

SKILLS PROGRESSION IN COMPUTING AT THE FOUNDATION STAGE

EARLY LEARNING GOALS FOR UNDERSTANDING OF THE WORLD

TECHNOLOGY

	Digital Citizenship	Digital Literacy	Computer Science	Information Technology
	<u>Education for a Connected World</u> Self-image and Identity Online relationships Online reputation Online bullying Health, wellbeing and lifestyle			<u>Education for a Connected World</u> Managing online information Privacy and security Copyright and ownership
Early Years Foundation Stage	<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. (Butterfly feeling) • I can explain how this could be either in real life or online • I can give examples of how I (might) use technology to communicate with people I know • I can identify ways that I can put information on the internet • I can describe ways that some people can be unkind online. • I can offer examples of how this can make others feel • I can give some simple examples 	<ul style="list-style-type: none"> • I can use every day ICT devices • I can explore on screen activities – by clicking cause and effect • I can use on screen simulations and compare with real life activities – click and drag activities 	<ul style="list-style-type: none"> • I can create a simple algorithm for a floor robot e.g. BeeBot 	<ul style="list-style-type: none"> • I can talk about how I can use the internet to find things out. • I can give simple examples of how to find information (e.g. search engine, voice activated searching) • I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location). • I can describe the people I can trust and can share this with; I can explain why I can trust them • I can name my work so that others know it belongs to me • I can shut down a computer appropriately

SKILLS PROGRESSION IN COMPUTING AT KEY STAGE ONE				
	Digital Citizenship	Digital Literacy	Computer Science	Information Technology
National Curriculum	<ul style="list-style-type: none"> • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies <p><u>Education for a Connected World</u> Self-image and Identity Online relationships Online reputation Online bullying Health, wellbeing and lifestyle</p>	<ul style="list-style-type: none"> • use technology purposefully to create, organise, store, manipulate and retrieve digital content 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • recognise common uses of information technology beyond school <p><u>Education for a Connected World</u> Managing online information Privacy and security Copyright and ownership</p>
Year One	<ul style="list-style-type: none"> • 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. (Butterfly feeling) • I can use the internet with adult support to communicate with people I know • I can explain why it is important to be considerate and kind to people online 	<ul style="list-style-type: none"> • I can use skills I have learnt across multiple application programs, • I can input text and images using a simple publishing programs • I can type simple sentences on the screen, making use of a word bank • I can alter my writing in a number of ways (size, colour, font etc.) 	<p>YEAR 1 FOCUS VOCAB: ALGORITHM</p> <ul style="list-style-type: none"> • I can give and follow instructions, which include straight and / or turning commands – one at a time. • I can plan a simple algorithm • I can create a simple program • I can debug a simple program that is causing an unexpected outcome. 	<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. (Butterfly feeling) • I can recognise more detailed examples of information that is

	<ul style="list-style-type: none"> • I can describe what information I should not put online without asking a trusted adult first • I can describe how to behave online in ways that do not upset others and can give examples • I can give examples of some of these rules • I can access school online resources e.g. Blog / Purplemash 	<ul style="list-style-type: none"> • I can type simple sentences using the correct format (capital letters, space and full stop) • I can use buttons within a programme to make text bold/ italics / text alignment etc. • I can move to different places in the text using the arrow keys or mouse • I can use the 'undo' icon to fix a mistake • I can use the digital camera independently 	<ul style="list-style-type: none"> • I can predict if a simple program will fulfil my algorithm • I can break a problem down into smaller parts (chunking / decomposing) 	<p>personal to me (e.g. where I live, my family's names, my school)</p> <ul style="list-style-type: none"> • I can explain why I should always ask a trusted adult before I share any information about myself online • I can explain how passwords can be used to protect information and devices • I can explain why work I create using technology belongs to me • I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it') • I can save my work (Purplemash/school network) so that others know it belongs to me (e.g. filename, name on content) • I can launch applications on the desktop using icons. • I can open a web browser • I can use online resources to conduct research & find information • I can log on and off the school network using my individual username and password
Year Two	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • I can start to use simple keyboard shortcuts Ctrl + B, I, U to edit my text style • I can use spell checker to check my work • I can use the 'undo' icon to fix a mistake • I can use the return/enter key to insert relevant line breaks 	<p>YEAR 2 FOCUS VOCAB: PROGRAM</p> <ul style="list-style-type: none"> • I can give and follow algorithms and instructions, which include direction and turning command – several in order • I can plan use logical reasoning to predict outcomes • I can create a program that contains several 	<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

