

Computing Curriculum Year 1

Strand	Suggested Resources	Objectives
Multimedia - Graphics	Infant Video Toolkit	Use ICT to generate ideas for their work Use various tools including brushes, pens, lines, fill, spray and stamp Use save, retrieve, amend and print
Multimedia - Text	Infant Video Toolkit, Or Word	Use the spacebar, back space, enter, shift and arrow keys Start to use two hands when typing Word process short texts, rather than copying up written work
Programming	Beebot Virtual Beebot (or similar – Infant video toolkit 2go)	Give and follow instructions, which include straight and turning commands, one at a time. Explore outcomes when instructions are given in a sequence Give a simple sequence of instructions Discuss/ explore what will happen when instructions are given in a sequence. Give a sequence of instructions to complete a simple task Instructions use both movement commands and additional commands

Strand	Suggested	Objectives
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	Resources	
Websites	Internet	Talk about websites they have been on Explore a website by clicking on buttons, arrows, menus and hyperlinks Navigate 'back' by clicking on the 'back' button Complete a search under the supervision of adults
Data - Pictograms	Infant Video toolkit	Know that images give information Say what a pictogram is showing them Put data into a program (Pictogram) Sort objects and pictures in lists or simple tables
E-Safety	thinkuknow.co.uk -Lee and Kim	Make decisions about whether or not statements or images found on the internet are likely to be true Identify different devices that can go on the Internet, and separate those that do not Identify things that count as personal information Identify when inappropriate content is accessed and act appropriately

Computing Curriculum Year 2

Strand	Suggested Resources	Objectives
Multimedia - Sound Recording	Easyspeak Microphones and Ordacity	Use sound recorders, at and away from a computer and playback sound Use software to record music and sounds Change sounds recorded Save, retrieve and edit work
Multimedia - Videoing	Windows movie maker and Flip cameras	Capture video Discuss which videos to keep and why Arrange clips to make a short film that conveys meaning Add simple titles and credits Select text and make simple changes including bold, italic and underlined
Programming	Real Roamer Virtual Roamer (2go on Infant Video Toolkit)	A) Generate a sequence of instructions including right angled turns Create a sequence of instructions to generate simple geometric shapes (oblong/ square) Discuss how to improve/ change their sequence of command B) Plan a short 'story' for a character and write the commands for this Edit/refine a sequence of commands Use the 'repeat' (loop) command within a series of instructions

Strand	Suggested Resources	Objectives
Online - Email	Email Accounts	Recognise an email address Find the @ on a keyboard Contribute to a class email Open and select to reply to an email as a class
Data - Branching databases	2Simple Infant Video Toolkit	Place objects and pictures in a list or a simple table Make a simple Y/N tree diagram to sort information Create and search a branching database
E-safety	thinkuknow.co.uk -Hector's world	Identify obviously false information in a variety of contexts Recognise that a variety of devices (Xbox, PSP etc, computers and phones) connect users with other people Identify personal information that should be kept private Consider other people's feelings on the Internet

Computing Curriculum Year 3

Strand	Suggested Resources	Objectives
Multimedia - Graphics	Infant video toolkit	Acquire, store and combine images from cameras or the Internet for a purpose Use the print screen function to capture an image Select certain areas of an image and resize, rotate an image Edit pictures using various tools in paint for photo-manipulation software
Multimedia- Ebooks	Publisher	Create a new eBook with a front cover and add and remove pages Combine text and images within each page and embed sound clips Add information about the author and title for publishing Get quicker at typing with both hands Use different fonts, sizes, colours and effects to communicate meaning Align text left, right and centre
Programming- Logo	Logo	Write simple program in Logo to produce a line drawing Use more advanced Logo programming including pen up, pen down etc. Write a program to reproduce a defined problem e.g. geometric shape/pattern
Programming	Scratch	Explore the Scratch environment Use a variety of inputs Sequence instructions

