

Computing
Whole School Overview

Year group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1	Computers	Using computers	E-safety	Coding		
2	Computers	Using computers	E-safety	Coding		
3	Networks	Coding	E-safety	E-safety	Using Computers	Coding / E-safety
4	Computers / Using Computers / Networks	Using Computer / Networking	E-safety	Using Computers	Coding	Not covered
5	Net searching / Using Computers	Coding	Coding	E-safety / Networks	Coding	Not covered
6	Networks	Using Computers	E-safety	Coding	Net searching	Not covered

YEAR 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Can do statements	Computers I can recognise how I use technology in my home and at school	Using computer I can use a program to create a simple document	E-Safety I know to tell an adult if I see anything worrying online	Coding I can predict the behaviour of a programmed toy I can explain that an algorithm is a step by step set of instructions		
Challenge	Using school based programs at home such as doodle maths and reading eggs	Apply this to different areas of learning and different subjects	Understand what programs and sites are suitable for my age	Demonstrate using a programmed toy and creating instructions for it.		

YEAR 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Can do statements	<p>Computers I can recognise how others use technology outside of school</p>	<p>Using computer I can find, open, edit and save files I am working on</p> <p>I can use different software programs and discuss the benefits of their usage</p>	<p>E-Safety I know I need to keep my personal information private</p>	<p>Coding I can predict the behaviour of a programmed toy, clearly relating each action to part of an algorithm</p> <p>I can create a simple program to perform a task</p> <p>I can create and debug simple programs</p> <p>I can find and fix simple bugs in programs</p> <p>I can understand that programs run by following clear instructions</p>		
Challenge	Use age appropriate technology for home learning based tasks	<p>Select appropriate software for the task in hand without support.</p> <p>Navigate where the files have been saved on a network.</p>	Using sites that are age appropriate and reporting any unusual behaviour to an adult.	Complete this with a sense of purpose in mind.		

YEAR 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Can do statements	<p>Networks understand that computer networks allow data to be transferred and shared.</p> <p>I understand that the internet is a large network that enables computers to share information.</p>	<p>Coding I can produce a simple program that completes a given task. I can explain how simple algorithms solve a given problem.</p>	<p>E-Safety I know I need to keep my password and personal information secure I can recognise acceptable and unacceptable behaviour online</p>	<p>Net searching Use simple search technologies</p> <p>Networks Understand that the internet is a large network of computers and that information can be shared between computers</p>	<p>Computers I know what input and output devices are and how they are used I can use a range of input and output devices efficiently</p>	<p>Coding Design, write and debug programs that control or simulate virtual events. Use logical reasoning to explain how some simple algorithms work</p> <p>E-Safety Use technology safely and recognise acceptable and unacceptable behaviour</p>
Challenge	<p>Pupils recognise that interconnected computers can save files to a central location, known as a server.</p>	<p>Pupils can clearly justify why the code used was an efficient solution to a problem.</p>	<p>Understand what makes a good password. Understand there are certain rules and laws beyond those of the school.</p>	<p>Pupils know you can use the internet to access information on other computers around the world and that this information is accessed by a hyper link.</p>	<p>Pupils are able to use the keyboard effectively and begin to use 'keyboard shortcuts' to save time. They are able to change basic printing settings, such as orientation or back to back.</p>	<p>Coding – Provide the students with the challenge of writing a programme in which a ball is controlled on the screen through the use of the computer mouse. E-Safety – Pupils can recognise a large range of activity that are acceptable and unacceptable, explaining their choices.</p>

YEAR 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Can do statements	<p>Computers I can use more complicated input devices.</p> <p>Understand what servers are and how they provide services to a network.</p> <p>Select, use and combine a variety of software systems and content that accomplish given goals</p>	<p>Using Computers With support select, use and combine a variety of software on a range of digital devices to accomplish given goals</p> <p>Net Searching Understand how results are selected and ranked by search engines</p>	<p>E-Safety Use technology responsibly and understand that communication online may be seen by others.</p> <p>Understand where to go for help and support when he/she has concerns about content or contact on the internet or online technologies</p>	<p>Using Computers With support select and use a variety of software on a range of digital devices</p>	<p>Coding Decompose programs into smaller parts</p> <p>Use logical reasoning to detect and correct errors in algorithms and programs</p>	Not Covered
Challenge	<p>Pupils are able to confidently select and use a range of input devices. Where more than one device could be used, they can recognise the merits of each and make appropriate choices to match the task.</p> <p>Pupils understand that some networks include one or more computers known as servers and that</p>	<p>Pupils can input resources form a multiple of programs and devises e.g. cameras or microphones. They can combine these within a singular document, identifying the benefits that each platform can provide.</p> <p>Pupils understand how some</p>	<p>Pupils can contribute to a group discussion on a variety of different scenarios whether something should or should not be shared online e.g. Holiday photos, Home address and phone number, favourite films, selfies. Also recognise although some websites may promise to protect their content, they</p>	<p>Pupils can identify the most appropriate piece of software and hardware for tasks, clearly justifying their choice with reference to functionality. They can make effective use of a range of tools.</p>	<p>Pupils make regular and efficient use of decomposition as a tool for developing and debugging programs.</p> <p>Pupils are seen to debug as they code their programs, constantly quiring the behaviour of their code.</p>	

