Carlisle Infant School

Computing: EYFS Development Matters and KS1 National Curriculum Progression Grid

	Autumn Term	Spring Term	Summer Term
Year R	**Progression – Objectives/Skills:** ❖ Be kind to my friends. ❖ Ask an adult when I want to use the Internet. ❖ Show some caution with technology devices. ❖ Tell you about different kinds of information such as pictures, video, text and sound. ❖ Can operate a mouse to select icons on the screen ❖ Move objects on a screen.	**Progression – Objectives/Skills:** ❖ Tell an adult when something worrying or unexpected happens while I am using the Internet. ❖ Talk about the amount of time I spend using a computer, tablet or game device. ❖ Make a floor robot move. ❖ Use simple software to make something happen.	**Progression – Objectives/Skills:** ❖ Make choices about the buttons and icons I press, touch or click on. ❖ Tell you about technology that is used at home and in school. ❖ Operate simple equipment. ❖ Use a safe part of the Internet to play and learn. ❖ Create shapes and text on a screen. ❖ Use technology to show my learning.
	Vital Vocabulary: Safe, think, internet, strangers, world, pictures, video, text, sound, website Click, select, move, screen	**Vital Vocabulary:** Unexpected, worry, strange, adult, warning, computer, tablet, screen, touchscreen, device, floor robot, Beebot, remote control, objects	**Vital Vocabulary:** Buttons, icons, touch, click, technology, home, school, shapes, text
	EYFS Enrichment Opportunities: Regular independent access to Busy Things and use of the Kindle Fire tablets.	**EYFS Enrichment Opportunities:** Regular independent access to Busy Things and use of the Kindle Fire tablets.	**EYFS Enrichment Opportunities:** Regular independent access to Busy Things and use of the Kindle Fire tablets.

	Autumn Term	Spring Term	Summer Term
Year 1 Progression – Objectives/Skills	**Computing systems and networks – Technology around us** ❖ **Recognise common uses of information technology beyond school** ❖ **Use technology purposefully to create, organise, store, manipulate, and retrieve digital content** ❖ **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.** • Develop understanding of technology and how it can help. • Become familiar with the different components of a computer - developing their keyboard and mouse skills. • Consider how to use technology responsibly. **Creating media – Digital painting** ❖ **Use technology purposefully to create, organise, store, manipulate, and retrieve digital content** • Develop understanding of a range of tools used for digital painting. • Use tools to create own digital paintings.	**Creating media – Digital writing** ❖ **Use technology purposefully to create, organise, store, manipulate and retrieve digital content** ❖ **Use technology safely and respectfully, keeping personal information private** • Develop understanding of the various aspects of using a computer to create and manipulate text. • Become more familiar with using a keyboard and mouse to enter and remove text. • Consider how to change the look of their text, and justify their reasoning in making these changes. • Consider the differences between using a computer to create text, and writing text on paper. **Data and information – Grouping data** ❖ **Use technology purposefully to create, organise, store, manipulate and retrieve digital content** ❖ **Use technology safely and respectfully** • Introduce data and information. • Use labels to put objects into groups, and label • Demonstrate counting objects, before and after the objects are grouped. • Demonstrate ability to sort objects into different groups, based on the properties they choose. • Answer questions about data.	**Programming A – Moving a robot** ❖ **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** ❖ **Recognise common uses of information technology beyond school** • Explore using individual commands, both with other learners and as part of a computer program. • Identify what each floor robot command does and use that knowledge to start predicting the outcome of programs. • Introduce the early stages of program design through the introduction of algorithms. **Programming B – Introduction to animation** ❖ **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** • Explore the way a project looks by investigating sprites and backgrounds. • Use programming blocks to use, modify, and create programs. • Introduce the early stages of program design through the introduction of algorithms.
Year 1	**Vital Vocabulary:**	**Vital Vocabulary:**	**Vital Vocabulary:**
	Technology, Computer, mouse, trackpad, keyboard, screen, double-click, typing paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, brush style	Word processor, keyboard, keys, letters, Google Docs, keys, letters, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, cursor, select, font, toolbar, undo, font Object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, the same	Forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, plan, algorithm, program, route, plan ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, block, joining, command, start block, run, program, background, delete, reset, predict, effect, change, value, instructions, sprite, appropriate, design, programming blocks

	Autumn Term	Spring Term	Summer Term
Year 2 Progression – Objectives/Skills	**Computing systems and networks – IT around us** ❖ **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** • Introduce learners to on-screen programming through ScratchJr. • Explore the way a project looks by investigating sprites and backgrounds. • Use programming blocks to use, modify, and create programs. • Introduced the early stages of program design through the introduction of algorithms. **Creating media – Digital photography** ❖ **Use technology purposefully to create, organise, store, manipulate, and retrieve digital content** ❖ **Recognise common uses of information technology beyond school** ❖ **Use technology safely and respectfully, keeping personal information private** • Recognise that different devices can be used to capture photographs • Experience capturing, editing, and improving photos. • Recognise that images they see may not be real.	**Creating media – Making music** ❖ **Use technology purposefully to create, organise, store, manipulate, and retrieve digital content** • Listen to a variety of pieces of music and consider how music can make them think and feel. • Compare creating music digitally and non-digitally. • Look at patterns and purposefully create music. **Data and information – Pictograms** ❖ **Use technology purposefully to create, organise, store, manipulate, and retrieve digital content** ❖ **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 what the term data means and how data can be collected in the form of a tally chart. • Learn the term 'attribute' and use this to help them organise data. • Present data in the form of pictograms and block diagrams. • Use data presented to answer questions.	**Programming A – Robot algorithms** ❖ **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 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.** • Develop understanding of instructions in sequences and use logical reasoning to predict outcomes. • Use given commands in different orders to investigate how the order affects the outcome. • Learn about design in programming. • Develop artwork and test it for use in a program. • Design algorithms and then test those algorithms as programs and debug them. **Programming B – An introduction to quizzes** ❖ **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** • Understand that sequences of commands have an outcome, and make predictions based on their learning. • Use and modify designs to create their own quiz questions in ScratchJr • Realise designs in ScratchJr using blocks of code. • Evaluate work and make improvements to programming projects.
Year 2	**Vital Vocabulary:**	**Vital Vocabulary:**	**Vital Vocabulary:**
	Information technology (IT), computer, barcode, scanner/ scan Device, camera, photograph, capture, image, digital, portrait, landscape, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting	Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions, pattern, rhythm, pulse, Neptune, pitch, tempo, rhythm, notes, instrument, create, beat, open, edit More than, less than, most, least, organise, data, object, tally chart, votes, total, pictogram, enter, compare, objects, count, explain, more, less, common, attribute, group, same, different, conclusion, block diagram, sharing	Instruction, sequence, clear, unambiguous, algorithm, program, order, commands, predict/prediction, artwork, design, route, mat, debugging Run, start, outcome, blocks, sprite, actions, project, modify, change, build, match, compare, debug, features, evaluate

KS1 Enrichment Opportunities:	KS1 Enrichment Opportunities:	KS1 Enrichment Opportunities:
Regular access at school and home to BugClub and Mathletics	Take part in Safer Internet Day – February Regular access at school and home to BugClub and Mathletics	Regular access at school and home to BugClub and Mathletics Yr 2 E-Mail-Mates – set up contacts with school (abroad)