing Progression of Skills and Knowledge

With God, all things are possible – Matthew 19:26

Love Teamwork Thankfulness Generosity Peace Forgiveness Equality Justice

Early Years

Educational Programme

Computing and technology are still vitally important in EYFS. Computing in EYFS ensures that pupils enter Year 1 with a strong foundation, builds problem-solving abilities, encourages resilience and supports other areas of learning. By integrating computing into EYFS, pupils also begin to build their digital literacy and their understanding of e-safety.

Aims

1. Building a strong foundation

Computing in EYFS doesn't have to mean creating a PowerPoint, or writing a Word document! It can be unplugged activities which don't use a computer. It can also be activities which familiarise pupils with technology they may use more formally in KS1. For example, computing in EYFS may look like taking photos with a tablet, tinkering with a Bee-bot, doodling on an iPad or including an old keyboard in the role play area.

2. Building problem solving skills

Computing activities, especially those involving computational thinking, build problem solving skills. Pupils learn to break problems down into smaller pieces and focus on the important facts. They take big problems and turn them into smaller ones which can be solved. These problem-solving skills support pupils across the domains of the EYFS framework.

3. Encouraging resilience

Computing tasks often require persistence to find a solution. There can be an element of trial and error, or tasks can need debugging. This process helps children develop their resilience as they learn to keep trying until they find a solution.

National Curriculum

Purpose of study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

Aims

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Subject Content

Key Stage 1

Pupils should be taught to:

- 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.

Key Stage 2

Pupils should be taught to:

- 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 concerns about content and contact

	Computer Science	Information Technology	Digital Literacy
Nursery Statement:	• Children live in a programmed world and they experience it every day. • Automatic doors at the supermarket. • Hand driers in public toilets. • price scanners at the supermarket. • automatic lights in the school toilets. • Children explore the uses of control technology through continuous provision or enhancements to provision such as beebot, metal detectors, remote control car/dog	• Explore teacher selected website to find information about a topic, person, animal • Watch videos and information on the interactive whiteboard. • Explore a range of different forms of electronic communication (e. g. mobile phones, hand-held devices, walkie-talkies, etc). • Explore a range of electronic music and sound devices and software. •Speak into and record using simple devices such as talking tins, talking pegs • Use purple mash with an adult to design a house • Paint using ipads • Map using mini map	Become more aware of technology and how it can help us in our learning etc Number blocks linked to Maths and Science etc Seasons. - Repeating patterns on whiteboard Become more aware of online safety and ways to keep safe.
	Computer Science	**Information Technology**	**Digital Literacy**
Reception Statement:	• Give simple commands to a digital device (Beebot)	• I can make a floor robot move.	• Ask an adult when I want to use the Internet.

	• Plan a series of simple instructions for Beebot to use on a Beebot map. • Make predictions of how far Beebot will travel. • Exploration of Purple Mash including the skills of logging in and using digital technology to support learning. • Use digital technology such as cameras and iPad to capture images with purpose. • Making resources work using buttons or switches etc torches.		• I can use simple software to make something happen. • I can make choices about the buttons and icons I press, touch or click on. • Playing and listening to digital stories		• Tell an adult when something worrying or unexpected happens while I am using the Internet. • Be kind to my friends (PHSE link) • I am careful with technology devices.	
	Computer Science		**Information Technology**		**Digital Literacy**	
Year 1 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	Children can work out what is wrong with a simple algorithm when	When looking at a program, children can read code one line at a time and	Children are able to sort, collate, edit and store simple	Children understand what is meant by technology and can identify a variety of examples	Children understand the

	used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand.	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.	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	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.	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	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.
I can statements:	- I can explain that an algorithm is a set of instructions.(1.4, 1.5) - I know that a computer program turns an algorithm into code that the computer can understand.(1.4, 1.7) - I can work out what is wrong when the steps are out of order in - instructions. (1.4, 1.5) - I can say that if something does not work how it should it is because my code is incorrect. (1.7)		- I can sort sound, pictures and text. (1.2) - I can add sound, pictures and text to a program such as 2Create a Story. (1.6) - I can change content on a file such as text, sound and images. (1.3, 1.6, 1.7, 1.8) - I can name my work. (1.2, 1.3, 1.6, 1.7, 1.8) - I can save my work. (1.2, 1.3, 1.6, 1.7, 1.8) - I can find my work. (1.2, 1.3, 1.6, 1.7, 1.8		- I can say what technology is. (1.9) - I can say what examples of technology are in school. (1.9) - I can say what examples of technology are at home. (1.9) - I know that a chair uses old technology and a smart phone uses new technology. (1.9) - I can keep my login information safe. (1.1 and most units) - I can save my work in a safe place such as 'My Work' folder. (1.1 and most units)	

	- I can try and fix my code if it isn't working properly. (1.7) - I can make good guesses of what is going to happen in a program. For example, where the turtle might go. - (1.5, 1.7)					
	Computer Science			**Information Technology**	**Digital Literacy**	
Year 2 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	Children can create a simple program that achieves a specific purpose. They	Children can identify the parts of a program that	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	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	Children know the implications of inappropriate online searches. Children begin

