Knowledge and Skills Progression for ICT

Strand	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Project Driving questions	1. How can we show compassion, care and love to those in need? 2. How can we care for our world? 3. What makes someone a hero?	1. How can we be compassionate, caring and loving towards others? 2. How can we look after our planet? 3. What is it like at the seaside? 4. What does it mean to be an explorer? 5. Growing, Changing, Belonging -Why are differences important? 6. Why did London burn and how can we design it safer today?		1. How can we be more compassionate, caring and loving towards others? 2. How could looking through 'my window' help me to be a better steward of the environment? 3. What can we learn from the Romans about work, innovation, and community? 4. Can rocks show us how to be sustainable? 5. Why is it important to hear everyone's story before we judge what happened in the past? 6. How did the Anglo Saxons build a life they could trust?		1. How can we show compassion, care and love to those in need? 2. What can we learn about stewardship from the medieval monarchs? 3. Why does Britain have the Benin bronzes and should they be given back? 4. Why is Earth special and how can we protect it? 5. How can learning about past and present lifestyles help us understand why we should not judge others? 6. How did trust help Ancient Egyptian society thrive, and how can we build fair and trusting communities today?	
Curriculum Topics - History/ *Science*	**Ourselves** **People that help us** **Superheroes** **Journeys and transport**	**Neil Armstrong, Explorers, Fire of London, Holidays and Seaside, Homes and Houses, Mary Seacole** ***Seasonal Changes, Plants, Animals including humans, Living things and their habitats, Everyday Materials***		**Vikings and Anglo Saxons, Romans, Stone age to Iron age, Anglo Saxons to Scots, Victorians** ***Plants , Light, Living things and their habitats, Animals including humans, Sound , Electricity, States of Matter, Forces and magnets***		**Tudors, Ancient Egypt, Benin, Ancient Greece, WW2** ***Light, Electricity, Living things and their habitats, Earth and Space, Evolution and Inheritance, Properties and changes of materials, Animals including humans, Forces and Magnets***	
IT (Information Technology)		Use technology purposefully to create, organise, store, ***manipulate*** and ***retrieve*** digital content.		Use ***search technologies*** effectively. 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***.			
		To be able to use IT skills (mouse, keyboard control, save, retrieve, print etc) and programs (paint, powerpoint) to create a label for their frame including a picture and inspirational words for a named person How can we find out more about explorers? Create an explorer's digital diary. Create an explorer fact poster		To research and create a powerpoint about the Victorian Era, using multimedia To research and find out about t**he Great Exhibition and inventions** in Victorian times. (Brunel, Stephenson, **Lightbulb**, flushing toilet, telephone, London Underground, Penny Black stamp)		To research and create a multimedia presentation on the evacuation and kindertransport.	

		Sort equipment images for polar explorer, space explorer, jungle explorer etc. What IT do modern explorers use?					
		Can use a mouse, finger etc. to select & move items on the screen, assembling or matching objects. Can take a digital picture or video clip, or record a sound, as part of a task. Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to correct or improve it. Can access a resource and then find answers to straight-forward questions. Can recognise and talk about some common uses of IT in the world around them. Can save and retrieve some work (and print if appropriate to task).	Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to correct or improve it. Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information. Can create and amend a (multi-media) resource for a clear purpose, starting to show a sense of the 'audience'. Can create & store some data, (simple data file), and then find answers to straight-forward questions. Can recognise and talk about some	Can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s). Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it. Can create and amend a (multi-media) resource that shows a sense of 'audience'. Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information. Can create & store some data, (simple data file), and then find answers to straight-forward questions. Can recognise and talk about some	Can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s). Can also edit and amend their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it. Can create and amend a multi-media resource that shows a sense of 'audience' Can navigate their way within range of (selected) online content, to find specific information. Can include some information / content from an online resource within a 'presentation'. Can use a data file to find answers to straight-forward questions, (such as through data logging or a survey or a prepared database or a simple spreadsheet, etc). Can save and retrieve work from electronic	Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. Can combine resources from different sources into a digital presentation, showing clear sense of intended purpose and 'audience'. Can find specific and valid information (i.e. be discerning) using sensible key words / search terms, from (selected) online web content, as fits the task. Can (collect), analyse and draw conclusions from data, (such as through data logging or a survey or a prepared database or through manipulating a spreadsheet, etc). Can save and rrious electronic folders on network (and controlled online environments where relevant).). etrieve work from va	Can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects Can combine resources from different sources into a digital presentation, evaluate it, and show clearly intended purpose and 'audience' Can be discerning and find valid information using sensible key words / search terms, from a range of online web content, as fits the task. Can (collect), analyse, evaluate and draw conclusions from data, such as through survey, database or spreadsheet, etc. Can save and retrieve work from various electronic folders on network (and controlled online environments where relevant).

