Progression of skills in Computing

* Based on the Chris Quigley Essentials Curriculum *

Computing Area	National Curriculum Objective & Area of Study (incl. possible resources)	Year 1	Year 2
Computer Science	**Year 1 and 2 National Curriculum Objectives** • Create and debug simple programs • Use logical reasoning to predict the behavior of simple programs **Year 1 Area of Study** • Giving and following instructions **Year 1 Possible Resources** • CSUnplugged **Year 2 Area of Study** • Predicting behaviour and using repeat command **Year 2 Possible Resources** • Scratch • 'Dressing up' from www.code-it.co.uk	• Understand that computers have no intelligence and that computers can do nothing unless a program is executed. • Explain why programs need to be written using a precise series of instructions • Follow a set of instructions given to perform a specific given task. • Develop own program by giving instructions to perform a specific given task. • Debug instructions by changing them to solve any problems that occur. • Predict what the outcome of a given set of instructions will be.	• Predict what is going to happen in a program. • Import sprites/ backdrops/ sounds in Scratch. • Create sprites/ backdrops/ sounds in Scratch. • Use the repeat command within a series of instructions. • Create conditions for actions by waiting for a user input using the 'if' and 'when' command. • Edit and debug instructions.
Computer Science	**Year 1 and 2 National Curriculum Objectives** • Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions **Year 1 Area of Study** • Understanding algorithms and turtle control **Year 1 Possible Resources** • Logo turtle • Beebot • Daisy the Dino **Year 2 Area of Study** • Using programs to recreate shapes **Year 2 Possible Resources** • Purple Mash 2Go • Spirograph • Geoboard • Kaleido free • RotoDoodle	• Recognise that all software executed on digital devices is programmed. • Explain what an algorithm is and express simple algorithms using symbols. • Program a Bee-bot to perform a specific given task. • Program Daisy the Dino to perform a specific given task. • Develop own task and give instructions to a Bee-bot/ Daisy the Dino to complete it. • Debug own instructions to solve any problems that occur. • Develop own task and give instructions to a Bee-bot/ Daisy the Dino to complete it. • Debug own instructions to solve any problems that occur.	• Create a geometric shape using a geoboard/ Spirograph. • Control the appearance of own shape by setting the colour, size and shape. • Create a geometric shape using Kaleido free/ RotoDoodle apps. • Create a sequence of instructions to generate simple geometric shapes (oblong/ square). • Create a specific shape using a program (2go). • Discuss how to improve/ change own sequence of commands.
Computer Science	**Year 1 and 2 National Curriculum Objectives** • Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs • Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions **Year 1 and 2 Area of Study** • To code **Year 1 and 2 Possible Resources** • Scratch	• Motion: Control motion by specifying the number of steps to travel, direction and turn. • Looks: Add text strings, show and hide objects and change the features of an object. • Sound: Select sounds and control when they are heard, their duration and volume. • Draw: Control when drawings appear and set the pen colour, size and shape. • Events: Specify user inputs (such as clicks) to control events. • Control: Specify the nature of events (such as a single event or a loop). • Sensing: Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?). • Variables and Lists: From Year 3 onwards. • Operators: From Year 3 onwards.	

