**Cookridge Holy Trinity C of E (A) Primary School**

*The Best for Every Child – A Unique Child of God*

# Computing Skills and Progression

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| **E Safety** | **Pupils should be taught to use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about material on the internet or other online technologies** | | | ***Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact. Be discerning in evaluating digital content.*** | | |
| | I can tell you what a password is.<br>I can tell you what personal information is.<br>I can talk about why it's important to be kind and polite.<br>I can follow class (age-relevant) e- safety rules. | I can explain what a password is. I can tell you why I need to keep my password private<br>I can explain what personal information is.<br>I can explain why it is important to be kind and polite online and in real life.<br>I can follow class (age relevant) e-safety rules.<br>I can tell an adult when I see something unexpected or worrying online. | I can talk about what makes a secure password and why they should be private<br>I know what personal information I need to protect online and the importance of keeping it protected<br>I understand that not everything I see online is true<br>I can follow class (age relevant) e-safety rules.<br>I can describe the things that happen online that I must tell an adult about.<br>I can recognise websites and games appropriate for my age.<br>I ask an adult before downloading files and games from the Internet. | I can choose a secure password when I am using a website, and explain the importance of keeping my password and personal information private<br>I can discuss, agree and follow class (age relevant) e-safety rules.<br>I can explain the things that happen online that I must tell an adult about. I can find the safety features of websites<br>I can choose websites and games that are appropriate for my age.<br>I can talk about why I need to ask a trusted adult before downloading files and games from the internet.<br>I know that anything I post online can be seen by others. | I can protect my password and other personal information. I can explain in detail the importance of doing this.<br>I can discuss, agree and follow class (age relevant) e-safety rules.<br>I can explain why I need to protect myself and my friend online and the best ways to do this, including reporting concerns to an adult.<br>I can discuss the importance of choosing an age-appropriate website or game.<br>I know which resources on the internet I can download and use.<br>I know that anything I post online can be seen used and may affect others.<br>I can explain the importance of communicating kindly and respectfully. | I can protect my password and other personal information. I can explain in detail the importance of/potential consequences of not protecting<br>I can discuss, agree and follow class (age relevant) e-safety rules. I can help peers follow these rules<br>I can support my friends to protect themselves and make good choices online, including reporting concerns to an adult.<br>I can determine if a website or game is age appropriate.<br>I can explain the consequences of sharing too much information about myself online.<br>I can explain the consequences to myself and others of not communicating kindly and respectfully. |

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| **Programming (coding** | Pupils should be taught to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs | | | Pupils should be taught to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals. | | |
| | I can give instructions to my friend and follow their instructions to move around.<br>I can describe what happens when I press buttons on a device (robot/beebot)<br>I can press the buttons in the correct order to make my device do what I want.<br>I can describe what actions I will need to do to make something happen<br>I can begin to use the word 'algorithm' (HA children)<br>I can begin to predict what will happen for a short sequence of instructions.<br>I can begin to use software/apps to create movement and patterns on a screen.<br>I can use the word 'debug' when I correct mistakes when I programme. | I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions.<br>I can tell you the order I need to do<br>things to make something happen and.<br>I can begin to use the word 'algorithm' and understand that it is a set of instructions<br>I can program a robot or software to do a particular task.<br>I can look at my friend's program and predict what will happen.<br>I can use programming Software to make objects move.<br>I can use the word 'debug' when I<br>correct mistakes when I programme | I can break an open- ended (real life) problem up into smaller parts.<br>I can put programming commands into a sequence to achieve a specific outcome.<br>I can keep testing my programme and can recognise when I need to debug it.<br>I can use repeat commands.<br>I can describe the algorithm I will need for a simple task.<br>I can detect a problem in an algorithm which could result in the programme not working.<br>I am beginning to use technical language such as algorithm, debug, coder, decode and program in my answers (written and verbal) | I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts.<br>I can use an efficient procedure to simplify a program.<br>I can use a sensor to detect a change which can select an action within my program.<br>I know that I need to keep testing my program while I am putting it together.<br>I can use a variety of tools to create a<br>program.<br>I can recognise an error in a program and debug it.<br>I can recognise that an algorithm will help me sequence programs that are more complex.<br>I can use technical language such as<br>algorithm, debug, coder, input/output, decode and program in my answers (written and verbal) | I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.<br>I can refine a procedure using repeat commands to improve a program.<br>I can use a variable to increase programming possibilities.<br>I can change an input to a program to achieve a different output.<br>I can use 'if' and 'then' commands to select an action.<br>I can talk about how a computer model can provide information about a physical system.<br>I can use logical reasoning to detect and debug mistakes in a program.<br>I use logical thinking, imagination and creativity to extend a program.<br>I can with confidence use technical language such as algorithm, debug, coder, input/output, decode and program in my answers (written) | I can deconstruct a problem into smaller steps, recognising similarities to solutions used before.<br>I can explain and program each of the steps in my algorithm.<br>I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.<br>I can recognise when I need to use a variable to achieve a required output.<br>I can use a variable and operators to stop a program.<br>I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen.<br>I can use logical reasoning to detect and correct errors in algorithms and programs.<br>I can with confidence use technical language such as algorithm, debug, coder, input/output, decode and program in my answers (written) |

