

Computing Progression Of Skills

Core Strand							
Year Group	Computer Science	Digital Literacy	Information Technology				E-safety
			Digital Media	Digital Communication	Online Research	Data Handling	
Year 1	The child can: Read a set of instructions and usually predict the correct outcome. Produce a set of instructions that others can usually follow. Understands that computers follow instructions given in a precise way. EXCEEDING – Understand that computers have no intelligence.	The child can: Move around a website using buttons and image links. Find answers to simple questions using a website. Use drawing and text tools to give information. EXCEEDING – Make choices about the kind of information they collect from websites. Use words and pictures to make simple presentations.	The child can: Continue to develop correct use of keyboard. Use images in work. Record audio. Know that text can be different colours, sizes and styles. Make simple changes to selected text. Open, save and print work. Talk about their use of text/images and their effect.	The child can: Contribute ideas to class emails, eBooks and blogs. Express ideas using digital content. Develop an awareness of how to behave when communicating digitally. Understand the need to be careful online.	The child can: Explore appropriate buttons, arrows, menus and hyperlinks to navigate websites. Search with provided key words. Locate websites using shortcuts, favourites and bookmarks. Talk about which websites are better than others and give reasons. Understand that it is possible to encounter something inappropriate online.	The child can: Sort and classify items and object. With support, use digital tools to produce simple graphs. With support, use graphs to answer questions. Save, retrieve and edit work.	The child can: Know to ask an adult before going online. Know to tell an adult if they find anything worrying online. Give examples of information that is personal. Know to only give personal information to people they trust.
Year 2	The child can: Produce a sequence of instructions that result in planned outcomes. Program a short sequence of commands that results in a planned effect. Program and test a simple program. Create algorithms to solve simple problems. EXCEEDING – Debug simple programs by correcting mistakes.	The child can: Enter the address (URL) of a website with support. Identify some links within web content and move around them with purpose. Start to use a range of apps and devices independently. Talk about how useful particular websites have been. Use email to communicate with someone else. EXCEEDING – To use email including attachments.	The child can: Use a word processor to create original work. Begin to use both hands for typing. Make use of graphics, video and audio. Navigate around text. Create simple presentations. Save, print, retrieve and amend work. Know that multimedia includes audio, text and images. Begin to understand that images, audio and text cannot always be used without permission.	The child can: Contribute a variety of suitable ideas to class emails, eBooks and blogs. Send an email to a known recipient. Open and reply to an email from a known sender. Contribute to a blog. Develop an awareness of appropriate language and etiquette when communicating digitally. Know what actions to take if they see something inappropriate online.	The child can: Use and explore appropriate buttons, arrows, menus, image and text links to navigate websites. Use key words to search resources. Locate websites by typing URLs into an address bar and using shortcuts, favourites and bookmarks. Begin to evaluate web content by talking about online content that is the most appropriate, useful or preferred. Know what actions to take if they witness something inappropriate online.	The child can: Support and classify a variety of items. Use digital tools to produce a variety of basic graphs (e.g. pictograms and bar charts). Use graphs to answer questions. Save, retrieve and edit work.	The child can: Use computers and devices responsibly. Identify the ways to report things online that make them feel uncomfortable. Discuss the dangers of sending and receiving emails.
Year 3	The child can: Plan a sequence of instructions. Give a sequence of instructions, some of which are repeated and involve choices. Program a sequence of commands that results in a planned effect. Program and test a simple program. EXCEEDING – Evaluate their own work and comment on improvements.	The child can: Find information by moving around a web page using hyperlinks and the back button. Confidently type web addresses into a web browser. Question the reliability of information they find online. Create bookmarks/favourites and use them to access websites. Print web pages and copy and paste information into other applications. Describe how they use technology at school and at home. Evaluate their own and their peer's work and discuss improvements that could be made. EXCEEDING – Carefully select information from a range of websites.	The child can: Continue to develop correct use of a keyboard with increasing speed and accuracy. Vary fonts, colours and effects. Cut, copy and paste text and images. Select and import audio. Resize images and change position within a document. Insert and edit tables.	The child can: Demonstrate an awareness of appropriate behaviour when communicating digitally. Use digital tools to communicate. Understand the need to be careful online. Begin to publish work to a wider audience.	The child can: Use a search engine to find things online. Develop key questions and key words to search for specific things online. Talk about the accuracy and reliability of information found online. Know that some web content may be protected by copyright and cannot be used without permission. Understand that searches may include unwanted advertising. Know what actions to take if they encounter anything inappropriate online.	The child can: Create diagrams and charts to answer questions. Interpret diagrams and charts to answer questions. Begin to identify what data should be collected to answer a specific question. Collect data and enter it into a database. Conduct basic searching and sorting.	The child can: Can give examples how/how not to treat computers. Understand why information online needs to be checked. Choose information from websites carefully.
Year 4	The child can: Use sequence, selection and repetition in computer programs.	The child can: Understand that a computer network means connected computers.	The child can: Vary layouts, formats, graphics and media for a particular purpose and for intended audience.	The child can: Log on to an email account, open emails and send appropriate replies. Forward an email.	The child can: Use a range of search engines to locate online content.	The child can: Create diagrams and charts to ask and answer questions.	The child can: Use safety measures when using technology and working online. Check that information found online is correct.

