



Kingswood Primary School – Computing skills progression

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.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Topics studied	Internet Safety Beebots Basic typing – PaintZ Emails and messages Websites Object sorting and labelling	Internet Safety Beebots Typing – PaintZ and Docs Emails and messages Websites Branching databases	Internet Safety Emailing and messaging Networks Probots Scratch Pictograms Typing - Docs Data - Sheets Websites	Internet Safety Emailing and messaging Networks Scratch Typing – Docs Data- Sheets	Internet Safety Scratch (Pong) Typing - Slides Radio programmes Data - Sheets	Internet Safety Scratch (Smoking Car) Blogging Typing - Lucidpress Data - Sheets
Computer Science	<u>Bee-Bot</u> Follow and give instructions Explore outcomes when buttons are pressed in sequences Begin to identify and carry out an algorithm	<u>Bee-Bot</u> Follow and give forward, backward, left and right turn instructions Explain an algorithm to achieve a purpose Identify and carry out an algorithm	<u>Pro-Bot</u> Solve open-ended problems creating regular polygons using right angles Follow and give forward, backward, left and right turn instructions	<u>Scratch</u> Create an algorithm and a program that will use a simple selection command for a game Create and debug a program which uses	<u>Scratch</u> Use variables, conditional sentences (when/then), external triggers and loops Explain how their program works.	<u>Scratch</u> As previous but use mathematical expressions when constructing conditionals eg trigger winning when (If loops >5 then...)

	Begin to make predictions about short instructions Begin to use the word debug to correct any mistakes	Predict what will happen and test results Debug problems	Identify and carry out an algorithm to avoid objects <u>Scratch</u> Use flowcharting software to create a simple program to control an onscreen icon to: move, rotate, repeat, pen up, pen down. Test and debug simple mistakes Explore outcomes when giving sequences of instructions	sequence and selection Test and debug mistakes Begin to work with variables	Begin to identify bugs in programs written by others.	Know how to explain what a program might do and accurately predict the effect of changes
Digital Literacy	<u>E Safety</u> Know that they should always ask a responsible adult if they want to use a device. Begin to understand the importance of being kind and polite online. Know what is meant by personal information and develop awareness of why it is special. <u>Internet</u> Know that the internet	<u>E Safety</u> Know what personal information is and that they should never share this with strangers. Know that they should tell a trusted adult if they are upset or worried about anything on a device. <u>Internet</u> Know devices that enable direct	<u>E Safety</u> Know that concerns about what they see online should be reported to a trusted adult Know which websites are useful and trusted <u>Internet</u> Use a simple password Use a Search engine to find information given key words Log in and out of	<u>E Safety</u> Know that pictures and text share on-line can end up with strangers Reliably know what to do if they are exposed to unpleasant materials on any device <u>Internet</u> Reliably uses a more complex password to access resources Use key words in a	<u>E Safety</u> Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. Know that it is irresponsible to share images of friends on-line without their permission. Know how to report concerns online. Effectively use a	<u>E Safety</u> Know how to reduce the risks posed by using Social Media Know that hacking or misusing someone else's account is illegal. Know that search results can be manipulated by sponsorship and advertising. Know how to validate information found through searches

	is accessed all over the World and know which devices are connected to the internet. <u>Email</u> Begin to understand what email is used for Begin to understand how to send an email	communication between people. <u>Email</u> recognise and begin to send emails using @	websites used at school <u>Email</u> Send and reply to emails using a subject line Use different ways of communicating (Kahoot and surveys)	search engine to find information Select useful websites from the results of a search <u>Email</u> Attach a file Use different ways of communicating (Quizzes and Vlogs)	search engine to find multiple criteria using AND/OR Compare information from different websites and know that some sites may show bias <u>Internet</u> <u>Radio programmes</u> Use search engines (Swiggle) to effectively collect information and images Plan and create audio content View and evaluate the recording process	Know that some news is 'fake.' <u>Internet</u> <u>Blogging</u> Create blog Needs adding to
Information and communication technology	<u>Typing skills - PaintZ</u> Log onto a computer Navigate around the screen with a mouse Find and open an apps Change colour of brush Use paint brush to draw simple images Use eraser to clear screen Move image	<u>Typing skills - Docs</u> Type and format text using capital letters and full stops. Use backspace to correct mistake Use enter to start a new line Highlight text to format size and style B U /	<u>Typing skills - Docs</u> Change font style, format and size of text Use automatic spell checker Use shift key to type punctuation Insert and format tables and text boxes Align text using L R and C functions	<u>Typing skills - Docs</u> Delete, insert and replace text Highlight, copy and paste text using Ctrl c/v Use spell checker independently throughout Format tables Upload images taken from a camera Amend text using	<u>Typing Skills - Slides</u> Create basic presentation including text and images Change layout Add transitions and animations Add photos and videos taken Confidently format text including wrapping and layering	<u>Typing skills - Lucidpress (publisher)</u> Create basic publication using the skills already developed to create content using unfamiliar technology Evaluate the effectiveness of own and others work

	<u>Data</u> Begin to develop simple classification skills Sort objects with labels provided Sort and label objects Draw a simple graph, e.g. pictogram Begin to explain what the graph shows	Save work Add simple image <u>PaintZ</u> Use fill tool Move and resize images and shapes Change width of paintbrush <u>Data – Branching databases</u> Collect and record data purposefully Read and use a simple database to find information Add information to a database	Add images found online Reproduce and evaluate typed document <u>Data – Sheets</u> Enter data on simple grid Highlight data Create simple bar chart Change chart title and labels Use the terms cell, rows and columns	the find and replace tool Change page layout portrait or landscape Use the bullet ad number tools Use the word count tool <u>Data – Sheets</u> Independently enter data and highlight to create charts, tables and graphs Ask and answer simple questions about a database using the search criteria Copy and paste charts and graphs into other programmes Begin to use the 'AND' function to search a database	Begin to evaluate the effectiveness of own and others work <u>Data – Sheets</u> Collect and input data Use the 'AND' function Use the 'SUM' function to calculate the total of a set of numbers in a range of cells Copy cells Change data in a spreadsheet to answer 'what if...?' questions and check predictions. Create pie charts and line graphs	Explain why a specific tool has been chosen <u>Data – Sheets</u> Collect and input data Use 'AND' and 'SUM' functions to make calculations Use formulae for efficiency Answer database questions based on the sales of items Choose the best graph type to fit purpose
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