

| Computing progression of Knowledge and Skills | | | | | |
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| | Foundation | Year 1 | Year 2 | Year 3 | Year 4 |
| | | Technology around us Digital painting Moving a robot Grouping data Digital writing Programming animations | Information technology around us Digital photography Robot algorithms Pictograms Digital music Programming quizzes | Connecting Computers Stop-frame animation Sequencing sounds Branching databases Desktop publishing Events and actions | The internet Audio production Repetition in shapes Data logging Photo editing Repetition in games |
| e-safety | <ul style="list-style-type: none"> I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset. • I can explain how this could be either in real life or online. I can talk about how I can use the internet to find things out. • I can identify devices I could use to access information on the internet. • I can give simple examples of how to find information (e.g. search engine, voice activated searching). | <p>I can recognise that there may be people online who could make me feel sad, embarrassed or upset. • If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust.</p> <ul style="list-style-type: none"> I can use the internet to find things out. • I can use simple keywords in search engines • I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable, worried or frightened. | <p>I can explain how other people's identity online can be different to their identity in real life. • I can describe ways in which people might make themselves look different online. • I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help.</p> <ul style="list-style-type: none"> I can use keywords in search engines. • I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). • I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). • I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. • I can explain why some information I find online may not be true. | <p>I can explain what is meant by the term 'identity'. • I can explain how I can represent myself in different ways online. • I can explain ways in which and why I might change my identity depending on what I am doing online (e.g. gaming; using an avatar; social media).</p> <p>I can use key phrases in search engines. • I can explain what autocomplete is and how to choose the best suggestion. • I can explain how the internet can be used to sell and buy things • I can explain the difference between a 'belief', an 'opinion' and a 'fact'.</p> | <p>I can explain how my online identity can be different to the identity I present in 'real life' • Knowing this, I can describe the right decisions about how I interact with others and how others perceive me.</p> <p>I can analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'. • I can describe how I can search for information within a wide group of technologies (e.g. social media, image sites, video sites). • I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online. • I can explain that some people I 'meet online' (e.g. through social media) may be computer programmes pretending to be real people. • can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.</p> |
| Computing systems and networks | | | | <p>I understand that computers in a school are connected together in a network • I understand why computers are networked • I understand the difference between the Internet and the World Wide Web (WWW)</p> | <p>I understand that servers on the Internet are located across the planet • I understand how email is sent across the Internet • I understand how the Internet enables us to collaborate</p> |
| Programming | <p>I can follow simple oral algorithms • I can spot simple patterns • I can sequence simple familiar tasks</p> <p>I can use a mouse, touch screen or appropriate access device to target and select options on screen • I can input a simple sequence of commands to control a digital device with support (Bee Bot)</p> | <p>I understand what algorithms are • I can write simple algorithms • I understand the sequence of algorithms is important • I can debug simple algorithms • I understand that algorithms are implemented as programs on digital devices</p> | <p>I can write algorithms for everyday tasks • I can use logical reasoning to predict the outcome of algorithms • I understand decomposition is breaking objects/processes down • I can implement simple algorithms on digital devices • I can debug algorithms</p> | <p>I can create algorithms for use when programming • I can decompose tasks (such as animations) into separate steps to create an algorithm • I understand abstraction is focusing on important information • I can identify patterns in an algorithm I can use repetition in algorithms</p> | <p>I can use abstraction to focus on what's important in my design • I can write increasingly more precise algorithms for use when programming. • I can use simple selection in algorithms • I can use logical reasoning to detect and correct errors in programs</p> |

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| | | I can use a mouse, touch screen or appropriate access device to target and select options on screen • I can input a simple sequence of commands to control a digital device with support (Bee Bot) | I understand programs execute by following precise and unambiguous instructions • I can create programs on a variety of digital devices • I can debug programs of increasing complexity • I can use logical reasoning to predict the outcome of simple programs | I can design and create programs • I can write programs that accomplish specific goals • I can use repetition in programs I can work with various forms of input | • I can use simple selection in programs • I can work with various forms of output • I can use logical reasoning to systematically detect and correct errors in programs • I can work with various forms of output |
| Data and information | • I can identify a chart. • I can sort physical objects, take a picture and discuss what I have done. • I can present simple data on a digital device. | • I can sort images or text into two or more categories on a digital device. • I can collect data on a topic. • I can create a tally chart and pictogram. • I can record myself explaining what I have done and what it shows me. | I can sort digital objects into a range of charts such as Venn diagrams, Carroll diagrams and bar charts using different apps and software. • I can orally record myself explaining what the data shows me. • I can create a branching database using questions | • I can create my own sorting diagram and complete a data handling activity with it using images and text. • I can start to input simple data into a spreadsheet. • I can create a feelings chart exploring a story or character's feelings. | I can create my own online multiple choice questionnaire. • I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts. • I understand how data is collected |
| Creating Media | I can take a photograph • I can take a photograph and use it in an app • I can use a painting app and explore the paint and brush tools I can record sounds with different resources • I can find ways to change your voice (tube, tin can, shouting to create an echo) • I can record sounds/voices in storytelling and explanations | I can edit a photo with simple tools • I can use a paint/drawing app to create a digital image • I can begin to cut out an image to layer on another image. I can create a sequence of sounds (instruments, apps/software) • I can explore short and long sounds. • I can record my voice and add different effects. | I can edit a photo (crop, filters, mark up etc) • I can select and use tools to create digital imagery - controlling the pen and using the fill tool • I can cut images with accuracy to layer on other images Create a musical composition using software • I can record my own sound effects. • I can record my voice over a composition to perform a song. | I can confidently take and manipulate photos • I can create a digital image using a range of tools, pens, brushes and effects I can create and edit purposeful compositions using music software to create mood or a certain style • I can experiment with live loops to create a song • I can improve stop motion animation clips with techniques like onion skinning. • I can use animation tools in presenting software to create simple animations. | I can enhance digital images and photographs using crop, brightness, contrast & resize • I can manipulate shapes to create digital art Edit sound effects for a purpose. • Create a simple four chord song following the correct rhythm. |