



Westover Primary School – Subject Skills Progression

Computing Progression

	Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science (programming)	<p>Follow simple oral algorithms.</p> <p>Spot simple patterns.</p> <p>Sequence simple familiar tasks.</p> <p>Use a mouse, touch screen or appropriate access device to target and select options on screen.</p> <p>Input a simple sequence of commands to control a digital device with support (Beebot).</p>	<p>Know what an algorithm is.</p> <p>Program a Beebot.</p> <p>Explain the steps in a simple algorithm.</p> <p>Follow an algorithm without a computer.</p> <p>Write a simple algorithm.</p> <p>Compare different algorithms in terms of speed.</p> <p>Sequence a task correctly.</p> <p>Use a program to solve a problem.</p> <p>Spot an error in an algorithm.</p> <p>Fix a bug.</p> <p>Use a program to solve a problem.</p>	<p>Follow a simple algorithm.</p> <p>Plan and code an algorithm.</p> <p>Explain how a computer follows an algorithm.</p> <p>Explain the steps in a simple algorithm.</p> <p>Follow an algorithm without a computer.</p> <p>Write an algorithm on paper.</p> <p>Write a simple program.</p> <p>Break a problem down into smaller steps.</p> <p>Run a program.</p> <p>Predict how a program will behave when programmed.</p> <p>Explain what a bug is.</p> <p>Spot a bug in an algorithm.</p> <p>Fix a bug.</p>	<p>Follow a sequence of instructions.</p> <p>Know what computer control means.</p> <p>Debug a program to fix a problem.</p> <p>Split a problem into smaller parts.</p> <p>Spot when a program goes wrong.</p> <p>Write a program that controls a gadget.</p> <p>Compare two different algorithms that do the same thing in different ways.</p> <p>Design a program on paper.</p> <p>Explain the difference between input and output.</p>	<p>Understand what a variable is and use repetition.</p> <p>Give some examples of what algorithms can be used for.</p> <p>Use Scratch to predict and create an algorithm.</p> <p>Explain why computers are sometimes used to control things and simulate things.</p> <p>Explain how an algorithm works.</p> <p>Know what repetition is.</p> <p>Repeat something a certain number of times.</p> <p>Write increasingly more precise algorithms for use when programming.</p>	<p>Understand key components of a flowchart and use selection successfully.</p> <p>Solve problems by decomposing them into smaller parts.</p> <p>Use selection in algorithms.</p> <p>Recognise the need for conditions in repetition within algorithms.</p> <p>Apply and use these components together to follow a flow chart.</p> <p>Know how to label an input and output.</p> <p>Understand how to use an input and output in a flowchart.</p> <p>Use logical reasoning to explain how a variety of</p>	<p>Use a range of sequence, selection and repetition commands combined with variables as required to implement my design.</p> <p>Spot when a problem causes things to go wrong.</p> <p>Debug a program to fix a problem.</p> <p>Create an effective system flowchart.</p> <p>Use the vocabulary of system flowcharts.</p> <p>Include 'if' statements in my system flowchart.</p> <p>Check my system flowchart for accuracy.</p> <p>Predict what effect an</p>

					<p>Know what debugging is. Explain why programs need to be tested and debugged. Use logical reasoning to detect and correct errors in programs. Tell when an algorithm has worked or not. Evaluate the usefulness of a script.</p>	<p>algorithms work. Compare two different algorithms that do a similar thing. Use a variable to keep track of something. Evaluate the appropriateness of a program and rectify any errors.</p>	<p>algorithm will have. Evaluate the usefulness of a script. Critically evaluate my work and suggest improvements.</p>
<p>Computer Science (Systems and Networks)</p>	<p>Recognise that a range of technology is used in places such as homes and schools. Select and use technology for particular purposes.</p>	<p>Recognise what we mean by a computer. Understand why we need to log in and out of a computer and can do that. Navigate a computer using a mouse (pad). Name some key software/hardware vocabulary e.g. key board, mouse, speakers. Explain the function of key software and hardware. Explain why it can be useful to use a computer.</p>	<p>Know what a computer is. Recognise the parts of a computer. Explain why it can be useful to use a computer or digital device. List jobs done by a computer inside and outside of school. Say when it's better to use a computer and when it's better not to. I can use a search engine safely.</p>	<p>Know what a network is. Develop an understanding of how a computer works. Recognise parts of a computer. Explain the difference between input, process and output devices. Identify an input and an output. Know what hardware and software is. Know what a physical system is and the role of the CPU.</p>	<p>Understand that servers on the Internet are located across the planet. Understand how email is sent across the Internet. Understand how the internet enables us to collaborate.</p>	<p>Know how to use a search engine quickly and accurately. Explain how the internet was set up and how we view webpages Explain what communication is. Explain how the internet lets people collaborate. Explain what the internet can be used for. Explain why some results on Google appear higher than others.</p>	<p>Understand what a local network is and that this is two or more devices connected together to send and receive information. Understand what a global network is. Understand what HTML is and recognise HTML tags. Know what the internet is. Explain what the internet can be used for. Design an effective</p>

