

Subject	Subject specifics	By the end of KS1	By the end of LKS2	By the end of UKS2
Computing	Coding/ Algorithms	<ul style="list-style-type: none"> ● Can create and follow instructions. ● Can navigate programmable toys. ● Can use a mouse to move forward, backwards and side to side. ● Can give precise instructions ● Can run a programme. ● Can sequence a series of instructions. ● Can create a larger programme. ● Can test and debug a simple programme. ● Can use logical reasoning to tell a story when controlling devices. ● Can control other devices MP3 etc. ● Can explain what an algorithm is using simple symbols and key words using BeeBot online program and Scratch ● Can use logical reasoning to predict the behaviour of algorithms. 	<ul style="list-style-type: none"> ● Can solve open ended problems. ● Can design, write, run programmes using programming language ● Can debug an algorithm and correct errors. ● Can use repetition in programmes. ● Can use arithmetic operators, if statements and loops within programs. ● Can find and correct simple semantic errors i.e. debugging in programs ● Can design solutions that use repetition and two-way selection i.e. if, then and else. ● Can use diagrams to express solutions. ● Can explain that computers have no intelligence and that computers can do nothing unless a program or operation is running. ● Can explore the effect of changing variables. 	<ul style="list-style-type: none"> ● Can predict how a provided algorithm will behave before testing it ● Can represent an algorithm symbolically ● Can develop algorithms that create 'if' statements and loops ● Can create digital content to achieve a given goal through combining software packages and internet communication services ● Can use sequence of selection statements in programs, including an if, then and else statement ● Can design solution that use repetition and two-way selection ● Can use logical reasoning to predict outputs, showing an awareness of inputs ● Can declare and assign variables to an algorithm ● Can create a simple programme to simulate a real or imaginary scenario ● Can create a programme which demonstrates a sequencing loop

			<ul style="list-style-type: none"> ● Can use them to make and test predictions. ● Can create and programme sequences. ● Can create inputs and outputs including sensors ● Can use arithmetic operators, if statements and loops within programs. ● Can use arithmetic operators, if statements and loops within programs ● Can create, test and correct simple semantic errors in programs 	<ul style="list-style-type: none"> ● Can develop algorithms that create 'if' statements, loops repetition and procedures. ● Can develop more complex flow diagrams and procedures that draw on others ● Can refine procedures to improve efficiently ● Can use a variable a relational operators within a loop to govern termination ● Can explain the difference between and appropriately use 'if', 'then' and 'else' statements ● Can design, write and debug modular programs using procedures ● Can design solutions by decomposing a problem and creating a sub-solution for each of these parts ● Can use a procedure to hide the detail with sub-solution (procedural abstraction)
	Communication and research	<ul style="list-style-type: none"> ● Can log onto the school network using own username and password. ● Can contribute ideas to class email or blogs. ● Can use online etiquette ● Can use simple authoring tools to create own messages. 	<ul style="list-style-type: none"> ● Can log onto email account, open mails, create and send the appropriate replies. ● Can create an address book. ● Can attach different file to emails- to upload photo photographs from school camera. 	<ul style="list-style-type: none"> ● Can refine skills for independently creating/sending and responding to emails, blogs and forums ● Can make use of video conferencing technology to exchange ideas and collaborate on projects with other schools

- Can use appropriate buttons, menus and hyperlinks to navigate websites.
- Can enter keywords into search engine to find specific information.
- Can create, store and edit content in to their own folder
- Can talk about my work and make changes to improve it
- Can find content from the world wide web using a web browser
- Can report concerns over content
- Can communicate safely and respectfully online
- Can author own pages in PowerPoint/ google slides adding text and images.
- Can write and send a short email from a class email.
- Can use appropriate buttons, menus and hyperlinks to navigate websites.
- Can access different information using a range of equipment.
- Can locate specific websites by typing into the address bar.
- Can communicate safely and respectfully online and

- Can understand the dynamics of a search engine-using key questions and words.
- Can locate own folder on drive to save and retrieve work.
- Can contribute to discussion forums, blogs and survey.
- Can create own discussions, blog and survey.
- Can contribute to Wiki.
- Can understand how the internet works, networking/servers.
- Can save and retrieve accessed information through the use of favourites and history.
- Can explain the importance of communicating safely and respectfully online by contributing to Wiki.
- Can disclose concerns about content or being contacted by unknown people and knowing what to do with unacceptable content before downloading.
- Can navigate the web and carry out simple web searches to collect digital content.