	<p>frightened; I can give examples of how I might get help. (Butterfly feeling)</p> <ul style="list-style-type: none"> • I can use the internet to communicate with people I do not know well (e.g. email a pen pal in another school/ country) • I can give examples of how I might use technology to communicate with others I do not know well • I can explain how information put online about me can last for a long time. • I can give examples of bullying behaviour and how it could look online • I understand how bullying can make someone feel • I can explain simple guidance for using technology in different environments and settings. • I can say how those rules/guides can help me • I can access school online resources e.g. Blog / Purplemash 	<ul style="list-style-type: none"> • I can add a page border • I can insert a basic table • I can explain what digital communication is 	<p>commands for a device or software programme</p> <ul style="list-style-type: none"> • I can debug a program independently that has caused an unexpected outcome • I can use different events to start my programs – timing / on click / on button press 	<p>might be used (e.g. Alexa, Google Now, and Siri)</p> <ul style="list-style-type: none"> • 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 • I can describe how online information about me could be seen by others • I can describe and explain some rules for keeping my information private • I can explain what passwords are and can use passwords for my accounts and devices • I can explain how many devices in my home could be connected to the internet and can list some of those devices • I can describe why other people's work belongs to them • I can log on and off the school network using my individual username and password and save my work to Purple Mash or the school network • I can explain the difference between my school network and my home computer set up • I can use a variety of sources to find, sort and select information
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				appropriate to my class work including using the internet <ul style="list-style-type: none">• I can refine my searches to limit search results using an internet search engine
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SKILLS PROGRESSION IN COMPUTING AT LOWER KEY STAGE TWO				
	Digital Citizenship	Digital Literacy	Computer Science	Information Technology
National Curriculum	<ul style="list-style-type: none"> • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact <p><u>Education for a Connected World</u> Self-image and Identity Online relationships Online reputation Online bullying Health, wellbeing and lifestyle</p>	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 <p><u>Education for a Connected World</u> Managing online information Privacy and security Copyright and ownership</p>
Year Three	<ul style="list-style-type: none"> • I can explain ways in which and why I might change my identity depending on what I am doing online (e.g. gaming; avatars; social media) • I can describe ways people who have similar likes and interests can get together online • I can explain some risks of communicating online with others I don't know well • I can explain why I should be careful who I trust online 	<ul style="list-style-type: none"> • I can type a number of sentences using the keyboard • I can use tab to indent paragraphs • I can use cut, copy and paste to re-order text • I can use simple keyboard shortcuts e.g. Ctrl + V, X, C to re-order text • I can use columns • I can use bullet points, speech bubbles, auto shapes and text boxes 	<p>YEAR 3 FOCUS VOCAB: SEQUENCE</p> <ul style="list-style-type: none"> • I can use logical reasoning to explain what will happen next • I can solve problems by decomposing them into smaller parts • I can use and edit a pre-written program to achieve a specific outcome • I can detect and debug errors in algorithms and programs 	<ul style="list-style-type: none"> • 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' • I can give reasons why I should only share information with people I choose to and can trust