		<p>List jobs that can be done by a computer inside and outside school.</p> <p>Recognise computer related symbols and understand their function.</p> <p>Explain why it can be useful to use a computer to research information.</p> <p>Compare when it would be better to use a computer or real-life resources to research.</p>		<p>Understand the role of the computer's memory and the role of the computer's display.</p> <p>Understand that computers in a school are connected together in a network.</p> <p>Understand why computers are networked.</p> <p>Begin to understand the difference between the Internet and the World Wide Web.</p>		<p>Explain how some things on the internet may not be true.</p>	<p>network.</p> <p>Use software to accomplish given goals.</p> <p>Use technology purposefully to create digital content.</p>
<p>Information Technology (Word Processing)</p>	<p>Play on a touch screen game and use computers/key boards in role play.</p> <p>Type letters with increasing confidence using a key board and tablet.</p>	<p>Log onto a computer and access a website.</p> <p>Begin to use some functions on a keyboard.</p> <p>Save my work.</p> <p>Search for saved images.</p> <p>Open my saved work.</p> <p>Type words correctly on a digital device.</p> <p>Use the space bar and delete button.</p> <p>Make a new line</p>	<p>Begin to touch type.</p> <p>Understand how to use a word processor.</p> <p>Add images to a text document.</p> <p>Open and format a word document.</p> <p>Create a document on a computer.</p> <p>Edit the content of a word document.</p> <p>Use the space bar only once between words</p>	<p>Present my work to others using a device.</p> <p>Format a document in Microsoft word e.g. orientation, borders, columns, margins, text colour, text size to make my document more eye-catching.</p> <p>Use cut, copy and paste to quickly duplicate and</p>	<p>Combine digital images from different sources, objects and text to make a final piece of a variety of tasks e.g. posters, documents, leaflet, presentations.</p> <p>Confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text.</p>	<p>Apply other useful effects to my documents such as hyperlinks.</p> <p>Import sounds/images to accompany and enhance the text in my document.</p> <p>Organise and reorganise text on screen to suit a purpose.</p> <p>Enhance digital photos and images using crop,</p>	<p>Choose the best application to demonstrate my learning.</p> <p>Format text to suit a purpose.</p> <p>Publish my documents online regularly and discuss the audience and purpose of my content.</p>

		using enter/return.	and use touch to navigate to words letter to edit. Use caps lock and the shift key for capital letters. Type longer passages into a document with accurate punctuation. Save my work on a computer. Copy and paste images into a word document. Insert a page border. Copy and paste images. Edit a photo/image by cropping or changing the lightness.	organise text. Use software to create work for a given purpose. Evaluate how well a piece of work does what it's supposed to. Type a set of words accurately for example: use index fingers on keyboard home keys (f/j), use left fingers for a/s/d/f/g, and use right fingers for h/j/k/;.	Use font sizes appropriately for audience and purpose. Use spell check and thesaurus to edit and improve published work.	brightness and resize tools and include these images in my work.	
Information Technology (Data Handling)	Identify a chart. Sort physical objects, take a picture and discuss what I have done. Present simple data on a digital device.	Sort images or text into two or more categories. Collect data on a topic. Create a tally chart and pictogram. Explain what I have done and what it shows me.	Collect data and represent data using a computer. Interpret data on the computer and answer simple questions.	Input data into a database. Explain why there are digital and non-digital databases and compare the advantages and disadvantages. Sort and filter data. Represent data from a database in a visual way –	Know what a spreadsheet is and can enter data (Excel). Use a computer to collect data. Use Excel to sort and order data. Export data in a variety of ways e.g. charts, bar	Know what data is and know how it is different to information. Use simple formulae to solve calculations including =sum and other statistical functions.	Create formulae to add, subtract, multiply and divide data. Collect data and use Microsoft Excel to input data. Create formulae to find minimum and maximum scores I can