Strand	Suggested Resources	Objectives
Online - Blogging	TBC	Navigate to view their class/ school blog Understand that their class/ school blog can be updated from a range of devices Comment on their class/ school blog Subscribe with an adult's email to receive updates about their class/ school blog
Online - Internet Research	Internet	Type in a URL to find a website Add websites to favourites Use a search engine to find a range of media e.g. images, text Think of search terms to use linked to questions they are finding the answers for Talk about the reliability of information on the Internet e.g. the difference between fact and opinion - link to E-safety
Data	Excel	Choose information to put into a data table Recognise which information is suitable for their topic Design a questionnaire to collect information Sort and organise information to use in other ways
E-safety	thinkuknow.co.uk	Question the 'validity' of what they have seen on the Internet Use a browser address bar and not just search box and shortcuts Think before sending and suggest consequences of sending/ posting Recognise online behaviours that would be unfair

Computing Curriculum Year 4

Strand	Suggested Resources	Objectives
Multimedia Animation	Cameras and windows movie maker	Plan what they would like to happen in the animation Take a series of picture to form an animation Move items within the animation to create movement on playback Edit and improve animation
Multimedia Videoing	Flip cameras and windows movie maker	Capture video for a purpose Discuss the quality of videos and choose which to keep and which to re-shoot Trim and arrange clips to convey meaning Add titles, credits, slide transitions, special effects and talk about the effect these have on the audience
Programming	Scratch	Navigate the scratch programming environment Create a background and sprite Plan and create a story scene Add inputs to control the sprite Use conditional statements(if, then) within their work
Programming	Scratch	Create a stage for a game Add sprites to their game Program the sprites to move within the game Use the repeat command Use conditional statements (if..then) within their work

Strand	Suggested Resources	Objectives
Online Email	School email accounts	Log-in to an email, open emails, create and send replies Attach files to an email Download and save files from an email Email more than one person and participate in group emails by 'replying to all'
Online Video conferencing	Skype	Load and add a contact to Skype Make/ receive voice and video calls Adjust the audio/ video settings to ensure good quality of the call
Data Branching databases	2investigate	Create and search a branching database Sort and organise information to use in other ways Create database from information selected
E-Safety	thinkuknow.co.uk	Recognise social networking sites and social networking features built into other things (such as online games and handheld games consoles) Make judgements in order to stay safe, whilst communicating with others online Tell an adult if anything worries them online Identify dangers when presented with scenarios, social networking profiles etc Articulate examples of 'good' and 'bad' behaviour online

Computing Curriculum Year 5

Strand	Suggested Resources	Objectives
Multimedia E-books	Publisher	Create an e-book with a front cover and add/ remove pages and sub-pages Produce multimedia e-book combining video, pictures, text and audio Attach author data for publishing and publish book
Multimedia Sound Recording	Audacity	Collect audio from a variety of sources including own recordings and internet clips Create multi-track recording using effects Edit and refine own work to improve outcomes
Programming	Scratch	Explore and use graphics within Scratch Begin to use loops to control sprites Create and edit variables Use conditional statements
Programming	Scratch	Use conditional statements Create and edit variables Use loops to refine algorithms Use sound within an environment

Strand	Suggested Resources	Objectives
Online Internet research	Internet	Use advanced search functions in Google e.g. quotations Understand websites such as Wikipedia are made by users (link to E-safety) Use strategies to check the reliability of information e.g. cross checking with books Use their knowledge of domain names to aid their judgement of the validity of websites
Online Cloud computing	TBC	Understand that files may be saved off their devices in 'Clouds' Upload/ download a file to the cloud on different devices Understand about syncing files using cloud computing folder
E-safety	thinkuknow.co.uk	Judge what sort of privacy settings might be relevant to reducing different risks Judge when to answer a question online and when not to Be a good online citizen and a friend, not a 'digital bystander' Find and cite the web address for any information or resource found online Articulate what constitutes good behaviour online Use different sources to double check information found
Data Spreadsheets	Excel	Create data collection forms and enter data from these accurately Know how to check for and spot inaccurate data Know which formulas to use when changing a spreadsheet model Make graphs from the calculations on my spreadsheet