	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.	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.	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.	retrieving content. Children use a range of media in their digital content including photos, text and sound	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.	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
I can statements:	- I can explain an algorithm is a set of instructions to complete a task.(2.1) - I know I need to carefully plan my algorithm so it will work when I make it into code. (2.1) - I can design a simple program using 2Code that achieves a purpose. (2.1) - I can find and correct some errors In my program. (2.1) - I can say what will happen in a program. (2.1)			- I can organise data – for example, using a database such as 2Investigate.(2.3, 2.4) - I can find data using specific searches– for example, using 2Investigate.(2.4, 2.5) - I can use several programs to organise information – for example, using binary trees such as 2Question or spreadsheets such as 2Calculate. (2.4, 2.8) - I can edit digital data such as data in music composition software like 2Sequence. (2.7 and most units)	- I can find information I need using a search engine. (2.5) - I know the consequences of not searching online safely. (2.2, 2.5) - I can share work and communicate electronically – for example using 2Email or the display boards. (2.2 and others) - I can report unkind behaviour and things that upset me online, to a trusted adult. (2.2) - I can see where technology is	

	- I can spot something in a program that has an action or effect (does something). (2.1)			- I can name, save and find my work. (2.3, 2.4, 2.6, 2.7, 2.8 & most units) - I can include photos, text and sound in my creations. (2.8, 2.6)		used at school such as in the office or canteen. (2.2) - I understand that my creations such as programs in 2Code, need similar skills to the adult world. e.g. The program used for collecting money for school trips. (2.1)	
	Computer Science			**Information Technology**		**Digital Literacy**	
Year 3 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	Children demonstrate	Children's designs for	Children can list a range of ways that the internet can	Children can carry out simple	Children can collect,	Children demonstrate the importance of having a secure

	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.	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	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	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.	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.	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.	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.

		variables can be used to store information while a program is executing	can 'read' programs with several steps and predict the outcome accurately				
I can statements:	- I can make a real-life situation into an algorithm for a program. (3.1) - I can design an algorithm carefully, thinking about what I want it to do and how I can turn it into code. (3.1) - I can identify an error in my program and fix it. (3.1) - I can experiment with timers in my programs. (3.1) - I can identify the difference in using between the effect of a timer or repeat command in my code. (3.1) - I know that a variable stores information while a program is running (executing). (3.1) - I can identify 'If' statements, repetition and variables. (3.1) - I can read programs with several steps and predict what it will do. (3.1) I can identify different ways that the internet can be used for communication. (3.5) - I can use email such as 2Email to respond to others appropriately and attach files. (3.5)			- I can carry out searches to find digital content on a range of online systems, such as within Purple Mash or on an internet search engine. (Across units) - I can collect data and input it into software. (3.3, 3.6, 3.8) - I can analyse data using features within software to help such as, formula in 2Calculate (spreadsheets). (3.3, 3.6, 3.8) - I can present data and information using different software such as 2Question (branching database) or 2Graph (graphing tool). (3.3, 3.6, 3.8,3.9) - I can consider what the most appropriate software to use when given a task by my teacher. (Across units) - I can create purposeful (appropriate) content and attach this to emails. (3.3, 3.5, 3.6, 3.7, 3.8, 3.9)		- I can create a secure password. (3.2) - I can explain the importance of having a secure password and not sharing it with others. (3.2, 3.5) - I can explain the negative consequences of not keeping passwords safe and secure. (3.2, 3.5) - I understand the importance of keeping safe online and behaving respectfully. (3.2) - I can use communication tools such as 2Email respectfully and use good etiquette. (3.2, 3.5) - I can report unacceptable content and contact online in more than one way to a trusted adult. (3.2)	
	Computer Science			**Information Technology**		**Digital Literacy**	

Year 4 Statement:	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller part	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	Children's use of timers to achieve repetition effects are becoming more logical and are integrated into their	Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing	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	Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and	Children are able to make improvements to digital solutions based on feedback. Children make informed software	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.

	accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs.	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	some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They can trace code and use stepthrough 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.	provide different methods of communication is improving.	information at a basic level.	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.	

		user inputs and outputs such as 'print to screen'. e.g. 2Code					
I can statements:	- I can turn a real-life situation to solve into an algorithm, using a design that shows how I can accomplish this in code. (4.1, 4.5) - I can use repetition in my code. For example, using a loop that continues until a condition is met such as the correct answer being entered. (4.1) - I can use timers within my program designs more accurately to create repetition effects. For example, I can create a counting machine. (4.1) - I can use selection (decision) in my programming. For example, using an 'if statement' for a question being asked and the program takes one of two paths. (4.1) - I can use variables within my program and know how to change the value of variables. (4.1) - I can use the user inputs and output features within my program, such as 'Print to screen'. (4.1) - I can identify errors in my code by using different methods, such as steeping through lines of code and fixing them. (4.1)		- I understand the purpose of a search engine and the main features within it. (4.7) - I can look at information on a webpage and make predictions about the accuracy of information contained within it. (4.7) - I can create and improve my solutions to a problem based on feedback. For example, create a program using 2Code. (4.1, 4.2) - I can review solutions that others have created, using a checklist of criteria. (4.1, 4.2) - I can work collaboratively to create content and solutions. (4.1, 4.3, 4.4,48) - I can share digital content using a variety of applications such as: 2Blog, 2Email and Display Boards. (Across units)		- I have a good understanding of the online safety rules we learn at school. (4.2 & across curriculum) - I can demonstrate how to use different online technologies safely. (4.2 & across curriculum) - I can demonstrate how to use a few different online services safely. (4.2 & across curriculum) - I know I have a right to privacy both on and offline. (4.2 & across curriculum) - I recognise that my wellbeing can be affected by how I use technology. (4.2 & across curriculum) - I can report with ease any concerns with content and contact online and know immediate strategies to keep safe. (4.2 & across curriculum)	

