**Childwall Valley - Computing across the Curriculum Long Term Planning Map - F2**

This is your long-term overview for Computing. Please add to or amend this plan through the year. Underneath each section are the key skills for that area of computing. These can be assessed using the Assessment tracker spreadsheet. More activities and suggestions can be added as other subject areas are added to the plan.

T = Tutorial Available

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| **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| Our World | Light & Dark | Traditional Tales | Animals | Magic |
| Family, family trees, old toys, themselves, environment, different faiths and religions. | PSHE - who is scared of dark, shadows, making shadow puppets, colour mixing for art, light and dark in different countries around the world, space | Science experiments - wolf blowing down houses, comparing traditional and alternative tales, create own characters, PSHE who is right/wrong, geography looking at different settings | Animals from around the world, countries and habitats, where our food comes from | Magic - science experiments, maths - measure, number, shape. PSHE kind/unkind, mix media art, DT, making hats & cloaks |
| Our Lovely Home | Weather & Seasons | Then & Now: Nurses | Then & Now: At the Seaside |

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| ***Core Skills*** | KSF2.1 Be able to use a mouse/trackpad to move and place items on a screen, with increasing accuracy. KSF2.2 Be able to interact purposefully with icons and buttons in age-appropriate software using mouse clicks or taps.KSF2.3 Shows developing mouse control through simple activities on-screen including click-and-drag, drag-and-drop.KSF2.4 Be able to interact with and respond to a range of digital stimuli, including images, video and digital texts.KSF2.5 Be able to use a variety of electronic toys in play situations, with the intention of finding out how it works. |
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| ***Computer Science***  |
| ***Control and Programming*** | **Controllable Toys**Explore toys that simulate control devices in the home and their local environment e.g. torches, microphones, walkie talkies, ear phones & audio books with the intention of finding out how it works.**CSF2.1****Puzzle Pop HD app**Pupils learn problem solving, sequencing and spatial reasoning by solving different colourful puzzles.**CSF2.2****Remote Control Cars**Use remote control toys to navigate an obstacle course or pathway. Encourage children to use directional language. To extend, pupils could give one other directions to complete the obstacle course.**CSF2.1, CSF2.2****Dash and Dot Robots**Use the Go for Dash and Dot Robots app to explore control of a robotic device. Pupils can drive the Dash robot as well as alter light patterns and play sounds. Pupils should begin to describe the effect of their actions, eg “when I press X, Y will happen.”**CSF2.1, CSF2.2** | **Bee-Bot (Blue-bot) floor robots** Control the robot by giving single or short sequences of commands. Encourage children to talk to others through what they are doing, using appropriate directional and counting language.**CSF2.2, CSF2.3** **Code-a-pillar app** Learn to sequence instructions using Code-a-pillar App. Begin to use directional language e.g. forwards, turn right. Drag on the directional commands and tap the caterpillars head to guide it through increasingly challenging levels. Pupils may need guidance to use the resource in a structured way.**CSF2.2, CSF2.3, CSF2.4****Xylo for Dash and Dot**Use the Xylophone extension on the Dash robots for pupils to explore coding a short tune to be played out by the robot. Look at how we calibrate the robot to ensure it plays the right note and that by sequencing the notes we can play a recognisable tune.**CSF2.1, CSF2.2** | **Box Island app**Develop sequencing skills and directional language. (Each child can create their own profile or teachers can manually record each child's progress e.g. on ticklist).**CSF2.3, CSF2.4****Bee-Bot (Blue-bot) floor robots** Control the robot by sequencing directions. Children or teachers could use the floor mat to tell a story, programming the robot to reach different locations along the way. Pupils could record directions using a whiteboard or arrow cards.**CSF2.3, CSF2.4****Path for Dash Robot**Use the Path for Dash robot app to begin to sequence instructions. Pupils will solve problems by following the “recipes” of actions prompted by the app. They draw the path with their finger and add the instructions along that line. The robot then carries out these instructions. If pupils correctly sequence actions they unlock further actions and scenarios.**CSF2.1, CSF2.2** |
| ***Key Skills*** | CSF2.1 Be able to control a range of ‘toys’ using remote controls.CSF2.2 Be able to explore the commands needed to control a range of electronic toys, to achieve a specific outcome.CSF2.3 Be able to use step by step commands to program a floor or virtual robot to move, using directional language including forward, backward, left and rightCSF2.4 Begin to use basic symbols to represent and record directional instruction. |

