



Rattlesden C of E Primary Academy

Believe Embrace Shine Together I can do all things through Christ who strengthens me.' **Philippians 4:13**

Progression of skills

Computing

STICKY KNOWLEDGE/KEY LEARNING IN BOLD

| | EYFS | Year 1 | Year 2 | Year 3 |
|------------|---|--|---|--|
| Key Skills | <p>Use different digital devices</p> <p>Understand you can access content on a digital device.</p> <p>Use a mouse, touch screen to target and select options on a screen.</p> <p>Recognize a range of digital devices.</p> <p>Understand you can access the same content on different devices.</p> <p>Understand text can be added to a document.</p> <p>Understand that information and media can be stored on a digital device (ask to see a photo that has been taken on a tablet)</p> | <p>Recognise and name different digital devices.</p> <p>Explore what basic parts of a computer does.</p> <p>Turn computer on and off and log on and off (closing the lid when the screen is black) independently.</p> <p>Use mouse to move cursor to perform commands on simple programs.</p> <p>Use fingers to control simple apps on ipads.</p> <p>Use pens and finger to move cursor on whiteboard successfully.</p> <p>Increase speed and accuracy with typing skills to type words and sentences, using upper and lower case for names.</p> <p>Delete with backspace and delete spaces.</p> | <p>Open and close simple programs and apps on ipads from shortcuts and start menu.</p> <p>Know where to open and save work.</p> <p>Print documents simply.</p> <p>Highlight, click and drag.</p> <p>Scroll to find text.</p> <p>Combine text and images.</p> | <p>Understand that school computers are connected together in a network.</p> <p>Save whilst working- not creating multiple copies of the file.</p> <p>Find a file or folder in their space and a master file in shared area/Google Drive.</p> <p>Higher level mouse control- finer details and highlighting text (right, left and double click).</p> <p>Copy and paste text and images.</p> <p>Insert pictures.</p> <p>Format text (colour, size, font, bold, italic, underline, new line, space)</p> |



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Progression of skills

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| <p>Online safety and digital literacy</p> | <p>Are aware that some online content is inappropriate.</p> <p>Are aware that information can be public or private.</p> <p>Recognize inappropriate content and know to tell an appropriate adult.</p> <p>Can describe what makes a good friend.</p> | <p>Know when they are offline and online.</p> <p>Name digital methods to send messages.</p> <p>Know you need a password to access online accounts and these should be kept secret.</p> <p>Understands there is a need to use the internet safely and respectfully and to keep personal information private.</p> <p>Be aware what makes a good online friend and the need to be kind and thoughtful online.</p> <p>Knows to tell a trusted adult if they are worried about something on the internet.</p> <p>Understand that spending a long time in front of a screen can be unhealthy.</p> <p>Know that not all information online is true.</p> | <p>Understand you can share digital content online and it belongs to the person who created it and you need their permission to use it.</p> <p>Be aware of the THINK internet safety rules.</p> <p>Understand when we share content online, we might not be able to delete it.</p> | <p>Know different ways to send messages or communicate online.</p> <p>Understand the need to create a strong, secure password and can sort passwords into ones that are.</p> <p>Use SMART internet safety rules to use the internet safely and responsibly and describe situations when these may be used.</p> <p>Be aware that some people lie about who they are online.</p> <p>Show an awareness of a digital footprint.</p> <p>Understand what is meant by the term 'cyber bullying'.</p> <p>Be aware of the age restrictions of games and websites.</p> <p>Knows different ways of reporting unacceptable content and contact online.</p> |
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Progression of skills

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| <p>Communicating (text, images, multimedia)</p> | <p>Use technology to explore and access digital content.</p> <p>Operate a digital device with support to fulfil a task.</p> <p>Create simple digital content, e.g. digital art.</p> | <p>Type words with a keyboard.</p> <p>Type a sentence with: a capital letter, spaces and a full stop.</p> <p>Paint with different colours.</p> <p>Use undo or the rubber to correct mistakes.</p> <p>Paint lines and shapes.</p> | <p>Change either font, style, size and colour of text.</p> <p>Use enter to start a new line.</p> <p>Begin to edit sentences using backspace and arrow keys.</p> <p>Change the brush size to add detail.</p> | <p>Use shift key to add punctuation.</p> <p>Change the brush style for effect.</p> <p>Select part of the picture to: copy, rotate or flip.</p> <p>Draw and group shapes in different colours to make a picture.</p> <p>Rotate, duplicate (copy and paste) and flip shapes.</p> <p>Use presentation skills to create an on screen presentation.</p> <p>Take and retake photos and videos when necessary.</p> <p>Use zoom/macro buttons.</p> <p>Edit photos on ipad.</p> |
| <p>Programming</p> | <p>Repeat an action with technology to trigger a specific outcome.</p> <p>Recognize the success or failure of an action.</p> <p>Follow simple instructions to control a digital device.</p> <p>Try alternative approaches to achieve a goal</p> <p>Understand that we control computers.</p> <p>Can order the steps of a known task.</p> <p>Input a sort sequence of instructions to control a device.</p> | <p>Understand computers have no intelligence and need to be programmed (all software is programmed)</p> <p>Say how devices are controlled by precise instructions.</p> <p>Move a programmable toy around a mat.</p> <p>Understand what an algorithm is.</p> <p>Carefully create a simple program by combining commands (which do not rely on words), e.g. forward 5, to avoid errors, understanding that the order of commands is important.</p> | <p>Predict outcomes, check, change (debug) and evaluate programs and simple algorithms.</p> | <p>Use diagrams to represent an algorithm (flowchart)</p> <p>Draw shapes by repeating commands.</p> <p>Predict, create and decompose (break into smaller chunks) algorithms (group of commands) to do a specific task.</p> <p>Detects and corrects errors using debugging.</p> |



