

STRATFORD-SUB-CASTLE PRIMARY SCHOOL COMPUTING PROGRESSION

KNOWLEDGE – SKILLS – VOCABULARY

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
E-SAFETY	<p>I understand I need to follow certain rules to remain safe when visiting places online.</p> <p>I am beginning to understand that if you create something online, you own it.</p> <p>I know that many websites ask for information that is private & can discuss how to responsibly handle such requests.</p> <p>I can use the internet safely as a part of my daily life.</p> <p>I can tell an adult when I think I might be unsafe online.</p>	<p>I know that not all websites are equally good sources of information.</p> <p>I know that if I put information online it leaves a digital footprint or “trail” & I need to manage it so it’s not hurtful.</p> <p>I can stay safe online by choosing websites that are good for me to visit & not inappropriate sites.</p> <p>I can explore what cyber-bullying means & what to do when I encounter it.</p> <p>I can discuss criteria for rating the information on a website.</p>	<p>I know what actions could be taken if I am uncomfortable or upset online e.g. Report Abuse button.</p> <p>I can talk about what games I enjoy playing and what good choices are when playing games e.g. content, screen time.</p> <p>I can comment and provide positive feedback on the work of classmates in school or online, or the work of others online.</p> <p>I can agree sensible e-safety rules for the classroom.</p> <p>I can choose a secure password for age-appropriate websites.</p>	<p>I can identify comments or messages that may be hurtful to others</p> <p>I can explain why it may be dangerous to share private information</p> <p>I can explain how to be a good digital citizen</p> <p>I can tell someone else more than one way to stay safe online</p> <p>I can edit their own messages and comments to make sure they are kind</p>	<p>I can explain sensible e-safety rules for the classroom.</p> <p>I can discuss my personal use of the Internet and choices I make</p> <p>I know how to protect devices from virus threats.</p> <p>I know the importance of keeping an adult informed about what I am doing online, and how to report concerns.</p> <p>I can use online communication tools safely and responsibly e.g. blogs, messaging.</p>	<p>I can explain why someone might have an online friendship;</p> <p>I can explain what the SMART acronym means</p> <p>I can explain what a stereotype is and compare gender stereotypes, linked to cyber-bullying</p> <p>I can look in the address bar of a website so check for security</p> <p>I can identify the lock symbol in an address bar</p> <p>I can use online communication tools safely and responsibly e.g. blogs, messaging.</p>
VOCABULARY	<p>e-safety</p> <p>online</p> <p>email</p> <p>alphabetical</p> <p>private</p> <p>responsible</p> <p>information</p>	<p>e-safety</p> <p>online</p> <p>appropriate</p> <p>inappropriate</p> <p>cyber-bullying</p> <p>digital footprint</p> <p>keyword</p> <p>private</p> <p>responsible</p> <p>information</p>	<p>e-safety</p> <p>online</p> <p>abuse</p> <p>report</p> <p>content</p> <p>blog</p> <p>feedback</p>		<p>virus</p> <p>communication</p> <p>responsible</p> <p>appropriate</p> <p>inappropriate</p> <p>private</p> <p>cyber-bullying</p>	

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ONLINE	<p>I can recognise the uses of technology in my home and my community.</p> <p>I understand that there are online tools that can help me create and communicate</p> <p>I can explore how email can be used to communicate with real people within their schools, families & communities.</p> <p>I know that directory sites with alphabetical listings offer one way to find things on the Internet.</p> <p>I recognise what an email address looks like.</p> <p>I can join in sending a class email.</p> <p>I can use the @ key and type an email address</p> <p>I can print out a page from the internet.</p>	<p>I understand that keyword searching is an effective way to locate online information</p> <p>I know how to select keywords to produce the best search results.</p> <p>I can find information on a website.</p> <p>I can click links in a website.</p> <p>I can print a web page to use as a resource.</p> <p>I can send and reply to messages sent by a safe email partner (within school).</p>	<p>I can use a class blog to share information and talk about who can see it, and how to communicate safely and respectfully</p> <p>I can find relevant information by browsing a menu.</p> <p>I can search for an image, then copy and paste it into a document.</p> <p>I can use 'Save picture as' to save an image to the computer.</p> <p>I can copy and paste text into a document.