Childwall Valley - Computing across the Curriculum Long Term Planning Map - Y3

This is your long-term overview for Computing. Please add to or amend this plan throughout 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

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Local		UK		World	
Science	Magnets & Forces		Rocks	Light	Animals inc Humans	Plants
History/ Geography	Changes in Liverpool	Chester: Map work -	Changes in Britain from the Stone Age to the Iron Age	Trade links: Explore globalisation.	Overview of where and when the first civilisations appeared and a depth study of: Ancient Egypt	The Rainforest
Art / DT	Art – Drawing – self portraits - Kehinde Wiley	DT – Textiles – To create a seasonal stocking	DT – Cooking – To make a savoury tart	Art – Painting – To draw a flower in the style of Georgia O'Keeffe	Art – Sculpting – To create a clay sculpture and paint it in the style of John Dyer	DT – Pneumatics – To create pneumatic rainforest animal heads

Key Skills *(used throughout all areas of Computing)*	KS3.1 When using a mouse or trackpad, be able to use left/right/double click and scroll.
	KS3.2 Able to use more than one hand to enter text, using the keyboard.
	KS3.3 Can use cut, copy and paste tools by right clicking or using the edit toolbar.
	KS3.4 Be able to save and retrieve work effectively.
	KS3.5 With guidance, be able to navigate a folder system to find and open a specific file e.g. Shared Drive, iPad camera roll or Dropbox.
	KS3.6 Know and use basic keyboard function keys e.g. shift, caps lock, space bar, return.

Computer Science

Tutorial Link

	Code Studio
	Code Studio. Create or print off existing user accounts for class on the website. Y3 should be working around Course C level, at a pace that is appropriate for the class. We would recommend teaching the whole class a lesson at a time, and using the extension materials to allow more able pupils to progress once they have completed the lesson materials, rather than moving on through the lessons independently. Track and target pupil progress using the built-in pupil tracker. **T** **CS3.1, CS3.2, CS3.3, CS3.4, CS3.5, CS3.6**

Control and Programming	**Dash robot** Control the robot to tell a particular story along a path that the pupils have prepared and then programmed into the path app.. **CS3.1, CSC3.3, CS3.5, CS3.5**	**Lego Mindstorms (Fix the Factory) app** Develop work done in Code Studio by introducing Lego Mindstorms, Fix the Factory App. Resources here: Link here **T** **CS3.1, CS3.3, CS3.5**	**Learn to Code with El Chavo app** Develop sequencing skills (Level 3 - Sequences II). **CS3.1, CS3.2, CS3.3**	**Tynker app or online** (Space Cadet) Program repeating pattern of movement to solve problems by sequencing commands correctly and then including repeat and repeat until commands, extending to if/else blocks. **CS3.1, CS3.2, CS3.3, CS3.4, CS3.6**	**Scratch Jr app (moon landing)** Create a multi-scene story by programming sprites. Sequence the movement of a character to a space rocket which then launches. The next scene can be in space where multiple sprites can simultaneously move in a range of ways using repeats. Finally the rocket can land on the moon, where the astronaut leaves to explore and meet	**How does the internet work?** Use BBC Bitesize for a video, information and glossary. Use this as a basis to create a digital presentation to show learning, and undertake any additional research to follow lines of enquiry.

| | | | | | | an alien. Encourage creativity whilst ensuring that programming skills are being understood and demonstrated. **CS3.1, CS3.2, CS3.3, CS3.4, CS3.5, CS3.6** | |

Key Skills	CS3.1 To sequence a list of commands/blocks to produce an output e.g. a light comes on or a robot follows a defined route. CS3.2 Is able to use 'repeat' and 'repeat until' loops when appropriate. CS3.3 Be able to find errors in a simple program and successfully debug to make the program work. CS3.4 Can use conditional statements (if and when commands). CS3.5 Understands the importance of time within a program (e.g. using wait). CS3.6 Can make use of an input 'event' within a simple program e.g. when the start button is clicked.

Digital Literacy

Tutorial Link

| **Research: Internet** | **BBC Bitesize: Forces and Motion**
Use the videos and activities on the BBC Website to enhance and embed children's learning.
DL3.1

Google Expeditions
Use the VR headsets for pupils to experience stonehenge and the Bronze Age to inform and stimulate writing.
DL3.1 | **Google Expeditions**
Use the VR headsets for pupils to experience Roman ruins to inform and stimulate writing.
DL3.1