	<p>these provided services to network users e.g. managing print jobs or serving files.</p> <p>Pupils can input resources form a multiple of programs and devises e.g. cameras or microphones. They can combine these within a singular document, identifying the benefits that each platform can provide.</p>	<p>keywords may mean more than one thing to a search engine. They understand how search engines rank results by reliability.</p>	<p>can never be 100% sure.</p> <p>Pupils have a clear understanding of the school policies and procedures around reporting concerns about content and contact online.</p>			
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YEAR 5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Can do statements	<p>Network searching</p> <p>Use filters in search technologies effectively</p> <p>Use filters in search technologies effectively and appreciates how results are selected and ranked</p> <p>Using Computers</p> <p>Independently select, use and combine a variety of software to design and create content</p>	<p>Coding</p> <p>Design, input and test an increasingly complex set of instructions to a program or device</p> <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</p> <p>Design, write and test simple programs that follow a sequence of instructions or allow a set of instructions to be repeated.</p> <p>Design write and test simple programs with opportunities for selection, where a particular result will happen based on actions or situations controlled by the user.</p> <p>Use logical reasoning to explain how increasingly complex</p>	<p>Coding</p> <p>Design, input and test an increasingly complex set of instructions to a program or device</p> <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</p> <p>Design, write and test simple programs that follow a sequence of instructions or allow a set of instructions to be repeated.</p> <p>Design write and test simple programs with opportunities for selection, where a particular result will happen based on actions or situations controlled by the user.</p> <p>Use logical reasoning to explain how increasingly complex</p>	<p>E-Safety</p> <p>Understand the need to only select age appropriate content</p> <p>Use technology respectfully and responsibly</p> <p>Networks</p> <p>Begin to use internet services within his/her own creations to share and transfer data to a third party</p>	<p>Coding</p> <p>Design, input and test an increasingly complex set of instructions to a program or device</p> <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.</p> <p>Design, write and test simple programs that follow a sequence of instructions or allow a set of instructions to be repeated.</p> <p>Design write and test simple programs with opportunities for selection, where a particular result will happen based on actions or situations controlled by the user.</p> <p>Use logical reasoning to explain how increasingly complex algorithms</p>	Not Covered

	for a given audience	algorithms work to ensure a program's efficiency	algorithms work to ensure a program's efficiency		work to ensure a program's efficiency	
Challenge	<p>Pupils can identify more suitable keywords that could be used to generate more reliable results.</p> <p>Pupils can use a broad range of search tools to quickly locate what they're looking for, including image, map and news search.</p> <p>Pupils can recognise a range of functions in different software titles. Can confidently</p>	<p>Pupils can efficiently combine a broad range of programming skills to solve more complex problems.</p> <p>Pupils can control a range of hardware from within their programs, identifying parallels with real life physical systems.</p> <p>Pupils have a good understanding of the concept of loops including the difference between 'Repeat' and 'forever' loops.</p> <p>They use them to repeat a range of algorithms within their programs.</p>	<p>Pupils can efficiently combine a broad range of programming skills to solve more complex problems.</p> <p>Pupils can control a range of hardware from within their programs, identifying parallels with real life physical systems.</p> <p>Pupils have a good understanding of the concept of loops including the difference between 'Repeat' and 'forever' loops.</p> <p>They use them to repeat a range of algorithms within their programs.</p>	<p>Pupils have a good understanding why some websites, especially social media site, have age restrictions.</p> <p>Pupils have a clear understanding of the school policies and procedures around reporting concerns about content and contact online.</p>	<p>Pupils can confidently explain how their code helps solve a complex problem, identify why their choices are more efficient than alternatives.</p>	

	discover the functions of buttons they are not familiar with.					
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YEAR 6

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Can do statements	<p>Networks</p> <p>Understand how computer networks enable computers to communicate and collaborate</p> <p>Begin to use internet services within his/her own creations to share and transfer data to a third party</p>	<p>Using Computers</p> <p>Independently select, use and combine a variety of software to design and create content for a given audience, including collecting, analysing, evaluating and presenting data and information</p> <p>Design and create a range of programs, systems and content for a given audience</p> <p>Independently select, use and</p>	<p>E-Safety</p> <p>Use technology respectfully and responsibly</p> <p>Identify a range of ways to report concerns about content and contact in and out of school</p>	<p>Coding</p> <p>Include use of sequences, selection and repetition with the hardware used to explore real world systems</p> <p>Solves problems by decomposing them into smaller parts</p> <p>Create programs which use variables</p> <p>Use variables, sequence, selection, and repetition in programs</p>	<p>Net Searching</p> <p>Be discerning when evaluating digital content</p> <p>Use filters in search technologies effectively and is discerning when evaluating digital content</p>	Not covered

		combine a variety of software to collect, analyse, evaluate and present data and information		Use logical reasoning to explain how increasingly complex algorithms work and to detect and correct errors in algorithms and programs efficiently		
Challenge	Pupils understand that the smaller chunks of shared information are known as packets. They also understand applications that share information in a common way do so through the use of protocols.	<p>Pupils can identify a range of ways in which they have adapted their work to meet the needs of the audience.</p> <p>Pupils confidently analyse data through the use of sorting and multiple filters. They present data in a range of well</p>	Pupils develop a greater understanding of anti-virus software.	<p>Pupils confidently use variable values to influence a number of ways in which their programs run.</p> <p>Pupils demonstrate clear logical thinking as they work though their code required to solve a complex problem.</p>	Pupils can evaluate the reliability of a range of different websites and give them a reliability score.	

	<p>Pupils can add a range of 'embedded' information to their own sites. They can confidently use a range of online services that enable them to collaborate with others on a given task.</p>	<p>formatted graphs which are used to identify statements and trends.</p>				
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