	<ul style="list-style-type: none"> • I can explain how my and other people's feelings can be hurt by what is said or written online. • I can explain why I can take back my trust if I feel nervous, uncomfortable or worried • I can explain what it means to 'know someone' online & why this might be different from real life • I can explain what is meant by 'trusting someone online'. I can explain why this is different from 'liking someone online' • I can search for information about myself online • I can recognise I need to be careful before I share anything about others or myself online • I know who I should ask if I am not sure if I should put something online • I can explain what bullying is and can describe how people may bully others • I can describe rules about how to behave online and how I follow them • I can explain why spending too much time using technology can have a negative impact on me • I can give examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos) 	<ul style="list-style-type: none"> • I can use format wrapping/layout of text boxes and images in word • I can format images - move, rotate and re-size shapes • I can use the format tab to alter word art to enhance my work • I can use a variety of table tools (EG merge cells, fill) • I can create a folder to save my work in • I can give a file a name to identify it 	<ul style="list-style-type: none"> • I can sequence a simple program on Logo to produce a line drawing • I can write a program to complete an algorithm • I can predict how a change in a sequence may impact on the outcome of a program 	<ul style="list-style-type: none"> • I can explain that if I am not sure or I feel pressured, I should ask a trusted adult • I understand and can give reasons why passwords are important • I can describe simple strategies for creating and keeping passwords private • I can describe how connected devices can collect and share my information with others • I can explain why copying someone else's work from the internet without permission can cause problems • I can give examples of what those problems might be • I can communicate using a range of online resources (blogs, email)
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<p>Year Four</p>	<ul style="list-style-type: none"> • 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 • I can describe strategies for safe and fun experiences in a range of online social environments. • I can give examples of how to be respectful to others online • I can describe how others can find out information about me by looking online • I can explain ways that some of the information about me online could have been created, copied or shared by others • I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat) • I can explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them (their reputation) • I can explain how using technology can distract me from other things I might do or should be doing • I can suggest strategies to help me limit this time 	<ul style="list-style-type: none"> • I can use cut, copy and paste to re-order text • I can use simple keyboard shortcuts e.g. Ctrl + V, X, C to re-order text. • I can use columns • I can use bullet points, speech bubbles, auto shapes and text boxes • I can format wrapping/layout of text boxes and images in word • I can format images - move, rotate and re-size shapes using an object-based graphics package • I can use the format tab to alter word art to enhance my work. • I can use a variety of table tools (merge cells, fill etc.) • I can explain the difference between save and save as. • I can create a folder to save my work in. • I can give a file a name to identify it • I can select appropriate tools to add emphasis and effect to my work • I can explain why I have chosen my layout and formatting • I can review and edit my work and talk about the changes I made • I can think about whether my work is suitable for the audience. • I can extend the use of multimedia packages to include importing images, hyperlinks and 	<p>YEAR 4 FOCUS VOCAB: REPEAT/LOOP</p> <ul style="list-style-type: none"> • I can use sequence and loops (repetition) in programs confidently • I can detect and debug errors in algorithms and programs • I can independently select and sequence code to make my own program • I can demonstrate the loop or repeat command in all programming environments - I use more than one • I can explain why it is important to use 'loops' in particular place in my sequence • I can transfer my coding skills between software 	<ul style="list-style-type: none"> • 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 • I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true • I can explain what a strong password is • I can describe strategies for keeping my personal information private, depending on context • I can explain that others online can pretend to be me or other people, including my friends • I can suggest reasons why they might do this
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		the use of sounds recorded independently.		<ul style="list-style-type: none">• 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• I can talk about the advantages and disadvantages of using a computer• I can identify the most relevant results from a search engine – not just 'sponsored' links• I can discuss what it means to save work locally, to a network or into the 'Cloud
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SKILLS PROGRESSION IN COMPUTING AT UPPER KEY STAGE TWO				
	Digital Citizenship	Digital Literacy	Computer Science	Information Technology
National Curriculum	<ul style="list-style-type: none"> • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact <p><u>Education for a Connected World</u> Self-image and Identity Online relationships Online reputation Online bullying Health, wellbeing and lifestyle</p>	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 <p><u>Education for a Connected World</u> Managing online information Privacy and security Copyright and ownership</p>
Year Five	<ul style="list-style-type: none"> • I can use technology safely and respectfully and responsibly • I can demonstrate responsible choices about my online identity, depending on context • I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our fault • I can make positive contributions and be part of online communities 	<ul style="list-style-type: none"> • I can use cut, copy and paste to re-order text • I can use simple keyboard shortcuts e.g. Ctrl + V, X, C to re-order text. • I can use columns • I can use bullet points, speech bubbles, auto shapes and text boxes • I can format wrapping/layout of text boxes and images in word • I can format images - move, rotate and resize shapes 	<p>YEAR 5 FOCUS VOCAB: CONDITIONAL/ SELECTION</p> <ul style="list-style-type: none"> • I can plan and write programs and algorithms using the following: commands, sequence, repetition and selection 'if...then' (conditional statement) • I can detect and debug errors in more complex algorithms and programs 	<ul style="list-style-type: none"> • I can evaluate digital content and can explain how I make choices from search results • I can explain key concepts including: data, information, fact, opinion, belief, true, false, valid, reliable, evidence • I can explain what is meant by 'being sceptical'. • I can give examples of when and why it is important to be 'sceptical'