Compare a number of websites
Look at the way pages are formatted, use of images, helpfulness etc. Practice keyword searching and scanning and | **Google Expeditions**
Use the VR headsets for pupils to experience Rainforests to inform and stimulate writing.
DL3.1
Navigating a website
Use the link to allow children to navigate around the BBC Prehistory website section. Children could be set a number of questions with the answers | **Key Search Questions**
Develop key search questions to find information about palm oil. Teach strategies to increase the accuracy of keyword searches and make inferences about the effectiveness of the strategies. Use Common sense Materials to support: The Key to Keywords **T**
DL3.4 | **BBC Bitesize: Human Body**
Use the videos and activities on the BBC Website to enhance and embed pupil learning about healthy eating and skeleton and muscles.
DL3.1 | **BBC Bitesize: Plants**
Use the videos and activities on the BBC Website to enhance and embed children's learning.
DL3.1 |

		skimming for information. Teachers could provide children with 2 or 3 websites on the Romans and ask them to compare. **DL3.1, DL3.2, DL3.3, DL3.4**	found within the website. **DL3.1, DL3.2, DL3.3, DL3.4**			
Online Communication and eSafety	**School VLE** (virtual learning environment) Use eschools or Seesaw to show or allow children to partake in uploading content to a digital platform and responding to teacher comments after they have submitted work **DL3.3** **Quizizz and/or Kahoot** (ongoing) Use the quiz based website for pupils to participate in online quizzes and continue throughout the year. Quizizz link Kahoot link **DL3.2, DL3.3**					
	Common Sense Materials Device-Free Moments Why is it important that we have device-free moments in our lives? Technology use isn't always a distraction, but there are definitely times when it's best to keep devices away. Help students learn when it's appropriate to use technology and when it's not -- and practice making family rules for	**Common Sense Materials** That's Private! What kinds of information should I keep to myself when I use the internet? Staying safe online is a lot like staying safe in the real world. By helping a Digital Citizen sign up for a new app, students learn about the kinds of information they should keep to themselves when they use the internet -- just	**Common Sense Materials** Digital Trails What information is OK to have in your digital footprint? Does what you do online always stay online? Students learn that the information they share online leaves a digital footprint or "trail." Depending on how they manage it, this trail can be big or small, and harmful or helpful. Students compare different	**Common Sense Materials** Who Is in Your Online Community? How are we all part of an online community? We are all connected on the internet! By learning the Rings of Responsibility, students explore how the internet connects us to people in our community and throughout the world. Help your students think critically about the different ways they connect with	**Common Sense Materials** Putting a STOP to Online Meanness What should you do if someone is mean to you online? The internet is filled with all kinds of interesting people, but sometimes, some of them can be mean to each other. With this role play, help your students understand why it's often easier to be mean online than in person, and how to	**Common Sense Materials** Let's Give Credit! How can you give credit for other people's work? With so much information at our fingertips, students learn what it means to "give credit" when using content they find online. Taking on the role of a detective, students learn why it's important to give credit and the right ways to do it when

	device-free time at home. **DL3.2**	as they would with a stranger in person. **DL3.2**	trails and think critically about what kinds of information they want to leave behind. **DL3.2**	others, both in person and online. **DL3.2**	deal with online meanness when they see it. **DL3.2**	they use words, images, or ideas that belong to others. **DL3.2**
Modelling and Simulations	**Forces Simulations** Use the links below to experiment with the key concepts of each topic: Magnet simulation Friction simulation **DL3.6** N.B Magnet simulation is not compatible with iPad devices.	**Google Earth** Explore Chester on Google Earth. Compare land use and use street view. **T** Link here **DL3.6** **Comparing Maps** Use Side-by-Side Georeferencing to view two different maps of Chester side-by-side. **DL3.1, DL3.6**	**Plants Growing Simulation** Access this simulation to explore what plants need to grow. (Free Gizmo account required otherwise limited to 5mins per day per user) Link here **DL3.6** **Stonehenge Simulation** Explore a 360 degree virtual Stonehenge - looking at the different features. **CS3.6**	**Light and Shadow Simulation** Use a laptop or desktop computer to access this simulation to explore the relationship between light and shadow. Link here **DL3.6**	**Google Earth** Explore Ancient sites on Google Earth. Compare human and physical features and locate places at different scales. Use search tool, street view zoom and navigation tools. *This could be done in a Geography lesson or as a whole-class starter.***T** Link here **DL3.6**	**Google Earth** Explore rainforests on Google Earth. Compare human and physical features.**T** Link here **DL3.6**
Key Skills		DL3.1 Can use information found online to answer specific questions, and evaluate how appropriate a site is. DL3.2 Works within the internet safety rules, understand why they are in place and abide by them. DL3.3 With support, is able to share suitable pictures and work to an online platform. DL3.4 Can identify and use keywords for effective Internet searches. DL3.5 Able to select relevant information (pictures and text) to use in other software. DL3.6 Can enter data into a computer simulation, change data and observe changes in results.				