</p> <p>I am beginning to use note making skills to decide what text to copy.</p> <p>I can use the email address book.</p> <p>I can open and send an attachment.</p>	<p>I can appreciate the benefits of ICT to send messages and to communicate.</p> <p>I can talk about the school network & the different resources I can access, including the Internet.</p> <p>I can use a search engine to find a specific website.</p> <p>I can use note-taking skills to decide which text to copy and paste into a document.</p> <p>I can use tabbed browsing to open two or more web pages at the same time.</p> <p>I can open a link to a new window.</p> <p>I can open a document (PDF) and view it.</p>	<p>I can identify different parts of the Internet.</p> <p>I can use a search engine using keyword searches.</p> <p>I can compare the results of different searches.</p> <p>I can decide which sections are appropriate to copy and paste from at least two web pages.</p> <p>I can save stored information following simple lines of enquiry.</p> <p>I can download a document and save it to the computer.</p> <p>I can use instant messaging to communicate with class members.</p> <p>I can conduct a video chat with someone elsewhere in the school or in another school.</p>	<p>I can describe different services provided by the Internet & how information moves around the Internet.</p> <p>I can describe how search results are selected & ranked.</p> <p>I can acknowledge who resources belong to that they have found on the internet.</p> <p>I can contribute to discussions online.</p> <p>I can use a search engine using keyword searches.</p> <p>I can use complex searches using such as '+ 'OR' "Find the phrase in inverted commas".</p> <p>I can conduct a video chat with people in another country or organisation.</p>
VOCABULARY	<p>email</p> <p>communicate</p> <p>internet</p> <p>inbox</p> <p>send</p> <p>receive</p> <p>reply</p> <p>search engine</p> <p>print</p>	<p>email</p> <p>address</p> <p>address bar</p> <p>search engine</p> <p>website</p> <p>information</p> <p>source</p> <p>link</p>	<p>browser</p> <p>copy</p> <p>paste</p> <p>document</p> <p>text</p> <p>image</p> <p>attachment</p> <p>email</p> <p>blog</p>	<p>search engine</p> <p>keyword</p> <p>document</p> <p>window</p> <p>tabs</p> <p>browser</p> <p>message applications</p>	<p>download</p> <p>upload</p> <p>document</p> <p>information</p> <p>video chat</p> <p>save</p> <p>retrieve</p> <p>open</p>	<p>discussion</p> <p>comment</p> <p>complex search</p> <p>keyword</p>

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PROGRAMMING	<p>I know that computing devices work because they are given instructions</p> <p>I can physically follow & give instructions to move around a space</p> <p>I can explore outcomes when buttons are pressed in sequences on a robot</p> <p>I am beginning to use software to create movement & patterns on a screen</p> <p>I can use the word debug and correct any mistakes when programming a floor robot</p> <p>I can predict what will happen for a short sequence of instructions in a program</p> <p>I can create a simple series of instructions using forwards, backwards, left and right and record them</p> <p>I can put two instructions together to control a programmable toy.</p> <p>I can plan and test a Bee-bot journey.</p>	<p>I can talk about similarities & differences between floor robots and logo on screen</p> <p>I can physically follow and give others forward, backward & turn (right-angle) instructions</p> <p>I can write an algorithm to achieve a purpose</p> <p>I can plan and enter a sequence of instructions to achieve an algorithm, with a robot specifying distance & turn and drawing a trail</p> <p>I can explore outcomes when giving instructions in a simple Logo program</p> <p>I can watch a Logo program execute & debug any problems</p> <p>I can predict what will happen & test results of simple programs</p>	<p>I can plan & enter a sequence of instructions on a robot specifying distance & turn to achieve specific outcomes, debug the sequence where necessary.</p> <p>I can test, improve and debug programmed sequences.</p> <p>I can type simple logo commands to achieve outcomes.</p> <p>I can explore outcomes when giving sequences of instructions in Logo software.</p> <p>I can use 'repeat' commands to achieve solutions to tasks.</p> <p>I can solve open-ended problems with a floor robot & Logo including creating simple regular polygons, making sounds & planning movements such as a dance.</p> <p>I can create an algorithm to tell a joke or a simple story.</p> <p>I can sequence pre-written lines of programming into order</p> <p>I can talk about algorithms planned by others & identify any problems & the expected outcome.