

	Online Safety and Digital Literacy <i>see Education for a Connected World</i>	Information Technology	Computer Science	
Early Years	<ul style="list-style-type: none"> To recognise some ways in which the internet can be used to communicate and find information and to give examples of how I (might) use technology to communicate with people I know and find out information. Know that they should always ask a responsible adult if they want to use a device and ask for help if they see anything that makes me feel sad, embarrassed, worried or upset. Be able to identify some simple examples of my personal information (e.g. name, address, age,) and I can describe the people I can trust and can share this with. I can identify ways that I can put information on the internet. I can describe ways that some people can be unkind online and can offer examples of how this can make others feel. I can talk about how I can use the internet to find information and can identify devices that I can use. I can identify rules that help keep us safe and healthy in and beyond the home when using technology and can give some examples. I know that work I create belongs to me and can name my work so others know it belongs to me. 	<ul style="list-style-type: none"> To play on a touch screen game and use computers/keyboards/mouse in role play To type letters with increasing confidence using a keyboard and tablet. To take a photograph and use it in an app to create a simple digital collage. To record and play a video To use a painting app and explore the paint and brush tools To scan a QR code. To record sounds/voices in storytelling and explanations 	<ul style="list-style-type: none"> To follow simple algorithms and spot patterns To sequence instructions for simple familiar tasks To input a simple sequence of commands to control a digital device with support 	
Y1 Builds on last years skills	<ul style="list-style-type: none"> Know that the internet is accessed all over the World and know some devices are connected to the internet. To identify simple rules that help keep us safe and healthy in and beyond the home when using technology. With support from an adult be able to find information on the internet. To identify some examples of my personal information (e.g. name, address, age, phone number, email, location) To give simple examples of bullying behaviour and how it could look online. To explain how other people's identity online can be different to their identity in real life. To explain what passwords are and with support can use simple passwords for my accounts and devices. To describe how I know another people's work belongs to them. To identify some examples of how I might use technology to communicate with others I don't know well. 	<ul style="list-style-type: none"> Be able to log onto a computer Be able to navigate around the screen with a mouse or touchpad. I can confidently type words quickly and correctly on a digital device to create something meaningful. I can use the space bar to make space, delete to delete letters/words and use enter/return to start a new line. I can add labels to an image I can order images to create a simple storyboard. Be able to independently find and use an app on a tablet for instance to take and view a video or photograph. Be able to save and print a document I can use a paint/drawing app to create a digital image I can record my voice and add different effects. 	<ul style="list-style-type: none"> To know what an algorithm is and are implemented as programs on digital devices. Make a simple sequence of instructions / algorithm To understand the sequence of algorithms is important Know which button on a device represents which action Know how to program a robot to follow simple sequence of instructions (1- 2 turns) To use logical reasoning to make simple predications about an algorithm and a program. Be able to change (debug) the program to improve the route. 	Y1 Builds on last years skills
Y2 Builds on last years skills	<ul style="list-style-type: none"> Know devices that enable direct communication between people through images and text. Know what personal information is and that they should never share this with anyone they don't know. Know that they should tell a trusted adult if they are upset or worried about anything on a device. With support, be able to use a safe search engine and can demonstrate how to navigate a simple webpage. I can explain why some information I find online may not be true To explain simple guidance for using technology in different environments and settings. To talk about how someone can / would get help about being bullied online and offline and understand how bullying can make someone feel. To explain what is meant by the term 'identity.' To explain what passwords are and can use passwords for my accounts and devices. To recognise that content on the internet may belong to other people. To use the internet to communicate with people I don't know well (e.g. email another class) 	<ul style="list-style-type: none"> Be able to save, retrieve (open) and print work Know how to type, using the space bar only once between words, and format text including basic punctuation and capital letters To copy and paste images and text Be able to add and create simple images Be able to confidently use pointing device Be able to collect data on a topic and present it as a bar chart. Be able to combine simple text and graphics, for instance create a poster for a purpose, to create a simple presentation, Be able to take and view a video or photograph and use it to present information. 	<ul style="list-style-type: none"> To use logical reasoning to predict the outcomes of algorithms Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) To begin to understand decomposition to breakdown the algorithm into smaller parts Begin to use block programming to complete a simple program. Be able to debug more complex problems e.g. a route on a maze. 	Y2 Builds on last years skills
Y3/4 Mixed skills Builds on last years skills	<ul style="list-style-type: none"> Know that some people on the internet should not be trusted Know that pictures and text share on-line can end up with strangers Reliably know what to do if they are exposed to unpleasant materials on any device. Create and reliably uses a more complex password to access online resources. Be able to log in and out of websites used at school Know that using technology can sometimes be inappropriate Know that having a balance of online and offline activities is important. Know what words to enter into a search engine to find information and understand how to use autocomplete to choose the best suggestion. Know which websites are useful and begin to understand all might not be trustworthy. To analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'. 	<ul style="list-style-type: none"> Be able to log in to computer system as themselves and can find their documents Be able to organise their personal folder effectively Be able to save a document in a shared folder and retrieve this to continue working on it. Know how to open shared documents and pictures. Know how to use software to create a simple brochure or poster. Know how to change font size and style; include shapes and backgrounds and to use the Spellcheck function Confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text Use font sizes appropriately for audience and purpose. Use spell check and thesaurus. Know how to sequence and add to slides to make an effective presentation Create a meaningful document that contains both pictures and text 	<ul style="list-style-type: none"> Be able to use a block program to make a simple programme using sequencing and timing. Inputs sets of instructions according to programming language and environment Independently use logical reasoning to be able to debug basic mistakes Be able to modify their program and be able to predict the effects of any changes Be able to explain how their program works To use abstraction to focus on what is important in my design. Be able to use a program to sequence, use conditionals and use a variety of inputs and outputs To use decomposition to break sets of instructions into short steps to achieve goal. Use repeat loops for instance to create a program to draw regular 2D shapes 	Y3/4 Mixed skills Builds on last years skills