	- I can read programs that contain several steps and predict the outcomes with increasing accuracy. (4.1, 4.5) - I recognise the main component parts of hardware which allow computers to join and form a network. (4.8) - I understand that network and communication components can be found in many different devices which allow them to join the internet. (4.2, 4.7, 4.8)						
	Computer Science			**Information Technology**		**Digital Literacy**	
Year 5 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	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.

						data and information.	
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	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	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.

		algorithm design.				mode. They are able to use several ways of sharing digital content, i.e. 2Blog, Display Boards and 2Email.	
I can statements:	- I can make more complex real-life problems into algorithms for a program. (5.1) - I can test and debug my programs as I work. (5.1, 5.5) - I can convert (translate) algorithms that contain sequence, selection and repetition into code that works. (5.1) - I can use sequence, selection, repetition, and some other coding structures in my code. (5.1) - I can organise my code carefully for example, naming variables and using tabs. I know this will help me debug more efficiently. (5.1) - I can use logical methods to identify the cause of any bug with support to identify the specific line of code. (5.1) - I know the importance of computer networks and how they help solve problems and enhance communication. (5.2) - I recognise the main dangers that can be perpetuated via computer networks. (5.2)		- I can search precisely when using a search engine. For example, I know I can add additional words or removes words to help find better results. (5.2) - I can explain in detail how accurate, safe and reliable the content is on a webpage. (5.2) - I can make appropriate improvements to digital work I have created. (Across units) - I can comment on how successful a digital solution is that I have created. For example, a program built in 2Code that sorts decimals numbers. (Across units) - I can work collaboratively with others creating solutions to problems using appropriate software such as 2Code. (Across units) - I can use collaborative modes such as within 2Connect to work with others and share it. (5.7)		- I have a secure knowledge of online safety rules taught at school. (5.2 & across units) - I can demonstrate the safe and respectful use of different online technologies and online services. (5.2 & across units) - I always relate appropriate online behaviour to my right to have personal privacy. (5.2 & across units) - I know how to not let my mental wellbeing or others be affected by use of online technologies and services. (5.2 & across units)	

	- I can explain what personal information is and know strategies for keeping this safe. (5.2) - I can use the most appropriate form of online communication according to the digital content. For example, use 2Email, 2Blog and Display Boards. (5.2 & others)						
	Computer Science			**Information Technology**		**Digital Literacy**	
Year 6 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	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	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 refinement	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.

	approach to try to identify a particular line of code causing a problem.	as button clicks and the value of functions.					
I can statements:	- I can turn a complex programming task into an algorithm. (6.1) - I can identify the important aspects of a programming task (abstraction). (6.1) - I can decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work. (6.1) - I can test and debug my program as I work on it and use logical methods to identify a cause of a bug. (6.1) - I can identify a specific line of code that is causing a problem in my program and attempt a fix. (6.1) - I can translate algorithms that include sequence, selection and repetition into code and nest these structures within each other. (6.1) - I can use inputs and outputs within my coded programs such as sound, movement and buttons and represent the state of an object (6.1, 6.7) - I can interpret (understand) a program in parts and can make logical attempts to put the separate parts together in an algorithm to explain the program as a whole. (6.1)		- I can use filters when searching for digital content. (6.2,6.9) - I can explain in detail how accurate and reliable a webpage and its content is. (6.2) - I can compare a range of digital content sources and rate them in terms of content quality and accuracy. (6.1, 6.3, 6.4, 6.5, 6.7,6.9) - I can consider the intended audience carefully when I design and make digital content. (6.1, 6.3, 6.4, 6.5, 6.7,6.9) - I can design and create my own online blogs. (6.4) - I can use criteria to evaluate the quality of my own and others digital solutions, suggesting refinements. (6.1, 6.3, 6.4, 6.5, 6.7,6.9)		- I can demonstrate safe and respectful use of a range of different technologies and online services. (6.2, 6.4) - I can identify more discrete inappropriate behaviours online. For example, someone who may be trying to groom me or someone else. (6.2) - I can use critical thinking to help me stay safe online. (6.2)

	- I can explain the difference between the internet and the World Wide Web. (6.2, 6.4,6.6) - I can explain what a WAN and LAN is and describe the process of how access to the internet in school is possible. (6.2,6.6)		- I know the value of protecting my privacy and others online. (6.2, 6.4)