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	<p>Predict the outcome of a given algorithm or program and correctly identify if repetition is involved. Understand the difference between the internet and internet services e.g. the world wide web. Identify a number of computing devices inside and outside of the classroom and identify some common forms of input and output. Understand that computers store data as numbers. EXCEEDING – Write an algorithm to produce a given effect using repetition.</p>	<p>Understand that the internet can be used for activities other than web browsing. Confidently enter URLs into the address bar of a browser. Can question the credibility of information given on websites. EXCEEDING – Understand that search engines give a list of websites based on key words. Cross-check information provided on one website against that provided on another.</p>	<p>Change page size and orientations. Edit work to ensure it is accurate and clear. Import text, audio and graphics from devices, networks or online. Manipulate images using cropping tools, resize and edit. Use design features such as borders, shading, columns and text boxes. Insert and edit hyperlinks. Create work for an intended audience. Evaluate their own and their peer’s work.</p>	<p>Attach files to digital communications. Open and save attachments. Select recipients. Share digital work with a wider audience.</p>	<p>Consider the effectiveness of key words on search and refine where necessary. Verify the accuracy and reliability of information found online. Retrieve, use and save sources of information. Identify whether content has copyright restrictions. Know the actions to take if they witness inappropriate content online.</p>	<p>Know that data is represented digitally by computer systems – binary code. Identify what data to collect and answer specific questions. Enter data into a database and use search/sort to answer questions. Use and compare graphs and charts produced by database software. Select and use appropriate methods to organise, present and interpret data.</p>	<p>Understand the term ‘copyright’.</p>
Year 5	<p>The child can: Write and amend computer programs. Program a number of algorithms that achieve a specific outcome. Use repetition, variables and conditional statements in computer programs. Test computer programs and correct any errors. Know that the World Wide Web consists of many websites and that web pages can be accessed using the internet. Know that web pages are formatted using a type of ‘code’. EXCEEDING – Create efficient programs by designing solutions using abstraction. Understand basic HTM tags and CSS styles.</p>	<p>The child can: Use search technology to find things out. Suggest a number of activities that the internet can be used for. Cross-check information provided on one website against multiple alternative sources. Create digital content for specific purposes. EXCEEDING – Discuss opportunities for communication and collaboration online. Use a variety of services provided by the internet.</p>	<p>The child can: Continue to develop correct use of keyboard with increasing speed and accuracy. Develop and use criteria to evaluate the design of a variety of digital resources. Plan interactive presentations. Use hyperlinks in interactive presentations. Develop a consistent style throughout work (e.g. headings, fonts and colours). Use digital drawing tools to create vector images. Use graphical modelling software to create 3D images. Edit work to make improvements. Evaluate their own and their peer’s work.</p>	<p>The child can: Use digital communication to collaborate and communicate inside and outside of school. Evaluate the effectiveness of a range of digital communication tools. Send group communications. Publish to a global audience.</p>	<p>The child can: Choose to use online sources, where appropriate, for research and resources. Use a range of search techniques. Use appropriate strategies for finding, evaluating and verifying information. Know that information online can be fact or opinion. Understand that domain name extensions can be used to help evaluate the reliability of online information. Know the actions to take if they witness inappropriate content online.</p>	<p>The child can: Recognise the need for accuracy when entering and querying data. Understand that incorrect conclusions can be drawn from inaccurate data. Understand that IT enables large quantities of data to be organised and sorted. Understand the basic principles of data protection.</p>	<p>The child can: Give many examples about using technology safely and how to report anything that they are worried about. Communicate and work effectively and safely online. Use search criteria efficiently and check whether the information found is accurate and reliable. Know what actions to take if they witness cyber bullying.</p>
Year 6	<p>The child can: Write and amend more complex computer programs to create a variety of outcomes. Decompose ‘problems’ by splitting them into smaller ‘problems’ and designing solutions for each part. Use iteration (repeats and loops), variables and conditional statements in computer programs. Test computer programs and correct most errors. EXCEEDING -Critically analyse algorithms and programs and suggest more elegant solutions.</p>	<p>The child can: Communicate and collaborate using technology and online services. Create web content using basic HTML. Understand that internet search engines use algorithms to find web content. Understand that search technology are organised in order of popularity. Use search technology and clear search terms to view web pages and obtain information and data. Use a number of internet services. Create digital content for specific purposes and audiences. Use feedback to improve digital content. EXCEEDING – To design criteria for evaluating digital content. Design and create web pages using HTML and CSS.</p>	<p>The child can: Use a keyboard with speed and accuracy. Use a range of criteria to evaluate the design of a variety of digital resources. Plan and develop interactive presentations using a variety of digital media. Use a consistent style throughout work (e.g.headings , fonts, colours and themes). Critically evaluate their own and their peer’s work. Format and edit work to improve clarity.</p>	<p>The child can: Independently use digital communication to collaborate and communicate inside and outside of school. Critically evaluate the effectiveness of a range of digital communication tools and suggest appropriateness for audiences. Send group communications and be aware of the implications of responses. Use a variety of digital tools to publish to a global audience.</p>	<p>The child can: Develop the use of more advanced search techniques. Use the most appropriate search technique for a particular task. Question the origin of web content. Use domain extensions to evaluate the reliability of online information. Distinguish between fact and opinion and make informed choices about sources of online information to use. Know the actions to take if they witness inappropriate content online.</p>	<p>The child can: Recognise the need for accuracy when designing, entering and querying data. Recognise the consequences of using inaccurate data. Understand the need for data protection and some of the rights of individuals over stored data and how it affects the storage of data. Understand where and when it is appropriate to use a spreadsheet. Understand that spreadsheets can automate functions, making it easier to test variables. Understand that spreadsheets can be used to explore mathematical models. Understand the need for accuracy when entering formulae.</p>	<p>The child can: Use a variety of technologies and online tools to communicate and collaborate safely and effectively. Demonstrate responsible use of technology and online tools. Know a number of risks associated with work and leisure in a digital society and act to minimise them. Create strong passwords. Talk about specific ways to respond to bullying online and know to choose options that feel safe. Understand when and why it would be appropriate to use online reporting.</p>