	<ul style="list-style-type: none"> • I can describe some of the communities in which I am involved and describe how I collaborate with others positively • I can search for information about an individual online and create a summary report of the information I find • I can describe ways that information about people online can be used by others to make judgments about an individual • I can recognise when someone is upset, hurt or angry online • I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone • I can describe ways technology can affect healthy sleep and can describe some of the issues • I can describe some strategies, tips or advice to promote healthy sleep with regards to technology 	<ul style="list-style-type: none"> • I can use the Insert tab to alter Word Art to enhance my work. • I can use a variety of table tools (merge cells, fill etc.) • I can explain the difference between save and save as. • I can select appropriate tools to add emphasis and effect to my work • I can explain why I have chosen my layout and formatting • I can review and edit my work and talk about the changes I made • I can think about whether my work is suitable for the audience • I can draft and redraft my written work by deleting, inserting and replacing text to improve clarity and create mood. • I can evaluate and improve my finished designs. • I can evaluate multimedia pages, such as websites and blogs, and recognise the features of good page design and how it is suited to an audience 	<ul style="list-style-type: none"> • I can use selection to create games in which the user must make a choice • I can use my skills and understanding of selection in more than two programs 	<ul style="list-style-type: none"> • I can explain what is meant by a 'hoax'. • I can explain why I need to think carefully before I forward anything online • I can explain why information that is on a large number of sites may still be inaccurate or untrue • I can create and use strong and secure passwords • I can explain how many free apps or services may read and share my private information (including contacts, likes, images, messages, geolocation) with others • I can explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and explain why I should seek permission before purchasing • I can assess and justify when it is acceptable to use the work of others, and when I need to credit the source • I can give examples of content that is permitted to be reused • I can identify the features of legal downloads and illegal (pirated) content • I can describe what each of the key internal parts of a computer does • I can discuss what it means to save work locally, to a network or to a 'Cloud'
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<p>Year Six</p>	<ul style="list-style-type: none"> • I can use technology safely and respectfully and responsibly • I can describe ways in which media can shape ideas about gender • I can identify messages about gender roles and make judgements based on them • I can challenge and explain why it is important to reject inappropriate messages about gender online • I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. I know and can give examples of how I might get help, both on and offline • I can explain why I should keep asking until I get the help I need • I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming) • I can describe some simple ways that help build a positive online reputation • I can describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help me • I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental 	<ul style="list-style-type: none"> • I can explain why I have chosen my layout and formatting • I can review and edit my work and talk about the changes I made • I can think about whether my work is suitable for the audience • I can draft and redraft my written work by deleting, inserting and replacing text to improve clarity and create mood. • I can evaluate and improve my finished designs. • I can evaluate multimedia pages, such as websites and blogs, and recognise the features of good page design and how it is suited to an audience. 	<p>YEAR 6 FOCUS VOCAB: VARIABLE</p> <ul style="list-style-type: none"> • I can confidently use events, repeats, selection and variables • I can use a variable in a variety of programming software • I can confidently break a problem down and methodically sequence a program to solve it, testing and adapting as I go • I can evaluate the effectiveness of my programs and algorithms and suggest improvements • I confidently use the Blockly programming language 	<ul style="list-style-type: none"> • I can use search technologies effectively • I can explain how search engines work and how results are selected and ranked • I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting') • I can demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important • I can identify, flag and report inappropriate content • I use different passwords for a range of online services • I can describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories) • I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing) • I can demonstrate the use of search tools to find and access online content, which can be reused by others • I can demonstrate how to make references to and acknowledge
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	<p>warnings) and describe their purpose</p> <ul style="list-style-type: none"> • I can assess and action different strategies to limit the impact of technology on my health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise) • 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) 			<p>sources I have used from the internet</p> <ul style="list-style-type: none"> • I can independently save and retrieve work from different places • I can effectively research using the world wide web • I can suggest what technology might look like in twenty years' time
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