Information Technology

Tutorial Link

Word Processing and Desktop Publishing	**Typing Skills** Use BBC dancemat typing activities to improve keyboard skills. **IT3.1**	**Microsoft PowerPoint/Google Slides** Create a Chester based presentation(History/tourism/culture etc). Name the documents. Add images and enter text as titles. Combine images and text with effect and ensure word processing basics (capitals, punctuation, spaces, etc) are embedded. Format text to make it bold and underlined. Add additional slides. **IT3.1, IT3.4**	**Pic Collage app** Combine images and text to present an information poster on the Stone and Iron ages. Independently save and add images and text and format it with consideration to the audience. **IT3.1, IT3.4**	**Pic Collage app** Combine images and text to present an information poster on Light and its properties. Independently save and add images and text and format it with consideration to the audience. **IT3.1, IT3.4**	**StoryBoard That** Create a comic-strip story linked to Ancient Egypt on PCs with the Storyboard That website. Initially plan the story first, considering scenes and dialogue and story progression. Use Google logins to access via PCs. Use relevant characters and backgrounds from the site. Change elements of the appearance as relevant. Format speech bubbles and captions with consideration for the audience. NB Pupils will need individual logins. **IT3.1, IT3.4**	**Microsoft Word/Google Docs** Layout a formal document linked to palm oil. Practice typing with two hands, consider layout and add images. A piece of pre-written work from English could be used for this task e.g. a persuasive letter. **IT3.1, IT3.4**

Multimedia	**Incredibox** Combine and layer various musical beats, melodies and vocals for pupils to compose their own song. Use the recording tool to create a composition. This can be shared via a hyperlink and saved as a QR code if needed. Children can share their work via email or upload links to learning platforms. *This could be done as part of a music lesson.* **T** Link here **IT3.5**	**Shadow Puppets** Sequence images from the camera roll and add text to create a slideshow to show the history of Chester. Control formatting with consideration for the audience. **IT3.3, IT3.4, IT3.5**	**Koma Koma app (Stone Age)** Create a stop motion animation film to show cave paintings coming to life. Use the iPads resting over the edge of tables/chairs pointing at the floor. Animate cut outs of hunters and mammoths firing spears and arrows. Inspired by this Ice Age clip. Use the onion skin and show how to delete unwanted images. Stone Age boy **IT3.2, IT3.3, IT3.4**	**Use a paint app/software** Create digital art to draw a flower drawing in the style of Georgia O'Keeffe. Model how to select colours, choose brush styles and textures. Developing skills in using all the tools available to create art considering the audience. Use Brushes Redux app or Sumo Paint or Sketchpad online. **IT3.2, IT3.3**	**Green Screen** Use DoInk green screen app (with hi-impact support) to present a documentary on Egyptian times. Costumes and scripts pre-written in English lessons can enhance the children's work. **IT3.3, IT3.4**	**Chatterpix Kids Apps** Use the app to animate still images of Rainforest animals to 'speak' to explain the different parts of the forest they live in and the problems they face. Save images from Safari, import into the app and morph, and then record a voiceover. **T** **IT3.3, IT3.4, IT3.5**
	Lit Film Fest Use the website to access free English projects. Each project has a set of structured lessons based around writing genres and show how technology can be incorporated to produce a performance video by the end of the project. (Users will have to create a free account to access the free resources, while other projects are under a paid subscription. **IT3.1, IT3.4, IT3.5**					
Data Handling	**Online Graph Maker** Use an online graph maker to represent data collected during a forces investigation. Investigate the key features of a graph including title, axes, labels etc. Save as an image for use in another app or software or print their graph. **IT3.7** **Toolbox app** Use the teslameter section of the app on the iPad to record magnetic levels of different objects around the class or school. Extend this		**Galactica Luxmeter app** Use the app to explore how light levels change within the classroom. Take screenshots of readings around school and plot these on a school plan in Pic Collage. Add suitable colours as indicators to identify patterns.**IT3.6**		**Microsoft Excel/Google Sheets** Begin to use spreadsheets to enter information in the cells with simple formatting, to list information found from research on Rainforests. Search and sort the database once populated. **IT3.7, IT3.9, IT3.10**	

to measuring magnetic strength variation of a magnet as it changes with distance from the iPad as part of a science investigation. **IT3.6**	
Key Skills	IT3.1 In a suitable word processing package, can make use of basic layout tools such as borders and columns. IT3.2 Able to purposefully use a range of tools within suitable software to create digital art. IT3.3 Can use a range of editing tools in an image editing package for a specific purpose. IT3.4 Able to sequence still images and video and use simple editing techniques to create a presentation for an audience. IT3.5 Can locate, record, save and retrieve sounds in multimedia software. IT3.6 Can use data loggers to collect snapshot information. IT3.7 Able to use information from a given source to generate graphs or charts. IT3.8 Can use data records to populate a pre-prepared digital branching database. IT3.9 Can enter data into a pre-prepared spreadsheet. IT3.10 Able to answer questions by searching and sorting a database or spreadsheet.