</p>	<p>I can explain how an algorithm works</p> <p>I can explain the links between programming and the use of algorithms to work in Maths, Science & D&T.</p> <p>I can create & edit procedures typing logo commands including pen up, pen down & changing the trail of the turtle.</p> <p>I can use sensors to 'trigger' an action such as turning the lights on using Probot if it 'goes through a tunnel', or reversing a sprite if it touches something.</p> <p>I can solve open-ended problems with a floor robot, Logo & other software using efficient procedures to create shapes & letters.</p> <p>I can create an algorithm & a program that will use a simple selection command for a game.</p> <p>I am beginning to correct errors (debug) as I program devices & actions on screen, & identify bugs in programs written by others.</p> <p>I can use an algorithm to sequence more complex programming into order</p> <p>I am beginning to experiment with variables to control models.</p>	<p>I can identify different parts of computing devices.</p> <p>I can talk about procedures as parts of a program</p> <p>I understand input and output.</p> <p>I can explore procedures using repeat to achieve solutions to problems with Logo & a floor robot</p> <p>I am beginning to refine procedures to improve efficiency</p> <p>I can use a variable to replace number of sides in a regular shape</p> <p>I can explore instructions to control software or hardware with an input & using 'if... then...' commands</p> <p>I can explore a computer model to control a physical system, e.g. light sensor that then triggers a light to turn on or off</p> <p>I can change inputs on a model to achieve different outputs</p> <p>I can identify difficulties & articulate a solution for errors in a program</p> <p>I can use group commands as a procedure to achieve a specific outcome within a program</p> <p>I can write down the steps required (an algorithm) to achieve the outcome that is wanted and refer to this when programming. I can combine sequences of instructions and procedures to turn devices on or off.</p> <p>I can use ICT to measure sound or light or temperate using sensors.</p>	<p>I can describe different parts of a computing device & how it connects to the Internet.</p> <p>I understand how sensors can be used to measure input in order to activate a procedure or sequence & talk about applications in society</p> <p>I can connect a computing device to a keyboard, mouse or printer.</p> <p>I can record in some detail the steps (the algorithm) that are required to achieve an outcome & refer to this when programming</p> <p>I can predict the outputs for the steps in an algorithm</p> <p>I show increased confidence in the process: plan, program, test & review a program</p> <p>I can write a program which follows an algorithm to solve a problem for a floor robot or other model</p> <p>I can write a program which follows an algorithm to achieve a planned outcome for appropriate programming software</p> <p>I can control on screen mimics & physical devices using one or more input & predict the outputs</p> <p>I can create variables to provide a score/trigger an action in a game</p> <p>I can link errors in a program to problems in the original algorithm.</p> <p>I can explore 'what if' questions by planning different scenarios for controlled devices.</p>
VOCABULARY	<p>instruction</p> <p>outcome</p> <p>software</p> <p>program</p> <p>algorithm</p> <p>plan</p> <p>forwards</p> <p>backwards</p> <p>left</p> <p>right</p>	<p>algorithm</p> <p>instruction</p> <p>sequence</p> <p>input</p> <p>output</p> <p>plan</p> <p>predict</p> <p>debug</p> <p>hardware</p>	<p>algorithm</p> <p>sequence</p> <p>debug</p> <p>programming</p> <p>command</p> <p>repeat</p> <p>code</p> <p>software</p> <p>hardware</p>	<p>algorithm</p> <p>procedure</p> <p>command</p> <p>identify</p> <p>efficient</p> <p>sensor</p> <p>variable</p> <p>control</p>	<p>variable</p> <p>control</p> <p>sprite</p> <p>instructions</p> <p>procedures</p> <p>input</p> <p>output</p> <p>algorithm</p>	<p>input</p> <p>output</p> <p>sequence</p> <p>modal</p> <p>physical</p> <p>variable</p> <p>outcome</p> <p>error</p> <p>algorithm</p>

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MULTIMEDIA	I can record my own voice and play back to an audience.	I can use an increasing variety of tools and effects in paint programs and talk about my choices.	I can explore & begin to evaluate the use of multimedia to enhance communication.	I know how to use a spell check.	I know how to use text and video editing tools in programs to refine their work.	I know to 'save as' gif wherever possible to make the file size smaller (for emailing or downloading).