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Information Technology	**Year 1 and 2 National Curriculum Objectives** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content **Year 1 Area of Study** • Writing and illustrating a book **Year 1 Possible Resources** • Stories.lgfl.net • Popplet • Paint • BookCreator **Year 2 Area of Study** • Recording sound and creating music to accompany pictures **Year 2 Possible Resources** • Paint • GarageBand • Photostory • LGfL • Audio Network Audacity • Audionetworktv.lgfl.netMusictrax.lgfl.net	• Use technology to generate ideas for own work. • Word process short texts, rather than copying up written work, starting to use two hands when typing. • Use various tools including brushes, pens, lines, fill, spray and stamps to illustrate own work. • Use the spacebar, back space, enter, shift and arrow keys. • Use save, retrieve, amend and print. • Talk about own work and make changes to improve it.	• Create/ select a series of pictures. • Use sound recorders, at and away from, a computer to capture and playback sound. • Save, retrieve and edit sounds • Create music to accompany pictures using Garageband. • Combine sound recording and music to accompany pictures to create a soundtrack.
Information Technology	**Year 1 and 2 National Curriculum Objectives** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. **Year 1 Area of Study** • Creating and understanding pictograms. **Year 1 Possible Resources** • Purple Mash • 2Count • Jit.lgfl.net **Year 2 Area of Study** • Writing and filming a recipe. **Year 2 Possible Resources** • Green Screen • Word • Pages • iMovie	• Understand and explain how images give information. • Use a simple table to record information in an area across the curriculum. • Show information as a pictogram. • Use a program to create a pictogram. • Explain what a pictogram is showing. • Create a set of questions and answers based on the pictogram made.	• Write instructions for a healthy recipe. • Film the instructions for a healthy recipe to create a cookery programme. • Decide which clips to keep. • Edit the clips to convey meaning. • Add simple titles and credits. • Select text and make simple changes including bold, italic and underlined.

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Computing Area	National Curriculum Objective & Area of Study (incl. possible resources)	Year 1	Year 2
Information Technology	**Year 1 and 2 National Curriculum Objectives** • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. **Year 1 Area of Study** • Finding images using the Web and creating a presentation based on current topic. **Year 1 Possible Resources** • Google Chrome • Powerpoint • LGfL Gallery • LGfL Copyright Copywrongs **Year 2 Area of Study** • Creating online presentation about history of computing and development of world wide web. **Year 2 Possible Resources** • LGfL History of Computing resources • Simple.wikipedia.org • Haiku Deck • Online presentational tools e.g. Prezi, Empressr, Google docs, Zoho SlideRocket	• Talk about a website used. • Explore a website by clicking on buttons, arrows, menus and hyperlinks. • Find information using the internet to illustrate a topic across the curriculum. • Find images using the internet to illustrate a topic across the curriculum beginning to understand about copyright restrictions. • Include images and information in a presentation using Powerpoint. • Share presentation with class.	• Use the internet to find out about Tim Berners-Lee (inventor of the world wide web) and explain how his invention worked. • Appreciate how search results are selected and ranked. • Learn how to use Prezi. • Create an online presentation • Use own presentation to share what has been found out. • Improve own presentation based on the feedback received.
Digital Literacy	**Year 1 and 2 National Curriculum Objectives** • 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 **Year 1 Area of Study** • Esafety • Talking about the internet and what devices around us are connected to it **Year 1 Possible Resources** • Search engines • Thinkuknow website - Lee and Kim **Year 2 Area of Study** • Esafety • Emailing as a class **Year 2 Possible Resources** • Email provider • Thinkuknow website - Hector and his friends • Usonline.lgfl.net	• Make decisions about whether of not statements or images found on the internet are likely to be true. • Understand that people interact with computers. • Know common uses of information technology beyond the classroom. • Identify different devices that can go on the internet and separate those that do not. • Identify what things count as personal information. • Know what to do when concerned about content or being contacted and the need for keeping personal information private in order to stay safe online.	• Recognise that a range of digital devices can be considered a computer and use a range of input and output devices. • Understand online risks and identify obviously false information in a variety of contexts. • Discuss the age rules for sites and why they exist. • Consider other people's feelings on the internet. • Use Sid's Top Tips in order to stay safe online. • Contribute to a class email and open and reply to an email as a class.

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EYFS Development Matters – Development Statements			
22-36 Months	**30-50 Months**	**40-60 Months**	**Early Learning Goal**
• Seeks to acquire basic skills in turning on and operating some ICT equipment. • Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car.	• Knows how to operate simple equipment, e.g. turns on CD player and uses remote control. • Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. • Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. • Knows that information can be retrieved from computers.	• Completes a simple program on a computer. • Uses ICT hardware to interact with age-appropriate computer software.	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.