**Computing Scheme of Work 2014**

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| **Year Group** | **Term 1****Computer Science****Programming** | **Term 2****Information Technology** **(Switched on Computing)** | **Term 3****Digital Literacy** **E-Safety Week** | **Term 3****Computer Networks and the Internet** | **Term 4****Multimedia** | **Term 5****Computer Science & Computer Science Unplugged** | **Term 6****Information Technology****Data Handling** |
| **EYFS** | **Controlling Objects**Children play with remote control cars and other ‘push button’ toysUse control toys in conjunction with stories, (e.g. dress Bee-bot up as a character such as Incy Wincy Spider, and see how many moves it will take to move up the waterspout).<http://www.tts-group.co.uk/_RMVirtual/Media/Downloads/BEEBOT-How-To-1.pdf> | **We are Successful**Children make a presentation which celebrates their achievements or special events in their life - Switched on ICT in the Early Years sample unit of work | **Smartie the Penguin**<http://kidsmart.org.uk/teachers/ks1/> | **Identify technology and develop basic skills**Identify keyboard, monitor, mouse and uses of technology at school and homeOpen and close a program using the mouseDrag objects across the screen when using online activitiesDevelop their mouse controlLog on to a computer network such as the school’s Learning Platform | **Make use of software, online games and apps** that allow pupils to create something new. Pupil should have opportunities to work with images, text and sound.Recognise their name on the keyboard and add it to a piece of workExplore a simple paint program and begin to use different brushes, tools and colours to create a picture on a given topic | **Talk about electronic equipment in real-life situations**, (e.g. traffic lights, scanners, microwaves, cash tills, etc.) and investigate how they work.Look around the school and environment at technology with control switches, (e.g. photocopier, alarms, washing machines, television sets).Online games and Apps for controlling objects | * **Use appropriate internet-based games and activities to support their learning**