	<ul style="list-style-type: none"> • Can select useful websites from the results of a search. • To explain what bullying is, can describe how people may bully others and can describe rules about how to behave online. • To recognise I need to be careful before I share anything about myself or others online. • To explain how I can represent my identity in different ways online and how I might change my identity depending on what I am doing online (e.g. gaming, using an avatar, social media). • To explain how my online identity can be different to the identity I present in real life and can describe the right decisions about how I interact with others and how others perceive me. • I can give reasons why I should only share information with people I choose to and can trust. I can explain that if I'm not sure or I feel pressurised, I should ask a trusted adult. • When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. • To explain some risks of communications online and the information I share with others I don't know well. • To give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak). • To explain what it means to 'know someone' online and why this might be different to knowing someone in real life. • To explain what is meant by 'trusting someone online.' I can explain why this is different to 'liking someone online.' 	<ul style="list-style-type: none"> • Be able to deliver a simple presentation to their peers • I can create my own sorting diagram and complete a data handling activity with it using images and text. • I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts. • Know that collecting and storing information in an organised way helps them find answers to questions • Know that information on record cards is divided into fields and that a set of record cards is called a file • Know that information can be held as numbers, choices (such as yes/no) or words. • Know that information can be taken from pictures or text. • Know that ICT can be used to store and sort information • Add a record to a file in a computer database • Answer simple questions by matching the contents of a single field • Use a database to sort and classify information and to present my findings • I can create my own movie trailer. • I can sequence clips of mixed media in a timeline and record a voiceover • I can trim and cut film clips and add titles and transitions • I can take multiple animations of a character I have created and edit them together for a longer video. • I can use software to create a 3D animated story. • I can use animation tools in presenting software to create simple animations. • I can combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets. • I can add simple subtitles to a video clip. • I can use confidently use green screen adding animated backgrounds 	<ul style="list-style-type: none"> • I understand that the school computers are networked • I understand that servers on the Internet are located across the planet 	
<p style="text-align: center;">Builds on last years skills</p>	<p>Y5/6 Mixed skills</p> <ul style="list-style-type: none"> • Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Know how to reduce the risks posed by using Social Media by managing their friends lists and privacy settings. • I can create and use strong and secure passwords and use them for a range of online services. • I can explain what app permissions are and I can describe simple ways to increase privacy on apps and services that provide privacy settings. • Know that hacking or misusing someone else's account is illegal. • Know that it is irresponsible to share images of friends on-line without their permission. • Know that it is illegal to post or view 'rude' images of children. • I can demonstrate reasonable choices about my online identity, depending on context. • I can describe ways in which media can shape ideas about gender and can identify and make judgements about messages about gender roles. • Be able to maintain a healthy balance of online and offline activities and know that some activities may affect their emotional wellbeing • I can explain the importance of self-regulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents). • I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. • Know how to report concerns online and to describe how to capture bullying content as evidence (e.g. screen grab, URL, profile) to share with others who can help me. • I can identify a range of ways to report concerns both in school and at home about online bullying • I can explain key concepts including; data, information, fact, opinion, belief, true, false, valid, reliable and evidence. • Effectively use a search engine to find multiple criteria using AND/OR to refine searches • Know how to compare information from different websites and know that some sites may show bias and that search results can be manipulated by sponsorship and advertising. • Know how to validate information found through searches by checking more than one source. • Know that some news is fake or a hoax. 	