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| ***Digital Literacy*** |
| ***Research: Internet*** | **Peek-a-Zoo App** Allow children to learn about animals, emotions, actions and sounds using this app.**DLF2.1****Infant Encyclopedia - Houses and Homes**As a whole class or in groups, explore the topic on computer or board (teacher led).[Link here](http://infant.parkfieldprimary.com/) **DLF2.1, DLF2.2** | **Infant Encyclopedia - Nocturnal Animals**In small groups, allow children to explore the topic on computers or iPads by using a QR code or web link.[Link here](http://infant.parkfieldprimary.com/) **DLF2.1, DLF2.2** | **Traditional Tales music videos**Allow the pupils to watch selected videos as a class or individually to learn facts about the chosen topic.[Link here](https://www.bbc.co.uk/teach/ks1-music/zbcjscw)**DLF2.1, DLF2.2****Weather Data**Use the BBC weather app or website to find weather each day over a period of time. Website is [here.](https://www.bbc.co.uk/weather)**DLF2.1, DLF2.2****BBC Science: What are the seasons?**Use the videos and [activities](https://www.bbc.com/bitesize/articles/zcx3gk7) to learn about seasons.**DLF2.1, DLF2.2****Phonics Play Phase 1 Resources**Selective of interactive games linked to Phase 1-6 phonics that can be played on an interactive whiteboard. Some games require a subscription. [Link here](https://www.phonicsplay.co.uk/resources/phase/1)**DLF2.1** | **Animal music videos**Allow the pupils to watch selected videos as a class or individually to learn facts about the chosen topic.[Link here](https://www.bbc.co.uk/teach/bring-the-noise/andys-raps-index/z6tjcqt)**DLF2.1, DLF2.2****Online Image Searching**Find information in different forms on the Internet. Use a suitable child-friendly search engine such a Google Junior to find images linked to animals. These images could be used in Pic Collage activity below.**DLF2.1, DLF2.2****BBC Science Habitats and the environment?**Use the videos and [activities](https://www.bbc.co.uk/bitesize/topics/zx882hv) to learn about habitats.**DLF2.1, DLF2.2** | **Infant Encyclopedia - Seaside Holidays**Allow children to explore the topic on computers or iPads by using a QR code or web link.[Link here](http://infant.parkfieldprimary.com/) **DLF2.1, DLF2.2** |
| ***Online Communication*** | **Hello Ruby**Use the link below to allow children to investigate different computational concepts without a computer. In the PLAY section are multiple activities with printable resources.[Meet Ruby](http://www.helloruby.com/meetruby)**DLF2.3****Online Sharing**Share number rhymes and phonics songs on the Online Platform (e.g. Seesaw) as part of a home learning resource. **DLF2.3** | **Digiduck Online**Read a story of friendship and responsibility online. Discuss with the children what things they do online and use their information to help plan the e-safety lessons this year. Ask children to write down or draw pictures of the sites they visit, apps or games they play on the PC.Link [here](https://www.childnet.com/resources/digiducks-big-decision)**DLF2.3** | **Discuss being safe with ‘images’**Talk about how we should only take pictures with a tablet of people in class if our teacher has asked us to. Explain to the children that they should not share their own picture with other people they do not know. Do they know of any places on the internet where they could put their picture? Also use [Jessie and Friends: Sharing Pictures Film](https://www.thinkuknow.co.uk/parents/jessie-and-friends-videos/)**DLF2.3** |
| ***Modelling and Simulations*** | **Google Earth**As a teacher locate major continents of the world and add placemarks on Google earth. Locate school, explore using Street View. When zoomed out, **T****DLF2.1, DLF2.4** | **MarcoPolo Weather app** Simulate and represent the effects of different weather.**DLF2.4****Weather forecast**Create a model of a weather forecast for different locations.[Build your weather forecast](http://www.crickweb.co.uk/ks1science.html)**DLF2.1, DLF2.4** | **Animals in the local habitat**Use [school grounds animal activity](http://www.rspca-education.org.uk/wildlife/animal-friendly-school) to explore what kinds of animals they may find around the school grounds.**DLF2.1, DLF2.4****PEEP and the Big Wide World House Hunt app**Matching game where pupils match animals to their homes/habitats.**DLF2.4****Quiver app**Use Quiver app alongside the colouring pages to bring children’s artworks to life. Scan the coloured pages with the app to view them using AR technology. The colouring pages can be printed from the website [here](http://www.quivervision.com/coloring-packs/). Ensure the content to be used is marked as ‘free’.**DLF2.4** |
| ***Key Skills*** | DLF2.1 Be able to use a shortcut such as an icon on the desktop to navigate to a specific website, or an icon on a tablet to open a specific app.DLF2.2 Be able to purposefully navigate a website or app using buttons or icons.DLF2.3 Be able to tell an adult if they feel something they see online is inappropriate or hurtful.DLF2.4 Can explore simple digital simulations and games and find out ‘what happens if’ |