- Can select appropriate search engines
- Can consider the effectiveness of search results
- Can discuss issues of copyright and downloading material
- Can check plausibility of information by using a variety of sources on the same topic
- Can use appropriate referencing –sources used in work
- Can produce formal and informal messages appropriate to a task or to solve a problem
- Can refine the use of video technology to exchange ideas and collaborate on work.
- Can effectively use search engines and know how search results are selected.
- Can show responsible use of technologies and online services and know a range of ways to report concerns
- Can analyse and evaluate data and information and know that poor quality data leads to unreliable results and inaccurate conclusions

		<p>understand the need for keeping personal information private.</p> <ul style="list-style-type: none"> ● Can use technology with increasing independence to purposefully organise digital content ● Can show an awareness for the quality of digital content collected 		
	Text processing and Multimedia	<ul style="list-style-type: none"> ● Can use the keyboard correctly. ● Can begin to touch type. ● Can word process short texts using the correct fingers. ● Can navigate around a text using the mouse and arrow keys. ● Can use space bar, shift and return whilst word processing. ● Can select appropriate images and add to word documents. ● Can add captions to photographs using text boxes. ● Can use templates to create simple pieces of writing. ● Can be able to save and retrieve work. ● Can begin to edit their own work in the light of their own discussions and observations. ● Can develop touch typing skills. 	<ul style="list-style-type: none"> ● Can use different font size/colour and effects to communicate meaning for a given audience. ● Can use layout, format, graphics, and illustrations for different purposes/audience. ● Can inset and edit simple tables. ● Can use page set up to select different pages sizes and orientations. ● Can use cut and paste to refine and re order. ● Can select suitable text, sounds, and graphics from electronic resources. ● Can select and import sound from own recordings, create effects and music and import this from other resources. 	<ul style="list-style-type: none"> ● Can develop and use criteria to evaluate a range of websites ● Can understand how pages are linked together and recognise the need for clarity. ● Can format and edit work to improve clarity and moods using a range of tools (justify, tabs, insert, replace) ● Can make use of reviewing tools in word processors to collaborate in evaluating work ● Can independently select and import images and videos from digital cameras, graphic packages and other sources and prepare it for processing ● Can format and edit work to improve clarity and mood using range of tools (justify, tabs, insert, replace)

			<ul style="list-style-type: none"> ● Can select and import graphics from digital cameras and prepare for use. (Cropping, resizing and re-editing). ● Can use a variety of software to manipulate and present digital content. 	<ul style="list-style-type: none"> ● Can use spreadsheets to draw graphs to help answer specific problems ● Can use information from analysis of data to present findings on other applications
	Information handling	<ul style="list-style-type: none"> ● Can develop simple classification skills by carrying out simple sorting activities. ● Can use simple graphing programmes to create pictograms and other simple graphs. ● Can use simple search tools in a prepared database to answer simple questions. ● Can create their own simple database to answer a question. ● Can explain the different ways that digital data can communicate information. ● Can use graph software to change a graph type and consider which the best is that explains the data. ● Can sort and classify a group of items by asking simple questions. ● Can use branching database programmes to sort and identify items. 	<ul style="list-style-type: none"> ● Can build your own database to answer simple questions and provide information. ● Can raise questions of the data and translate them into search criteria. ● Can achieve a given goal through combining software packages. ● Can make appropriate improvements to a database based on feedback received and can comment on the success of the database. ● Can create and use a branching database to organise and sort data to answer questions. ● Can use a spreadsheet to record data and produce graphs. ● Can determine the data needed to answer a specific question and organise it into a table. ● Can begin to develop skills to identify clearly what data 	<ul style="list-style-type: none"> ● Can design questions using keywords to search a large prepared database ● Can use complex searches to search data when looking for patterns and relationships in data ● Can modify a search pattern to find specific information ● Can change the content of cells in a spreadsheet to explore 'what ifs' ● Can check for accuracy by checking data ● Can use input devices e.g. data logger ● Can use input devices including sensor and application software for accurate data ● Can use pre-programming features of data logging software and devices to set up a specific data capture ● Can use a range of external sensors in a variety of situations

		<ul style="list-style-type: none"> ● Can use a variety of software to manipulate and present digital content and information ● Can talk about work and make improvements to solutions based on feedback received. 	<p>needs to be collected and use an input device (data logger)</p> <ul style="list-style-type: none"> ● Can use a range of input and output devices to collect and organise data. 	<ul style="list-style-type: none"> ● Can use a data logger as a timing device ● Can use graphical information to answer questions and solve different problems ● Can use Excel efficiently to analyse data ● Can enter labels and numbers in a spreadsheet ● Can enter a formula into a spreadsheet and modify the data ● Can use 'sum' to calculate the total of a set of numbers in a range of cells ●
	<p>Simulations and digital images</p>	<ul style="list-style-type: none"> ● Can explore simulation in other curriculum areas and talk about what happens. ● Can manipulate tools to use the simulation. ● Can use models and simulations to test out their thinking ● Can use debugging skills 	<ul style="list-style-type: none"> ● Can acquire, store, retrieve images from the internet/camera and manipulate the software to change the image. ● Can create a short animated sequence from captured images in simple storyboard software, to communicate a specific idea. ● Can begin to independently capture, store, retrieve and edit a digital image. ● Can import music and stills into video editing software and add to film projects. 	<ul style="list-style-type: none"> ● Can use an object based graphics to design and develop a plan to find a solution to a specific problem ● Can create images using a range of techniques ● Can refining and make appropriate changes ● Can make judgements about digital content when evaluating and repurposing it for a given audience ● Can design and create digital content for a specific audience ● Can make appropriate improvements to content based on feedback

			<ul style="list-style-type: none">• Can add simple credits and titles.	<ul style="list-style-type: none">• Can create a programme that includes a method of scoring• Can create a programme that uses a timer and set variables• Can enhance a presentation by acquiring, storing and combining images from different sources.• Can make judgements about digital content when evaluating and repurposing it for a given audience
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