**Crick Web -**[http://www.crickweb.co.uk/Early-Years.htm**l**](http://www.crickweb.co.uk/Early-Years.html)**Topmarks Search -** <http://www.topmarks.co.uk/Search.aspx?Subject=37>**Primary Interactive -**<http://www.primaryinteractive.co.uk/early.htm> |
| **1** | **Bee Bots – mats, storytelling and games**Queensland Government Bee-Bot Guide has lots of ideas for lessons<http://www.tts-group.co.uk/_RMVirtual/Media/Downloads/BEEBOT-How-To-2.pdf>Use Bee-Bot software – onscreen representation of Bee-bot and the matsSolving problemswith Bee-Bots2Simple Infant Toolkit – 2Go | **We are Sharing**Create a collage about you - Switched on Computing sample unit of work | **Digiduck’s Big Decision**<http://kidsmart.org.uk/teachers/ks1/digiduck.aspx> | **Navigating the WWW****Common uses of IT beyond school**Viewing webpages, Navigating a websiteEntering a website addressE-SafetyInfant Encyclopaedia<http://simonhaughton.typepad.com/files/year-1.pdf><http://www.parkfieldict.co.uk/infant/> | **Art & Images****Music Software**Any painting and music packages / appsMusic – 2Simple Basic word processing skillsUse index fingers (left and right hand) on a keyboard to build words and sentences. Know when and how to use the SPACE BAR (thumbs) to make spaces between words. | **Modelling software** Sherston examples:-Charlie Chimp’s Modelling PartyFlobotLittle Brown Bear on the Farm2Simple – 2 Do It YourselfHow a supermarket works<http://www.code-it.co.uk/csplanning.html> | **Data Handling – Sorting and organising data**[The Topmarks website](http://www.topmarks.co.uk/interactive.aspx?cat=18" \t "_blank) has a range of resources for organising and sorting data.[Primary games maths pack 2](http://www.maths-packs.co.uk/indexmp2.html%22%20%5Ct%20%22_blank) allows children to organise their own data. |
| **2** | **How to Train your Robot / Mazes - Dr Technico & Bee-Bots**<http://drtechniko.com/2012/04/21/teaching-the-how-to-train-your-robot-class/>**One key Logo**<http://scratch.redware.com/project/one-key-logo-play-button>**Bee-Bot slalom buzzing game – Queensland guide** | **We are Cooking**Create an interactive recipe book -Switched on Computing sample unit of work | **Lee & Kim’s Big Adventure CEOP**<http://www.thinkuknow.co.uk/5_7/leeandkim/> | **Internet research and safe Searching**Simple searching, locating and recording informationCopy and paste from the Internet to another documentE-Safety | **Combining text, images & sound**(e.g.) 2CreateaStoryCapture images, sound, textVideo and digital camera, sound recordingBasic word processing skillsUse keyboard to enter text (index fingers left and right hand). Know when and how to use the RETURN/ENTER key. Use SHIFT and CAPSLOCK to enter capital letters. Use DELETE and BACKSPACE buttons to  | **Algorithms** **What are they?****Sorting algorithms**[iPad apps](http://www.ipadsinprimary.co.uk/control-and-programming%22%20%5Ct%20%22_blank): Cato's hike, A.L.E.X, move the turtle, beebot and Daisy dino are key appsThinking Myself<http://games.thinkingmyself.com/><http://travelingcircuits.blogspot.co.uk/>Rommy Robot<http://www.sandaigprimary.co.uk/fun/rommy_robot.html>TESiboard<http://www.iboard.co.uk/teacher/jlisaw8>Human Carne Algorithm<http://www.code-it.co.uk/csplanning.html> | **Data Handling – sort, capture and present data**MAPE Sorting GamesBranching databasesBar ChartsVenn & Carroll diagrams |
| **3** | **Probots** **Cracking the Code**[**http://www.bbc.co.uk/programmes/p01661yg**](http://www.bbc.co.uk/programmes/p01661yg)Program the Probot to draw different shapes and patterns using the repeat command. Fix bugs in faulty code.Cops & Robbers / MFL Ideas<http://www.resources.digitalschoolhouse.org.uk/?searchword=probots&searchphrase=any&limit=&ordering=newest&view=search&Itemid=92&option=com_search><http://nrich.maths.org/6288>ORCreating a Simple Scratch Program to Investigate Angles of Regular 2D ShapesComputer Science Integrating with Maths Planning<http://www.code-it.co.uk/cs/loops2dshapes.htm>OR use LOGO | **We are tour-guides**Create a virtual tour of the local area -Switched on Computing sample unit of workOR**An introduction to Scratch**Word cards 1-12Additional Scratch cards <http://www.teach-ict.com/contributors/liane_okane.htm>Switched on Computing sample unit – we are programmers | **Hector’s World**<http://hectorsworld.netsafe.org.nz/> | **What is the Internet?** Drawing the InternetLearn about the telegraph and Morse codeHistory of the netWalking the net activityModelling the net**Evaluating Digital Content**Understanding media advertising - <http://www.mediasmart.org.uk/><https://sites.google.com/site/primaryictitt/home/key-stage-2/discernment> | **Animation / Movie Making**Windows Movie Maker / Photo storyText, images and sound multimedia Video editing project | **Algorithms**Jam Sandwich botMagic Trick - <http://www.resources.digitalschoolhouse.org.uk/algorithms-a-programs/190-teaching-algorithms>Computer Science Unplugged* Image representation
* Error detection
* Searching algorithms
* Sorting algorithms
 | **Infographics**[Piktochart](http://piktochart.com/%22%20%5Ct%20%22_blank): create your own infographics combining global and local data by adding images, text and data to ready-made themes. Alternatives are [easel.ly](http://easel.ly/) and [infogr.am](http://infogr.am/). A successful Year 3 student project. |
| **4** | **Scratch Projects**Scratch lesson Plans 1-10 from the Irish Computer Society | **We are Botanists**Create a tree diagram for sorting plants and recreate this tree diagram structure in PowerPoint using hyperlinks - Switched on Computing sample unit of work | **Captain Kara and the SMART Crew**<http://www.childnet.com/resources/the-adventures-of-kara-winston-and-the-smart-crew> | **Know the difference between the web and the Internet**The birth of the Web**Search technologies – how results are selected and ranked**<https://sites.google.com/site/primaryictitt/home/key-stage-2/search-engines><https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxwcmltYXJ5aWN0aXR0fGd4OjU5NDliNjA2MjY2ZTJkNTQ> | **PPT interactive stories with choices and hyperlinks** (selection , linking slides)The child puts two buttons onto a slide and then links them to other slides - creating in effect, a branch tree. Children create interactive comic books or alterative endings to stories they are studying. | **Computer Science Unplugged**[**http://csunplugged.org/activities**](http://csunplugged.org/activities)* Selection
* Repetition
* Variables

**How to Teach Programming games**<http://bit.ly/tp-games> | **Class Survey****Analyse & Present Data**Create a questionnaire online to collect data. Enter into Excel spreadsheet,graph data and analyseIntroduce simple formulae[**http://www.code-it.co.uk/dlplanning/spreadsheet/spreadsheet.htm**](http://www.code-it.co.uk/dlplanning/spreadsheet/spreadsheet.htm) |