				creating charts and graphs	charts, pie charts. Begin to enter formulas into Excel to analyse my data.	Know how to collect data and can use a computer to collect data. Use the computer to present data e.g. Microsoft Excel. Present data from data loggers and analyse the results. Edit and format different cells in a spreadsheet.	create formulae to find the average of scores. Find the total of a set of data. Conditionally format cells.
Information Technology (Presentations)	Create images on the computer using a range of programs. Use a painting app and explore the paint and brush tools. Move and resize images with my fingers or mouse. Know the difference between photography and video. Take a photograph. Record/play a short film.	Develop mouse skills. Use a range of tools to create desired effects. Use a camera. Use Sketchpad to fill sections and stamp Clipart into place. Use a variety of digital planning tools to create different effects. Take a clear photo. Edit photos. Create a photo collage.	Create a simple animation. Use software to create artwork. Create a repeated pattern on the computer. Use the computer to recreate a piece of my artwork. Create an avatar online.	Create an animation with a plot. Use a program (Scratch) to use to make a piece of work. Present my animation to others. Use PowerPoint to create slides displaying my topic research. Insert slide, use templates and change the backgrounds, add hyperlinks when using PowerPoint. Add slide	Create a simple website. Tinker with Google Sites and create a page. Plan the content of my page. Evaluate my website's success. Use PowerPoint to create slides displaying my topic research. Insert slide, use templates and change the backgrounds, add hyperlinks when using PowerPoint. Add slide transitions and	Use PowerPoint or Google Slides to produce a presentation. Select, edit and format information to include in my presentation. Enhance digital photos and images using crop, brightness and resize tools and include these images in my work.	Use PowerPoint or Google Slides to produce a cohesive presentation with a beginning, middle and end. Include hyperlinks in my presentation. Create a storyboard for animation. Include a beginning, middle and end. Create a story to entertain. Present work to

				transitions and animations to a slide show.	animations to a slide show.		others using a computer or device. Know how to record an animation. Know that small movements will create a smooth animation. Identify how to improve my animation. Include titles and credits in my animation. Include a voice over in the animation. Understand and use the terms frames, titles and credits.
Digital Literacy (Online Safety) Crosses over with PSHE		Know what the internet is and how to use it safely. Understand how seeing things on the internet can affect feelings. Explain how to treat people both in person and online. Explain how to be careful online.	Know that things that go onto the Internet are then there forever. Know what consent is. Explain what 'private' means. Explain the importance of a password. Know that it is important to speak to an adult about things online.	Know the difference between opinions, facts and beliefs. Explain how to deal with upsetting online content. Know what privacy settings are. Explain how to protect myself and my personal information on social media.	Be able to make a judgement about accuracy of search results. Explain what methods companies use to encourage us. Explain what an opinion, fact and belief is and give examples. Explain the risk of bots. Recognise positive and	Know what to do if I experience online bullying. Explain how online apps access information. Limit my personal information from being online. Explain the positive and negative aspects of online communication. Use technology	Create a positive online reputation. Understand the positive and negative effects of the internet. Explore negative feelings which can occur as a result of being online. Explain what privacy settings are and how to change them. Know how

			Know that not everything on the internet is true.		negative distractions of technology. Be respectful and safe online and know strategies to achieve this.	safely, respectfully and responsibly. Explain which information is true and which is false. Explain the difference between online and offline bullying. Replace bad habits with good habits.	important anonymity is. Understand the importance of capturing online bullying evidence and reporting it. Manage passwords safely and understand what makes a strong one. Identify online scams and reduce the risks.
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