2 Year Rolling Programme for Computing

Mixed-year groups	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year A – R/1 2021/22	The keyboard is used for typing letters and numbers. The mouse is used for positioning the cursor. I can use google draw/Microsoft paint to draw a digital picture. To fill a shape, the outline needs to be completely sealed. Use select, copy and paste to duplicate elements. Use zoom tools to add more detail. Year 1 and 2: Save and retrieve work. Navigate the screen and open internet search.		Safer Internet Day (Feb) 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.	Create, save and retrieve a Word document. Insert pictures. Change font style and size.	https://www.stem.org.uk/resources/community/ collection/359493/ks1-programming (Will need to create a free account on STEM.org) Bee Bots planning. Basics programme, then move on to Pirates/Gingerbread Man activities. *Design and solve challenges using a programmable toy.* *Create sequences of instructions to navigate a route.* Year 1 Create a Powerpoint presentation Save and retrieve work. Alter fonts, backgrounds and insert pictures.	
Year B – R/1 2020/21	The keyboard is used for typing letters and numbers. The mouse is used for positioning the cursor. I can use google draw/Microsoft paint to draw a digital picture. To fill a shape, the outline needs to be completely sealed. Use select, copy and paste to duplicate elements. Use zoom tools to add more detail. Year 1 and 2: Save and retrieve work. Navigate the screen and open internet search.		Safer Internet Day (Feb) 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.		Rec Bee Bots planning. Basics programme, then move on to Pirates/Gingerbread Man activities. *Design and solve challenges using a programmable toy.* *Create sequences of instructions to navigate a route.* Year 1 – Code for Life KS1 (Rapid Router Levels 1 – 16 *Create algorithms for physical movement; Controlling van on screen app using movement commands; Working out the shortest route to a destination.*) 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; Use technology purposefully to create, organise, store,	

				manipulate and retrieve digital content; Recognise common uses of ~~technology beyond school;~~
Year A – 1/2 2021/22	Bee bots –Barefoot goes wild links with wildlife, insects, birds etc) https://www.stem.org.uk/search?search_query=bee+bots&items_per_page=10 Will need to create an account at STEM.org and download lesson materials. *Create short algorithms Enter these as simple programs using Bee-Bots Debug their program*	Safer Internet Day (Feb) 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.	Create, save and retrieve a Word document. Insert pictures. Change font style and size.	Create a Powerpoint presentation Save and retrieve work. Alter fonts, backgrounds and insert pictures. **Year 2:** Use slide transitions and animations
Year B – 1/2 2020/21	Code for Life KS1 Code for Life KS1 (Rapid Router Levels 1 – 16 *Create algorithms for physical movement; Controlling van on screen app using movement commands; Working out the shortest route to a destination.*) 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; Use technology purposefully to create, organise, store, manipulate and retrieve digital content; Recognise common uses of technology beyond school;	Safer Internet Day (Feb) 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.	Create a Powerpoint presentation Save and retrieve work. Alter fonts, backgrounds and insert pictures. **Year 2:** Use slide transitions and animations	Use internet to research information. Understand how to select, copy and paste text or images. Present findings to an audience.
Year A – 3/4 2021/22	https://www.stem.org.uk/resources/elibrary/resource/359084/scratch-junior (will need to create an account on STEM.org and download activities and support materials) Scratch Junior Pick a background and a character, and use a motion block to make a car drive across the city. Use the speed block to speed up or slow down a character. Make a character disappear. Moonrise after sunset. Add a new page to change scene. Make multiple characters with their own scripts. Use the repeat block to dribble a basketball. Use sound and motion blocks and a start again block to make characters dance. Use the envelope to send a message from one character to another. Send multiple messages among characters.	Safer Internet Day (Feb) Use technologies safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Computer Networks: Understand how digital devices function. Explain inputs and outputs. Explain how computer networks share information. Identify how devices in a network are connected. https://www.stem.org.uk/resources/elibrary/resource/466634/computing-systems-and-networks-connecting-computers-overview Year 3 Lessons)	Computer Networks: 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 technology safely, respectfully and responsibly. Use search technologies effectively and appreciate how results are selected and ranked, and be discerning in evaluating digital content. https://www.stem.org.uk/resources/collection/466694/computing-systems-and-networks-%E2%80%93-internet (Year 4 lessons)
Year B – 3/4 2020/21	Code For Life KS2 (Rapid Router Levels 17 – 28 *Understanding the repeat function. Creating and evaluating their own challenges and programs using the code skills learnt*)	Safer Internet Day (Feb) Use technologies safely, respectfully and responsibly;	**Be Internet Legends Resource** (Pillars 1 Think Before You Share; 2 Check it's for Real):	Use the internet to research information. Understand how to use a search facility. Select, copy and paste appropriate information. Understand differences in sources of

	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. 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.	recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Know what a having a positive digital footprint means. Know how they can build a positive digital footprint. Know how to be a critical consumer while online. Know about different online scams, including what 'phishing' means. Develop safe habits online, including protecting personal information.	information. Present findings. Save and retrieve work successfully.
Year A – 5/6 2021/22	https://www.stem.org.uk/resources/elibrary/resource/35835/scratch (will need to create an account on STEM.org and download lesson materials) Scratch *drawing shapes and using repeats *accepting keyboard input to control the movement of sprites *planning algorithms using flow diagrams and executing them in Scratch *importing and using sprites *programming for interactivity *students evaluating their work against their own plans and criteria, and peer-evaluating each other.	Safer Internet Day (Feb) Use technologies safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Computer Networks and Systems – Sharing Information Use technology safely, respectfully and responsibly. 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, Work with variables and various forms of input and output, 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. https://www.stem.org.uk/resources/collection/466832/computing-systems-and-networks-sharing-information (Year 5 lessons)	Computer Systems and Networks Use technology safely, respectfully and responsibly. 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. 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. https://www.stem.org.uk/resources/collection/466878/computing-systems-and-networks-communication (year 6 lessons)
Year B – 5/6 2020/21	(will need to create an account on STEM.org and download lesson materials) https://www.stem.org.uk/resources/elibrary/resource/35215/super-scratch-programming-adventure	Safer Internet Day (Feb)	Be Internet Legends (Pillars 3 Protect Your Stuff; 4 Respect Each Other)	Branching databases *Understand fields and records *Search including the use of wildcards

	Scratch	Use technologies safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Respect online privacy boundaries for themselves and others. Know how to seek or ask for help if they or others feel unsafe online. Develop respectful, empathetic and healthy online relationships. Know ways to manage and respond in a healthy and safe way to hurtful online behaviour.	*Use Structured queries including Boolean operators and Venn diagrams are used to aid understanding *Use range searches using comparison operators *Know and use key vocabulary See https://www.stem.org.uk/elibrary/resource/36020
	]Breaking the Spell![/b] – Children learn about sprites and coordinates and how to programme them to perform different actions. They learn how to debug the programme they have created. [b]A Space Odyssey![/b] – Children design new costumes and program a sprite's movements, and reactions, they also add various effects.			