Computing Curriculum Year 6

Strand	Suggested Resources	Objectives
Multimedia Animation	Cameras and Windows Movie Maker	Plan a multi-scene animation including characters, scenes, camera angles and special effects Use stop-go animation software with an external camera to shoot the animation frames Adjust the number of photographs taken and the playback rate to improve the quality of the animation Publish their animation and use a movie editing package to edit/ refine and add titles
Multimedia Video	Flip cameras Windows Movie Maker	Storyboard and capture videos for a purpose Plan for the use of special effects/transitions to enhance their video Trim, arrange and edit audio levels of video to improve the quality of their outcome Add titles, credits, transitions, special effects Export their video in different formats for different purposes
Programming	Scratch	Navigate the Scratch programming environment Use a range of statements and loops to control sprites Create and edit variables Use sound within an environment
Programming	Scratch	Design their own game including sprites, backgrounds, scoring and/or timers Their game uses conditional statements, loops, variables and broadcast messages Their game finishes if the player wins or loses and the player knows if they have won/lost Evaluate the effectiveness of the game and debug if needed

Strand	Suggested Resources	Objectives
Online Blogging	TBC	Register for a blog: selecting a url and navigate to their blog once it is created Alter the theme and appearance of their blog, adding background and images Create a new post, save it as a draft and publish it Embed photos, hyperlinks and videos into posts Reorganise the posts and remove posts they no longer want Like/ follow other blogs and build up their blog content over the year
E-safety	thinkyouknow.co.uk	Find <i>report</i> and <i>flag</i> buttons in commonly used sites and name sources of help (Childline, Cybermentors etc) 'click-CEOP' button and explain to parents what it is for Discuss scenarios involving online risk State the source of information found on the Internet Act as a role model for younger pupils, including promoting 'Sid's Top Tips'
Data Spreadsheets	Excel	Create data collection forms and enter data from these accurately Know how to check for and spot inaccurate data Know which formulas to use when I want to change my spreadsheet model Make graphs from the calculations on my spreadsheet Sort and filter any information Understand that changing the numerical data effects a calculation

Scratch Progression in KS2

3	<u>Key Skills-</u> Exploring Scratch environment Creating a stage Creating and changing sprites Sequencing instructions Debug own work
	<i>Introduction to programming</i> <i>Experiment with sprites and stages</i> <u>Starting from Scratch</u> <i>Story Time</i>
4	<u>Key Skills -</u> Recap prior knowledge Exploring Scratch environment, sprites and stages Begin to create games Use of conditional statements Use of repeat loop Debug own work
	<i>Creating animated stories</i> <u>Starting from Scratch</u> <i>A Mazing Game</i>
5	<u>Key Skills -</u> Recap prior knowledge Exploring Scratch environment, sprites and stages Explore graphics within Scratch Use of decision statements and conditional loops Create and edit variables Adding sound to work Debug own/ others work
	<u>Starting from Scratch</u> <i>Get the picture</i> <i>Forest Archery Game</i>

6	<u>Key Skills -</u> Recap prior knowledge Exploring Scratch environment, sprites and stages Use of statements and loops to control sprites Create and edit variables Add sound to work Use programming skills in less familiar Scratch environments Design and create own games
	<u>Starting from Scratch</u> <i>2014/15 only - Forest Archery Game</i> <i>Scratch Project</i> <i>2015/16 onwards - Pico boards/ Raspberry Pi</i>

Notes

Much of the above document has been adapted from PrimaryComputing.co.uk

Units of work to be taught as each teacher chooses - either in termly blocks (in any order) or cross-curricular.

All assessment to be in the form of teacher judgement.