<ul style="list-style-type: none"> • To be able to share their work from their personal folder to work collaboratively with others. • Be able to select the best program for the task. • Using software know how to add data into a prepared spreadsheet to answer simple questions • I can edit and format difference cells in a spreadsheet. • I can write spreadsheet formula to solve calculations including=sum and other statistical functions and to solve more challenging maths problems. • Know how to use the main features of office software to produce suitable documents and presentations for an audience. • Know how to create a simple formula in a spreadsheet to work out given mathematical tasks such as adding a set of numbers. • Know how to use software to create and effective poster or leaflet. • Independently, prepare an effective presentation to show their learning to others which includes some elements of timing or sequence. • to create and sequence a video, add sound effects, transitions and title/subtitles. • Know how to edit a picture. • To be able to use two or more programmes to create a final piece of work. (eg, edit a picture before inserting into a document). 	<ul style="list-style-type: none"> • Use customisation to change a working program to change its effect for instance • Uses loops to achieve goals • Uses variables, conditional sentences (when/then), external triggers and loops to achieve set goals • Use conditional sentences (when/then) to program objects • As above but use mathematical expressions when constructing conditionals e.g. trigger winning when (If loops >5 then...) • Be able to explain what a program will do and accurately predict the effect of changes. • Be able to reliably modify existing algorithms and code to change the effect of the program. • Be able to make an efficient program by using an effective algorithm and techniques such as loops and procedures • I understand how we view web pages on the Internet • I use search technologies effectively and appreciate how pages are ranked • I understand that web spiders index the web for search engines • I understand what HTML is and know a range of HTML tags • I can remix and create a webpage using HTML • I understand that servers on the Internet are located across the planet • I understand how email / packets are sent across the Internet • I understand how the Internet enables us to collaborate • I understand that the school computers are networked and why. • I understand the difference between the Internet and the World Wide Web (WWW) 	<p style="text-align: center;">Builds on last years skills</p> <p>Y5/6 Mixed skills</p>

	<ul style="list-style-type: none"> • I can demonstrate ways of reporting problems online for both myself and my friends. • I can explain how impulsive and rash communications online may cause problems and understand my responsibilities for the wellbeing in my online social group. • I can explain how I am developing an online reputation, which will allow other people to form an opinion of me, and to describe some simple ways that help build a positive online reputation. • I can describe ways that information about people online can be used by others to make judgements about an individual • When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. 			
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Cultural Capital Additional enrichment

All children across the school are given different opportunities to participate in different activities that enhance Computing in our school. These include:

- Year 5/6 Lego Mindstorm EV3 Robotics club (Mr Patterson), which progresses to competing in a Lego Robotics competition hosted by Nissan.
- Year 5/6 Radio club
- Year 5/6 Coding work at Tanfield Comprehensive School.
- Year 4 Coding Lego Wedo 2.0 Workshop (Sunderland University)
- Year 3 Coding Workshop at the Apple Store.
- Year 3 / 4 after school Code Club (Mr McIntosh).
- Year 1 / 2 Lunchtime stop motion animation / code club (Mr McIntosh).