			common uses of IT in the world around them. Can save and retrieve work (and print if appropriate to task).	common uses of ICT in the world around them. Can save and retrieve work from electronic folders (and print if appropriate to task).	folders (and print if appropriate to task).		
CS (Computer Science		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.		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 detect and correct errors in algorithms and programs. Understand ***computer networks*** including the ***internet***; how they can provide multiple services, such as the World Wide Web. Appreciate how [search] results are selected and ranked.			
		Write a set of instructions for a vehicle to travel at the seaside (Beebot or Code-a-pillar). Focussing on what an algorithm is and how computers use them.				Use J2e and coding skills to make a character go around the British Museum and Benin Bronzes	
		Can give simple instructions to control a device, like a 'floor' robot, or on-screen object. Can use trial and error to produce an accurate set of simple instructions, to control a floor 'robot' or on-screen object. Can name some digital devices that need precise instructions (algorithms) to work / be controlled.	Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object. Can use trial and error to produce an accurate set of 'instructions' to control a floor 'robot' or on-screen object; refine (de-bug) and improve / make changes. Can talk about some electronic devices and understands that	Demonstrates logical 'trial and error' when using a computer simulation, 'model' or game, and predicts some consequences of decisions/choices made. Can produce an accurate set of simple instructions (code), to program (control) an on-screen object (or floor 'robot'), using trial and error to debug.	Demonstrates logical choices and prediction when using a computer simulation, 'model' or game and can make simple edits to solve a problem. Can produce, debug and edit an accurate sequence of instructions, include use of repeat, to control on-screen objects. Can plan and create a program using decomposition; includes the use of selection	Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. Can create an accurate program to accomplish a given goal, including the use of repetition (loops), selection (IF/ELSE) and variables. Can use logical reasoning to deconstruct	Can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. Can create & develop programs, by planning, debugging and applying programming skills of repetition (loops), selection (IF/ELSE) and variables, to accomplish specific goals. Can use logical reasoning to deconstruct programs,

		Understands that software may represent a fantasy situation and can make sensible (logical) decisions/choices when 'playing' a straight-forward 'game'. Understands some basic computing terms and concepts, such as ... algorithm, program, sequence, etc.	they need precise instructions (algorithms) to work / be programmed (controlled). Demonstrates logical 'trial and error' when using a computer simulation or game, and predicts the consequences of decisions/choices made. Understands some basic computing terms and concepts, such as: (school) network, algorithm, program, debug, editing, website, etc.	Can also talk about how the sequence of events in some simple instructions (algorithms) or code are 'working'. Can talk about some digital devices beyond school, that need precise instructions (algorithms) to work / be programmed (controlled). Knows some relevant computing terms such as computer network, Internet, algorithm, program, World Wide Web, website, etc.	(IF/ELSE) and/or variables. Can talk about different types of input options e.g. motion /touch, microphone, data logging sensor; and output options e.g. switch, speakers, screen, etc. Developing and using a wider computing 'vocabulary' relevant to work, such as de-bug, Apps, data logging, search engine, spam, Wiki, etc.	programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. Can use different types of input options and output options such as through sensing and control 'kits' and/or software, to solve a problem. Has an understanding of computer networks (local, internet services and WWW). Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, variable, validate, digital footprint, spam, Wiki, etc.	evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. Can use different types of input options and output options such as through sensing and control 'kits' and/or software to solve a problem. Has an understanding of computer networks (local, internet services and WWW). Developing and using a wider computing 'vocabulary' in context of task, such as search engine, URL, HTML, https, variable, validate, digital footprint, etc.
DL (Digital Literacy)		Recognise common uses of information technology beyond school. 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.		Understand the opportunities [networks] offer for ***communication*** and ***collaboration***. Be concerning in evaluating digital content. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.			
		To understand how to keep safe online - safety rules posters Creating a Digital Poster – “We Do Not Judge Others”				How do we use technology safely? What is a digital footprint? Is information on the web always reliable? How have computers changed our lives?	

						Create a **class digital respect agreement** that promotes kindness and avoids judgement.	
		Knows about the Internet and beginning to understand some key, age appropriate safety 'rules'. Can share some information with others, (such as via school network, in school MLE, via a 'closed' blog). Can find some straight-forward information from a 'safe', selected online resource.	Can talk about key online safety 'rules' and knows where to go / report if a problem. Can create and share some information online, (such as in school MLE, 'closed' email system or blog), understanding need to be respectful and safe. Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'.	Can talk about key online safety 'rules' and knows where to go / report if a problem. Can create and share some information online (such as in school MLE, email/blog), understanding need to be respectful and safe. Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'.	Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem. Can create and share some information online (such as school MLE, email / blog), demonstrating need to be respectful and safe. Can find straight-forward information from (selected) website resource(s) and knows sites can contain, true or false facts, or opinion.	Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go / report if a problem. Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues. Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. Understands some simple steps to 'validate' information found on the Web, and appreciates how search results are selected and ranked.	Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues. Can discuss range of eSafety and eSecurity (privacy) issues and knows range of ways to report concerns or inappropriate behaviour. Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. Can check the results of web searches i.e. how useful, relevant, reasonable, valid, accurate, and appreciates how search results are selected & ranked.

Key
Purple - National Curriculum
Red - St Vincent's Curriculum

Black - Skills Progression