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Progression of skills

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| | Recognize patterns in groups of objects. | | | |
| Data | <p>Access content in a range of formats, e.g. image, video, audio</p> <p>Sort familiar objects into 1 or more categories.</p> <p>Answer basic questions about information displayed in images, e.g. more or less.</p> <p>Collect simple data, e.g. likes/dislikes on a topic.</p> <p>Can present simple data using images, e.g. number of animals.</p> | <p>Knows that digital content can be represented in different ways and recognizes these, e.g. text, numbers, images, charts, tables, branching databases.</p> <p>Collect data on a topic. Find similar information in different formats, e.g. video, text.</p> <p>Identify an object by asking yes/no questions (branching databases).</p> <p>Add simple data to a table.</p> <p>Use specific software to create simple charts and branching databases.</p> | <p>Spot errors in branching databases.</p> <p>Understand that the questions you ask are important when collecting data.</p> | <p>Knows the difference between data and information.</p> <p>Understands adding data to a table makes it useful.</p> <p>create and add data to table.</p> |
| Communication and network | | <p>Understand what the internet is.</p> <p>Read words, look at pictures and watch videos on a website.</p> <p>Say what facts they find on a website.</p> | <p>Carry out simple web searches using keywords.</p> | <p>Understand the internet is made up of computers from all around the world connected together.</p> <p>Understand that data can be stored and shared on the internet.</p> <p>Scroll up and down and click on hyperlinks to explore websites.</p> <p>Use web browsers to access information stored on the internet.</p> <p>Use internet search engines (using key words and phrases) to find relevant facts and specific information.</p> <p>Understand search engines store information in databases.</p> <p>Find places on a virtual map using search and pan/zoom tool.</p> |



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Progression of skills

| | Year 4 | Year 5 | Year 6 |
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| Key Skills | <p>Use a variety of digital devices and understand the difference between hardware and application software.</p> <p>Understand that computers collect data from a variety of sources, including software.</p> <p>Save, re-save (Ctrl S) and open documents in a suitable folder location, giving the file a sensible name.</p> <p>Understand you can organize files using folders.</p> <p>Increase speed and accuracy with typing skills, preferably using all fingers, to types in paragraphs, using punctuation and numbers, shift for punctuations and capitals.</p> <p>Resize window: Use minimize, maximize and close.</p> <p>Use commands, menus and tabs for specific purposes.</p> | <p>Understand the roles of hardware and application software within a computer system</p> <p>Use ipads/Chromebooks to complete specific tasks, connecting to the internet/other devices where necessary.</p> <p>Create folders in suitable location in shared network and organize files effectively using folders.</p> <p>Use a keyboard confidently and at a suitable pace.</p> <p>Resize window for specific purposes.</p> <p>Take screen shots.</p> <p>Use basic layout features: tables, text boxes, shapes, text affects, spell check and use shortcuts (Ctrl C- copy, Ctrl V-paste, altF-file menu)</p> | <p>Know meaning of file extensions .doc/, docx/, jpg/, sb2, png/</p> <p>Rename, copy, delete and move files to another location.</p> <p>Print documents (more complex commands, e.g. quantity, number of pages per sheet, size etc.)</p> |
| Online safety and digital literacy | <p>Recognise risks and benefits of different apps and websites.</p> <p>Understand term copyright and people need to give their permission to use their digital content (Creative Commons).</p> <p>Know about privacy settings.</p> <p>Understand the media can portray groups of people differently.</p> | <p>Explain why passwords are needed and features of a strong password (create strong passwords).</p> <p>Understand why and respect copyright when using media files and know where to find copyright free images, and audio (Creative Commons)</p> <p>Apply SMART rules when online to demonstrate responsible use of technologies and online services.</p> <p>Stay safe on social media (settings, pictures and private information) and be aware of their digital footprint.</p> | <p>Be increasingly savvy online consumers- be aware websites use algorithms to track online activity to target advertisements (cookies)</p> <p>Know there are laws around purchasing of games, videos, sending and storing images, what is written online and around online gambling.</p> <p>To understand the term 'Cybercrime' and the impact of this on the lives of others.</p> |



