Overchurch Juniors school - Computing across the Curriculum Long Term Planning Map - Year 3

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
Science	Rocks	Minerals & Soil	Forces & Magnets	Light	Plants & Habitats	Environment
English	Jemmy Button	The Ice Bear	The Iron Man	Starbird	Into the Forest	Oliver and the Seawigs
History	Black History Month Rosa Parks	Changes in Britain from the Stone Age to the Iron Age and the Celts	Local History Study Liverpool		Ancient civilisations The Egyptians	
Geography	Volcanoes and earthquakes		Locating counties and cities in the UK Merseyside and Titanic		Egypt	
DT	Mechanical Systems Pulleys or gears		Textiles Combining different fabric shapes (including computer-aided design)		Food Celebrating culture and seasonality Bread	
PSHE	How can we be good friends?	What keeps us safe?	What are families like?	What makes a community?	Why should we eat well and look after our teeth?	Why should we keep active and sleep well?

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

Control and Programming

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

The extension activities below are non-essential, but teachers may wish to vary and consolidate learning from Code Studio using additional tools.

Investigate Algorithms Create(recipes) for making healthy sandwiches/pizza. Children use the template provided to sequence a set of instructions, by using a flowchart. Possibly laminate sheets and use whiteboard pens to allow resources to be reused. Link here **CS3.1, CS3.3, CS3.4, CS3.6**	**Purple Mash turtle** Use the 2logo tool to code. Children can overlay a map onto their screens and program a character to navigate it. Children can also create their own maps and import them. Link here **CS3.1, CS3.2, CS3.3**	**Tynker 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**	**Purple Mash: 2Code Gibbon** Traffic Lights: Learn how to sequence traffic lights. **CS3.1, CS3.3**	**Learn to Code with El Chavo app** Develop sequencing skills (Level 3 - Sequences II). **CS3.1, CS3.2, CS3.3**	**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**

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: Rocks and Soils** Use the videos and activities on the BBC Website to enhance and embed children's learning. **DL3.5**	**Navigating a website** Use the link to allow children to navigate around the BBC historic websites. Children could be set a number of questions with the answers found within the website. **DL3.1, DL3.2, DL3.3, DL3.4**	**BBC Bitesize: Forces and Motion** Use the videos and activities on the BBC Website to enhance and embed children's learning. **DL3.5**	**Key Search Questions** Develop key search questions to find information about the history of Liverpool. 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: Light and Shadows** Use the videos and activities on the BBC Website to enhance and embed their learning on Light and Dark. **DL3.5**	**Compare a number of websites about Ancient Egypt** Look at the way pages are formatted, use of images, helpfulness etc. Practice keyword searching and scanning and skimming for information. Teachers could provide children with 2 or 3 websites and ask them to compare. **DL3.1, DL3.2, DL3.3, DL3.4** **BBC Bitesize: Plants** Use the videos and activities on the BBC Website to enhance and embed children's learning. **DL3.5**	**Add a web page/site** Select a web page linked to Egypt to Favourites list/ bookmark for use at another time e.g. Word document or shared folder as a link. **DL3.1, DL3.2, DL3.3, DL3.4** **BBC Bitesize: Humans and the environment** Use the videos and activities on the BBC Website to enhance and embed children's learning. **DL3.5**
Online Communication and eSafety	**School VLE** (virtual learning environment) Use Purple Mash 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 device-free time at home. **DL3.2**	**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 as they would with a stranger in person. **DL3.2**	**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 trails and think critically about what kinds of information they want to leave behind. **DL3.2**	**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 others, both in person and online. **DL3.2**	**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 deal with online meanness when they see it. **DL3.2**	**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 they use words, images, or ideas that belong to others. **DL3.2**
Modelling and Simulations	**Google Earth** Search for volcanoes and use the data layer to Look at global positions and specific volcanoes in detail. Identify key features and landmarks using street view and 360° images.Link here. **T** **DL3.6**	**Stonehenge Simulation** Explore a 360 degree virtual Stonehenge - looking at the different features. **CS3.6**	**Forces Simulations** Use the links below to experiment with the key concepts of each topic: Magnet simulation Friction simulation **DL3.6** **Google Earth** Explore UK countries and cities. Compare human and physical features at different	**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**	**Mummification models** Use the links below to explore the process of mummification digitally. Interactive mummification The mummy maker **DL3.6** **Plants Growing Simulation**	**Purple Mash 2DIY3D** Design and plan a 3D maze game based on Egypt **DL3.5, DL3.6**

	Volcano Island simulator Use the website to explore what life might be like living in close proximity to an active volcano. **DL3.6**		scales. Use search tool, street view zoom and navigation tools.**T** Link here **DL3.6**		Use a laptop or desktop computer to access this simulation to explore what plants need to grow. 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	**Purple Mash writing Frame** Rosa Parks News Write a newspaper report about how Rosa Parks was arrested for refusing to give up her seat. **IT3.1** **Purple Mash writing Frame** Volcanoes Use some of the writing frames. E.g. write a news report after a volcano has erupted. **IT3.1**	**Typing Skills** Use Keytower Typing Game activities to improve keyboard skills. **IT3.1** **Purple Mash writing Frame** Stone Age Use some of the writing frames. E.g. and information text about Mesolithic hunter gatherers. **IT3.1**	**Microsoft Word/Google Docs** Layout a formal document linked to the history of Liverpool. Practice typing with two hands, consider layout and add images. A piece of pre-written work from English could be used for this task. **IT3.1, IT3.4**	**Adobe Spark Page app** Create a webpage by combining images and text. Use previously researched information about the Titanic. (A class login will be required). **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 from "Classic Era" 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 PowerPoint/Google Slides** Create a non-fiction presentation about Egypt. 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** **Purple Mash writing Frame** Ancient Egypt Use some of the writing frames. E.g. write about an Egyptian God or Goddess studied. **IT3.1**
Multimedia	**Purple Mash 2Beat** Use 2Beat to combine 4 different percussion sounds to layer beats to create and save short compositions. **IT3.5**	**Purple Mash 2Paint a Picture** Use the painting app with a range of painting tools to help you create and save a volcanic scene. **IT3.2, IT3.3**	**Purple Mash 2 Animate** Create animated scenes by repeating and changing images in a storyboard. Link Create a movie to show the Iron Man's parts coalescing. **IT3.2, IT3.3, IT3.4**	**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. T Link here **IT3.5**	**Adobe Video Spark website** Use the Adobe Video Spark website (a school or class account login will be required) to create a fact based presentation about Ancient Egypt. **IT3.3, IT3.4, IT3.5**	**Paint software** Create digital art to create a river Nile scene. Model how to select colours, choose brush styles and textures. Develop skills by using all the tools available to create art. Use Sumo Paint or Sketchpad online. **IT3.2, IT3.3**

	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	**Purple Mash 2Graph** Use the app to create a range of block, pie and line graphs to show information. **IT3.7**	**Purple Mash 2calculate** Use activities 1-5 to begin to introduce spreadsheets **IT3.9**	**Galactica Luxmeter app** Use the iPad app to explore how light levels change within the classroom. Take screenshots of readings around school and plot these on a school plan. Add suitable colours as indicators to identify patterns. **IT3.6**	**Purple Mash 2Question** Use the apps for pupils to interrogate existing branching databases and create records to populate their own. **IT3.8, IT3.10**	
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.				