**Progression of Skills and Knowledge in Computing**



**Hawkinge Primary School**

Computing can be broken down into three key areas of competency: computer science (how computers work), digital literacy (interacting via digital technologies) and information technology (creating content using technology).

Each unit should include a ‘tinkering’ session (letting children have a go and test out new technology, identifying and solving them – this mirrors real-world practices of computer programmers).

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| KS1 | LKS2 | UKS2 |
| **Algorithms and programming**  Y1   * I can create a series of instructions * I can plan a journey for a programmable toy   Y2   * I can use a range of instructions * I can test and amend a set of instructions * I can find errors and amend * I can write a simple program and test it * I can predict what the outcome of a simple program will be * I understand that algorithms are used on digital devices * I understand that programs require precise instructions | **Algorithms and programming**  Y3   * I can design a sequence of instructions, including directional instructions * I can write programs that accomplish specific goals * I can work with various forms of input * I can work with various forms of output   Y4   * I can experiment with variables to control models * I can give an on-screen robot specific instructions that take them from A to B * I can make an accurate prediction and explain why I believe something will happen * I can de-bug a program | **Algorithms and programming**  Y5   * I can combine sequences of instructions and procedures to turn devices on and off * I can use technology to control and external device * I can design algorithms that use repetition and 2-way selection   Y6   * I can design a solution by breaking a problem up * I recognise that different solutions can exist for the same problem * I can use logical reasoning to detect errors in algorithms * I can use selection in programs * I can work with variables * I can explain how an algorithm works * I can explore ‘what if’ questions by planning difference scenarios for controlled devices |
| **Information Technology**  Y1   * I can create digital content * I can store digital content * I can retrieve digital content * I can use a website * I can use a camera * I can record sound and playback   Y2   * I can organise digital content * I can retrieve and manipulate digital content * I can navigate the web to complete simple searches | **Information Technology**  Y3   * I can use a range of software for similar purposes * I can collect information * I can design and create content * I can present information * I can search for information on the web in different ways * I can manipulate and improve digital images   Y4   * I can select and use software to accomplish give goals * I can collect and present data * I can produce and upload a podcast | **Information Technology**  Y5   * I can analyse information * I can evaluate information * I understand how search results are selected and ranked * I can edit a film   Y6   * I can select, use and combine software on a range of digital devices * I can use a range of technology for a specific projects |
| **Digital Literacy**  Y1   * I can use technology safely * I can keep personal information private   Y2   * I use technology safely * I know where to go for help if I am concerned * I know how technology is used in school and outside of school | **Digital Literacy**  Y3   * I can use technology respectfully and responsibly * I know different ways I can get help if I am concerned * I understand what computer networks do and how they provide multiple services * I can discern where it is best to use technology and where it adds little or no value   Y4   * I recognise acceptable and unacceptable behaviour using technology | **Digital Literacy**  Y5   * I understand that you have to make choices when using technology and that not everything is true and/or safe   Y6   * I can discuss the risks of online use of technology * I can identify how to minimise risks |
| **Knowledge and Understanding**  Y1 and Y2   * I understand the different methods of communication * I know you should only open email from a known source * I know the difference between an email and communication systems * I know that websites sometimes include pop-ups that take me away from the main site * I know that bookmarking is a way to find safe sites again quickly * I have begun to evaluate websites and know that not everything on the internet is true * I know that it is not always possible to copy some text and images from the internet * I know that personal information should not be shared online * I know I must tell a trusted adult immediately if anyone tries to meet me via the internet | **Knowledge and Understanding**  Y3 and Y4   * I understand the need for rules to keep me safe when exchanging learning and ideas online * I recognise that information on the internet may not be accurate or reliable and may be used for bias, manipulation or persuasion * I understand that the internet contains fact, fiction and opinion and begin to distinguish between them * I use strategies to verify information * I understand the need for caution when using an internet search for images and what to do if I find an unsuitable image * I understand that copyright exists on most digital images, video and recorded music * I understand the need to keep private information and passwords private * I understand that if I make personal information available online it may be seen and used by others * I know how to respond if asked for personal information or feel unsafe about content of a message * I recognise that cyber bullying is unacceptable and will be sanctioned in line with the school’s policy * I know how to report an incident of cyber bullying * I know the difference between online communication tools used in school and those used at home * I understand the need to develop an alias for some public online use * I understand that the outcome of internet searches at home may be different than at school | **Knowledge and Understanding**  Y5 and Y6   * I can discuss the positive and negative impact of the use of ICT in my own life, my friends and family * I understand the potential risk of providing personal information online * I recognise why people may publish content that is not accurate and understand the need to be critical evaluators of content * I understand that some websites and/or pop-ups have commercial interests that may affect the way the information is presented * I recognise the potential risks of using internet communication tools and understand how to minimise those risks * I understand that some material on the internet is copyrighted and may not be copied or downloaded * I understand that online environments have security settings, which can be altered, to protect the user * I understand the benefits of developing a ‘nickname’ for online use * I understand that some malicious adults may use various techniques to make contact and elicit personal information * I know that is unsafe to arrange to meet unknown people online * I know how to report any suspicions * I understand I should not publish other people’s pictures or tag them on the internet without permission * I know that content put online is extremely difficult to remove * I know what to do if I discover something malicious or inappropriate |
| **Skills**  Y1 and Y2   * I follow the school’s safer internet rules * I can use search engines agreed by the school * I know what to do if I find something inappropriate online or something I am unsure of * I can use the internet for learning and communicating with others, making choices when navigating through sites * I can send and receive email as a class * I can recognise advertising on websites and learn to ignore it * I can use a password to access the secure network | **Skills**  Y3 and Y4   * I follow the school’s safer internet rules * I recognise the difference between the work of others which has been copied (plagiarism) and re-structuring and re-presenting materials in ways which are unique and new * I can identify when emails should not be opened and when an attachment may not be safe * I can explain and demonstrate how to use email safely * I can use different search engines | **Skills**  Y5 and Y6   * I follow the school’s safer internet rules * I can make safe choices about the use of technology * I can use technology in ways which minimises risk * I can create strong passwords and manage them so that they remain strong * I can independently, and with regard for e-safety, select and use appropriate communication tools to solve problems by collaborating and communicating with others within and beyond school * I can competently use the internet as a search tool * I can reference information sources * I can use appropriate strategies for finding, critically evaluating, validating and verifying information * I can use knowledge of the meaning of different domain names and common website extension to support validation of information |