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| ***Information Technology*** |
| ***Word Processing and Desktop Publishing*** | **Pic Collage app** Take children on a walk around the school building (or F2 area), taking photographs of different sources of light. Pupils can then add these photos into Pic Collage, and choose a suitable background. **ITF2.2, ITF2.3** **Digital Books**Using the Apple Books app, allow children to access a range of different eBooks and explore the differences between printed and digital books. If the app is not installed, ask a technician to add it to iPads -  [link here](https://apps.apple.com/us/app/apple-books/id364709193). Many books can be downloaded for free or a small charge. **ITF2.4**  | **Pic Collage app**Present information about weather and seasons, combining text and photos. Choose a suitable frame to place the images. Add text to each image, in the form of simple labels.**ITF2.2, ITF2.3** **Mark Making**Use an interactive whiteboard /iPad app for mark-making (e.g. [Doodle Buddy](https://apps.apple.com/gb/app/doodle-buddy-paint-draw-app/id313232441) app (iPad2+), [iPastels](https://apps.apple.com/gb/app/ipastels/id489302558) app (iOS12+) or [Joy Doodle](https://apps.apple.com/il/app/joy-doodle-movie-color-draw/id460712294) app (iOS10+)). Alternatively, children could use the interactive board with a paint program (e.g. Tux Paint) or online tool (e.g. [Kidmons](http://kidmons.com/game/paint-online)). If the apps are not available on the iPads, ask technician to add.**ITF2.1** | **Primary Writer app**Use the Primary Writer app to allow children to word process their own pieces of writing and then selecting an appropriate background for the content of the writing.**ITF2.3****Pic Collage app** Present information about animals, combining text and photos. Pupils could use images found in internet research (see above). Choose a suitable frame to place the images. Add text to each image, in the form of simple labels.**ITF2.2, ITF2.3**  |
| ***Multimedia*** | **Taking Photos**With help, children can begin to take photographs of their local and school area. For example, this could be used as part of the children’s work on self-portraits or to take photographs of the outdoor area.**ITF2.2****Sound recording**Experiment with audio recording in role play using talking tins and microphones. This could be part of role-play activities.**ITF2.4****Music-Making**Explore ways of making and listening to sounds using simple programs and devices, e.g. karaoke machines, music mats and piano keyboards.**ITF2.4****Draw and Tell**Use the Draw and Tell app to create pictures and record the children speaking about their artwork. Videos can be saved to the ipad camera roll. Link to the app is [here](https://apps.apple.com/gb/app/draw-and-tell/id504750621), ask a technician to add it to the iPads if needed.**ITF2.1, ITF2.4** | **Gracie & Friends Photo Friends**Pupils with adult support can take images of themselves that then appear in different scenes and scenarios.**ITF2.2****Audio Books & Ear Phones**Allow pupils to explore audio books linked to traditional tales.**ITF2.4****Puppet Pals app**Use Puppet Pals app and fairy tale characters to tell stories set in imaginary worlds (free version). Can extend by retelling a story that they have read in class (paid version). Choose two to four characters and up to two backgrounds. Arrange on screen. Use double tap to flip the image and pinch and stretch to make characters bigger and smaller. Practise retelling the story. Use the pause button to manage the recording. Save as video to the app and then export to camera roll. **T****ITF2.4****Music-Making apps**Explore ways of making and listening to sounds using the iPads. Apps include:Singing Fingers, Jellyband (iPad2+), Tap a Tune, Musical Me and Tune Train. If chosen apps are not available, ask a technician to add.**ITF2.4** | **Animated Images**Use the Chatterpix Kids app to animate a still image/photograph and record the children's voices. Teachers could find and save a range of pictures of animals (or children could save photos from a web search) to animate. This could be linked to Understanding of the World or to characters from a book that the class is reading. **T****ITF2.2, ITF2.4****Sock Puppets app**Use Sock Puppets app to create animations and develop language. Experiment with using different characters to alter the children's voices.**ITF2.4****Tap a Tune app** Explore different instruments and begin to understand how musical notes can be represented as images and symbols.**ITF2.4** |
| ***Data Handling*** | **Explore:**Use and have examples of barcodes, metal detectors, simple sound recorders, automatic doors, light sensors, stick-on thermometer strips.**ITF2.5, ITF2.6****Talking Tins**Ask pupils to sequence talking tins to order numbers, or match an initial sound to an object or written letter.**ITF2.4, ITF2.6** | **Collecting data**Collect and analyse class-based data about themselves e.g. eye colour/favourite fruit/favourite fairy tale. Use simple tally chart software to present data. Link is [here.](https://primaryschoolict.com/pictograph/)**ITF2.6** | **Pictograms**Use an online pictogram maker to record data. Sort the children practically, then transfer the information to the graph. This could be linked to a wide variety of areas e.g. how children have travelled to school, favourite animals, etc. This could also be completed as a whole class activity led by the teacher on the interactive whiteboard. [Link here](http://primaryschoolict.com/pictograph)**ITF2.6, ITF2.7**  |
| ***Key Skills*** | ITF2.1 Be able to use an interactive whiteboard or tablet for mark-making and to communicate their ideas.ITF2.2 Use a digital camera to capture still and moving images.ITF2.3 Begin to use a computer keyboard using single fingers, developing a familiarity with letters, numbers, backspace, arrow keys and spacebar.ITF2.4 Be able to record and playback pre-recorded sounds and speech using age-appropriate software or other recording devices.ITF2.5 Be aware of everyday devices that sense data, e.g. bar codes, metal detectors, automatic doors, light sensors.ITF2.6 Be able to sort, sequence or group various objects on a screen or interactive whiteboard.ITF2.7 Be able to produce simple digital pictograms with adult support |