	I can create sounds and simple music phrases using ICT tools.	I can use templates to make electronic books individually and in pairs.	I can create & begin to edit presentation documents and text, experimenting with fonts, size, colour, alignment for emphasis & effect.	I can explore how multimedia can create atmosphere & appeal to different audiences	I can select an appropriate ICT or online tool to create and share ideas.	I can identify the purpose for selecting an appropriate online tool.
	I can add text and images to a template document using an image & word bank	I can explore the effects of sound and music in animation and video.	I can use a range of effects in art programs including brush sizes, repeats, reflections	I can confidently in create and modify presentation documents to achieve a specific purpose.	I can explore the effects of multimedia (photos, video, and sound) in a presentation or video and show how they can be modified.	I can discuss audience, atmosphere and structure of a presentation or video and evaluate it
	I can use index fingers (left and right hand) on a keyboard to build words and sentences, and word process my own ideas	I can create my own documents, adding text and images with support.	I can explore the use of video, animation & green screening. Use ICT tools to create musical phrases.	I can use art programs & online tools to modify photos for a specific purpose using a range of effects.	I am developing the use of transitions and hyperlinks to enhance the structure of presentations.	I can collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience.
	I can take photographs, video and record sound to record learning experiences.	I am beginning to touch type and locate keys on the keyboard independently to word process.	I can touch type	I can explore the use of video, animation, & green screening for a specific audience.	I can use a wide range of effects in art programs and online tools, discussing my choices and their effectiveness.	I can confidently use sound, images, text, transitions, hyperlinks and HTML code effectively to create a sophisticated multimedia presentation
	I can print out a photograph from a camera with help.	I can use the RETURN/ ENTER key.	I can amend text by highlighting & using SELECT/ DELETE & COPY/ PASTE.	I can use ICT tools to create music phrases for a specific purpose	I can use the use of video, animation, & green screening for a specific audience.	I can store presentations and videos online where they can be accessed by themselves and shared with others.
	I am beginning word process ideas using a keyboard.	I can use SHIFT & CAPS LOCK to enter capital letters.	I can evaluate my work and consider how it can be improved for effectiveness.	I can use a keyboard effectively, including the use of keyboard shortcuts.	I can use font sizes & effects such as bullet points appropriately.	I can evaluate the effectiveness of my own work and the work of others.
	I can use the spacebar, back space, enter, shift and arrow keys.	I can use DELETE & BACKSPACE buttons to correct text.	I can review images on a camera and delete unwanted images.	I can use the use of video, animation, & green screening for a specific audience.	I can listen to streaming audio such as online radio.	I can present a film for a specific audience and then adapt same film for a different audience.
	I can left click to open software and select relevant tools.	I can create, edit and save text documents.	I can download images from a camera into files on the computer	I can look at my own and a friend's work and provide feedback that is constructive & specific.	I can download and listen to podcasts.	I can confidently choose the correct page set up option when creating a document.
	I can use simple drawing software to create an image.	I can take and save photographs, video & record sound to capture learning.	I can use photo editing software to crop photos and add effects.	I can capture images using different hardware including webcams, screen capture, scanning and visualisers	I can produce and upload a podcast.	I can confidently use text formatting tools, including heading and body text.