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| | | <p>Understand why games, films and websites have age restrictions.</p> <p>Knows a range of ways of how to respond and report online concerns.</p> <p>Explain 'Zip It! Block It! Flag It' slogan.</p> <p>Be aware of fake and bias news.</p> | |
| <p>Communicating (text, images, multimedia)</p> | <p>Edit sentences and correct mistakes using highlight and delete.</p> <p>Insert text boxes, tables, clipart, shapes and photos/pictures from files.</p> <p>Change the font style, size, colour and re-size images.</p> <p>Add slides and change slide background.</p> <p>Create presentation on given topic with text and pictures.</p> <p>Record and edit video clips at different angles to combine into a film.</p> <p>Save photos onto computer.</p> | <p>In on-screen presentations- Change the page background edit and rotate images/text boxes/ shapes and put borders on.</p> <p>Improve text by correcting spelling mistakes and finding synonyms.</p> <p>Move objects around to find the best layout.</p> <p>Explain how they created a document for a purpose.</p> <p>Design web pages with: text, images and hyperlinks.</p> <p>Change the colours and fonts to create a theme.]</p> <p>Embed content (e.g. map or video) onto a web page.</p> <p>Open images and edit/add effects to photographs.</p> <p>Combine images into a collage and add text labels.</p> <p>Add slide transitions and animations to text and pictures.</p> <p>Create a consistent design throughout presentation.</p> <p>Zoom in/out to paint more accurately.</p> <p>Edit shapes using text wrapping.</p> | <p>Change text direction in tables.</p> <p>Trim video clips and add captions.</p> <p>Add a soundtrack and transitions.</p> <p>Print photos (change size/quality)</p> <p>Add sound effects.</p> <p>Use hyperlinks to create a non-linear presentation.</p> <p>Send shapes forwards/backwards in layers.</p> <p>Draw and combine prism shapes.</p> <p>Change the colour/texture of faces.</p> <p>Put holes in faces and measure lengths</p> |



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| Programming | Understand how computers can be used to represent real-life events -simulations and modelling. Use loops (including forever loops) to repeat commands and use 'if...then' command. Use procedures in programs to create sub-routines, e.g. procedure called 'square' in logo. | Design and create a program to achieve a specific goal by sequencing and creating commands using 2 way selection (if...then...else... repeat until...loops commands). Use tree/flow diagrams to show this. Explain the sequence and function of commands in a program and know there are different solutions for the same problem. Independently: predict, test, debug and modify an algorithm to improve it. | Create simple variables, e.g. to keep score in a game. |
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| <p>Data</p> | <p>Explores databases to find information.</p> <p>Enter data into a database.</p> <p>Recognise different programs that work with different types of data (text, numbers)</p> <p>Understand the benefits of using a computer to create charts and databases.</p> <p>Design a questionnaire and collect a range of data on a theme.</p> <p>Draw conclusions from the information in a database, table or chart.</p> <p>present data in different ways.</p> | <p>Understand the benefits of using a computer to create charts and databases.</p> <p>Appreciate how different programs work with different types of data, e.g. text, numbers.</p> <p>Know the difference between data and information.</p> <p>Change the cell size, colour and text direction and cell alignment.</p> <p>Design a questionnaire and collect a range of data on a theme and enter data into a database.</p> | <p><u>Perform more complex searches by:</u></p> <p>Sort data to answer questions.</p> <p>Search a data base using < and >.</p> <p>Search a database using AND and OR.</p> <p><u>Enter formulae for simple conversions:</u></p> <p>Type + - / *</p> <p>Type =SUMO =MINO and =MAX) formulae</p> <p>Explore a database and use filters in a database to find specific information</p> <p>Draw conclusions, analyse and evaluate data and information in tables and charts, recognizing that poor quality data leads to unreliable results.</p> |
| <p>Communication and network</p> | <p>Find facts by navigating websites.</p> <p>Know the difference between the internet and different internet services, e.g. www, email...</p> <p>Recognise what kinds of websites are trustworthy sources of information.</p> | <p>Understand that information can be stored and shared on the internet and search engines store information on databases.</p> <p>Use internet search engines to find relevant facts and knows how search engines work (using web crawler programs).</p> <p>Filter search results to find different types of media.</p> | <p>Create blogging pages- add blogs and comments to other blogs.</p> <p>Attach files and links to messages.</p> <p>Be aware of where data is stored- cloud or local</p> |



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| | <p>Tell the difference between adverts, sponsored links and other search results.</p> | <p>Measure distances and explore place marks on virtual maps.</p> <p>Evaluate websites to check their validity, reliability and usefulness and compare websites to check facts.</p> <p>Are aware of and can use a range of internet services, email, VOIP (e.g. Skype, FaceTime), www...</p> <p>Send a message online.</p> | |
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