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| **Handling Data** | ***Pupils should be taught to use technology purposefully to organise and manipulate digital content.*** | | | ***Pupils should be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.*** | | |
| | I can talk about different ways in which information can be shown.<br>I can use technology to collect information, including photos<br>I can sort different kinds of information and tell it to others.<br>I can add information to a pictograph and talk to you about what I have found out. | I can talk about the different ways I use technology to collect information, including a camera, or microscope.<br>I can talk about the data that is shown in my chart or graph.<br>I am starting to understand a branching database.<br>I can tell you what kind of information I could use to help me investigate a question. | I can talk about the different ways data can be organised.<br>I can search a ready-made database to answer questions.<br>I can collect data to help me answer a question.<br>I can add to a database.<br>I can make a branching database.<br>I can use a data logger to monitor changes and can talk about the information collected. | I can organise data in different ways.<br>I can collect data and identify where it could be inaccurate.<br>I can plan, create and search a database to answer questions.<br>I can choose the best way to present data to my friends.<br>I can use a data logger to record and share my readings with my friends. | I can use a spreadsheet and database to collect and record data.<br>I can choose an appropriate tool to help me collect data.<br>I can present data in an appropriate way.<br>I can search a database using different operators to refine my search.<br>I can talk about mistakes in data and suggest how it could be checked. | I can plan the process needed to investigate the world around me.<br>I can select the most effective tool to collect data for my investigation.<br>I can check the data I collect for accuracy and plausibility.<br>I can interpret the data I collect.<br>I can present the data I collect in an appropriate way.<br>I use the skills I have developed to interrogate a database. |

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| **Multimedia** | ***Pupils should be taught to use technology purposefully to create digital content*** | | ***Pupils should be taught to select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.*** | | | |
| | I can use technology to create and present my ideas.<br>I can use the keyboard or a word bank on my device to enter text.<br>I can save files on a device | I can use technology to organise and present my ideas in different ways.<br>I can use the keyboard on my device to add, delete and space text for others to read.<br>I can save and open files on the device I use.<br>I can change colour to my text and add images from clipart<br>I can use the internet for research | I can create different effects with different technology tools.<br>I can combine a mixture of text, graphics to share my ideas and learning.<br>I can use spellchecker.<br>I can evaluate my work and improve its effectiveness.<br>I can use the internet to search for images and information<br>I can copy and paste images (or insert an image on a Chromebook) | I can use photos, video and sound to create an atmosphere when presenting to different audiences.<br>I can change the appearance of text to increase its effectiveness.<br>I can create, modify and present documents for a particular purpose.<br>I can use a keyboard confidently and make use of a spellchecker to write and review my work.<br>I can give constructive feedback to my friends to help them improve their work and refine my own work. | I can use text, photo, sound and video editing tools to refine my work.<br>I can use the skills I have already developed to create content using unfamiliar technology.<br>I can select, use and combine the appropriate technology tools to create effects that will have an impact on others.<br>I can review and improve my work and support others to improve their work. | I can talk about audience, atmosphere and structure when planning a particular outcome.<br>I can confidently identify the potential of unfamiliar technology to increase my creativity.<br>I can combine a range of media, recognising the contribution of each to achieve a particular outcome.<br>I can tell you why I select a particular online tool for a specific purpose.<br>I can be digitally technical when evaluating the effectiveness of my work and the work of others. |

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| **Technology in our lives** | ***Pupils should be taught to use technology purposefully to store and retrieve digital content and to recognise common uses of information technology beyond school.*** | | ***Pupils should be taught to understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.*** | | | |
| | I can recognise the way we use technology in our classroom.<br>I can recognise ways that technology is used in my home and community.<br>I can begin to identify some of the benefits of using technology. | I can tell you why I use technology in the classroom.<br>I can tell you why I use technology in my home and community.<br>I am starting to understand that other people have created the information I use.<br>I can identify benefits of using technology including finding information, creating and communicating.<br>I can talk about the differences between the internet and things in the physical world. | I can save and retrieve work on the internet, the school network or my own device.<br>I can talk about the parts of a computer.<br>I can tell you ways to communicate with others online.<br>I can describe the World Wide Web as the part of the internet that contains websites.<br>I can use search tools to find and use an appropriate website.<br>I can think about whether I can use images that I find online in my own work. | I can tell you whether a resource I am using is on the internet, the school network or my own device.<br>I can identify key words to use when searching safely on the World Wide Web.<br>I think about the reliability of information I read on the World Wide Web.<br>I can tell you how to check who owns photos, text and clipart.<br>I can create a hyperlink to a source on the World Wide Web. | I can describe different parts of the internet.<br>I can use different online communication tools for different purposes.<br>I can use a search engine to find appropriate information and check its reliability. I can recognise and evaluate different types of information I find on the World Wide Web.<br>I can describe the different parts of a webpage.<br>I can find out who the information on a webpage belongs to.<br>I can create a hyperlink to a source on the World Wide Web. | I can tell you the internet services I need to use for different purposes.<br>I describe how information is transported on the internet.<br>I can select an appropriate tool to communicate and collaborate online.<br>I can talk about the way search results are selected and ranked.<br>I can check the reliability of a website.<br>I can tell you about Copyright and acknowledge the sources of information that I find online. |