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VOCABULARY	<p>sound</p> <p>music</p> <p>video</p> <p>photograph</p> <p>record</p> <p>playback</p> <p>delete</p> <p>save</p> <p>tool</p> <p>keyboard</p> <p>type</p> <p>spacebar</p>	<p>tool</p> <p>effect</p> <p>template</p> <p>animation</p> <p>video</p> <p>text</p> <p>word process</p> <p>create</p> <p>edit</p> <p>save</p> <p>capture</p> <p>highlight</p> <p>insert</p>	<p>multimedia</p> <p>communication</p> <p>presentation</p> <p>font</p> <p>alignment</p> <p>evaluate</p> <p>effective</p> <p>review</p> <p>amend</p> <p>download</p> <p>crop</p> <p>manipulate</p> <p>software</p>	<p>atmosphere</p> <p>modify</p> <p>effect</p> <p>green screen</p> <p>shortcut</p> <p>multimedia</p> <p>spellcheck</p> <p>hardware</p> <p>export</p>	<p>transition</p> <p>hyperlink</p> <p>editing tools</p> <p>streaming</p> <p>download</p> <p>link</p> <p>homepage</p> <p>produce</p> <p>podcast</p> <p>export</p>	<p>graphics</p> <p>.gif</p> <p>formatting</p> <p>indent</p> <p>copyright</p> <p>access</p>
DATA	<p>I know how data is represented digitally.</p> <p>I can contribute to and interpret a pictogram.</p> <p>I can enter information into a template to make a graph.</p> <p>I can talk about the results shown on a graph.</p>	<p>I can use microscopes or other devices to capture and save magnified images.</p> <p>I can ask questions and consider how they will collect information.</p> <p>I can collect data, generate graphs and charts to find answers.</p> <p>I can save & retrieve the data to show to others.</p> <p>I can create paper/ object decision trees & explore a branching database.</p> <p>I can investigate different types of digital data e.g. online encyclopaedias</p>	<p>I can find out information from a pre-prepared database, asking straightforward questions.</p> <p>I can contribute towards a database.</p> <p>I can construct and use a branching database.</p> <p>I can record data in a variety of ways.</p> <p>I can present data for others.</p> <p>I can use a data logger to monitor changes and talk about the outcomes seen</p> <p>I can input data into a prepared database.</p> <p>I can sort and search a database to answer simple questions.</p>	<p>I know what a spreadsheet is.</p> <p>I know how to enter data, highlight it and make bar charts in spreadsheet software.</p> <p>I can plan and create a database to answer questions.</p> <p>I can identify different types of data.</p> <p>I can ask questions carrying out simple searches on a database.</p> <p>I can identify inaccurate data.</p> <p>I can present data in appropriate format for an audience.</p> <p>I can use a data logger to record and compare individual readings.</p> <p>I can use and explain terms 'cells', 'rows' and 'columns'.</p>	<p>I can collect and record information using spreadsheets and databases</p> <p>I can carry out complex searches (e.g. using and/or; \leq / \geq)</p> <p>I can solve problems and present answers using data tools.</p> <p>I can analyse information and question data.</p> <p>I can identify poor quality data.</p> <p>I can select appropriate use of a data logger for an investigation and interpret the findings.</p> <p>I can create a formula in a spreadsheet and then check for accuracy and plausibility.</p> <p>I can search databases for information using symbols such as = > or</p>	<p>I can use the whole data process – generate, process, interpret, store, and present information – realising the need for accuracy and checking plausibility.</p> <p>I can select appropriate data tool.</p> <p>I can identify and present results.</p> <p>I can interrogate a database, refining searches to provide answers to questions.</p> <p>I can plan investigations using the outcomes from a data logger to show findings</p> <p>I can collect live data using data logging equipment.</p> <p>I can identify data error, patterns and sequences.</p> <p>I can use the formulae bar to explore mathematical scenarios.</p>

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VOCABULARY	data interpret information pictogram graph result	microscope magnified image information generate chart save retrieve branching database digital data	database data logger monitor outcomes	accurate inaccurate readings record spreadsheet highlight	spreadsheet database complex search analyse poor quality appropriate interpret formula accuracy	generate process plausibility interrogate live data data error formulae bar