Heygarth Primary School - Long Term Curriculum Map - Computing

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	What is the world like just outside of my window?	Who are the real life heroes that protect me?	Does our world need improving?	What is life like as a King or Queen?	Has flight changed our world?	What is living in Australia like?
Control and Programming	Say what an algorithm is.	Use keys or commands to make a virtual robot go forwards, backwards, left and right.	Program a sprite with a simple sequence of commands.	Use basic symbols to record directional instructions.	Use a developing range of language and styles of control to direct a robot.	Use a developing range of language and styles of control to direct a robot.
Key Skills	Logging on.	Enter text using single fingers.	Use a mouse/trackpad to move and place items accurately on a screen.	Right click, drag and drop.	Save and retrieve work with support.	Enter text with single fingers, beginning to use more than one hand.
Digital Literacy	Navigate a website using links.	Access information using QR codes or links.	Use a search engine by using keywords given by the teacher.	Say what information is personal and should not be shared online with support.	Be able to tell an adult if they see something online which is inappropriate.	Can change options in models/simulations that represent real or fantasy situations to create different outcomes and effects.
Information Technology	Can produce text, adding and making edits, in word processing software.	When entering text, can use knowledge of where most letters are located on a keyboard.	Use a range of simple tools purposefully, to create and alter the appearance of an image.	Begin to use simple video or animation software.	Use a sound recorder to collect and store information .	Be able to use appropriate graphing software to represent information.

Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	What is it like to live in Africa?	What have we learnt from the Great Fire of London?	Can we plan a celebration for everyone?	Do polar bears eat penguins?	What's so special about Port Sunlight?	What will you find in the woods today?
Control and Programming	Code Studio: Online safety looking at digital trails. Offline control and programming	Code Studio: Course B Sequencing lessons 3-5 Investigating algorithms using flowcharts	Code Studio Course B Using Loops Offline content and Lesson 7 and 8	Code Studio Course B Lesson 9 Drawing Gardens with loops	Code Studio Course B Lesson 10-12 Impacts of computing and using Events	

Key Skills	To log in and out of a program To find a bug in a simple program. To make use of simple events e.g. mouse click/tap on screen, To follow school rules about how to stay safe online.	To use the repeat mode (looping) to program more efficiently. To give control devices instructions that contain numerical data. To follow school rules about how to stay safe online.	To use a mouse/trackpad accurately. To save and retrieve work effectively. With clear guidance navigate a folder system. To follow school rules about how to stay safe online.	To enter text using more than one finger, beginning to use both hands. Use basic keyboard skills e.g. backspace, space bar, return. To follow school rules about how to stay safe online.	To be able to shut down a device at the end of a session. To follow school rules about how to stay safe online.	To navigate a website using links or buttons. To follow school rules about how to stay safe online.
Digital Literacy	Doodle buddy (linking to Grace and Family) Google Earth - exploring Africa	Great Fire of London Game (Make a game review based on criteria)	Internet research	BBC Bitesize Website: Science Habitats	Search for and save images online Google Earth to explore Port Sunlight	Google Earth to find Eastham Woods
Information Technology	Typing skills BBC Dance mat	Shadow Puppet Pic Collage	Typing skills BBC Dance mat	Microsoft Word/Google Docs Shadow Puppet	Typing skills BBC Dance mat	Microsoft Word/Google Docs

Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	What was life like in the Stone Age?	Can humans live without metals?	What were the achievements of the Egyptians?	Where in the world are we?	How diverse is the continent of Europe?	How is Merseyside represented in art?
Control and Programming	Code.org Course C Lesson 1 and 2 Online Safety	Code.org Course C Lesson 3-7 Sequencing	Code.org Course C Lessons Lesson 8-13 Loops	Code.org Course C Lesson 14 -17 Events and Data	Code.org Course C Lesson 18 End of course project	Lego Mindstorms. Fix the Factory App
Key Skills	Use mouse to be able to click left/right and double click	Use cut, copy and paste	Layout a formal document linked to Ancient Egypt-type with 2 hands and add images. Save and retrieve work effectively	With guidance, be able to navigate a folder system to open the camera roll. Take pictures of growing plants.	Enter data into a computer simulation, change data and observe changes	Navigate a folder system

Digital Literacy	Use information found online to answer specific questions BBC Bitesize Rocks and Soils	Work within internet safety rules Share pictures onto an online platform	Research the internet Identify keywords BBC Bitesize Human Body	Use Google Earth locate countries Plants Growing Simulation	Use Google Earth to compare physical and human features	Compare a number of websites. Look at the way they are formatted, use images, helpfulness
Information Technology	Use dance mat typing to improve keyboard skills Timeline App for Stone Age	ToolBox App to record magnetic levels of objects Use Green Screen DoInk App to film children acting out script linked Iron Man	Breshes Redux Explore the different tools to sketch pyramids Investigate Algorithms: Create recipes for healthy sandwiches sequence a set of instructions using a flow chart	Word processing make use of basic layout tools such as borders Begin to use spreadsheets/Google Sheets and input data about plant growth	Light and shadow simulation Online Graph maker To represent data collected on French Cities Investigate data Save Image for use in another APP	Create a Google Slide presentation adding images and text boxes Incredibx Combine and layer musical beats, melodies and vocals to compose own song

Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Who were the Mayans?	How do natural disasters impact planet Earth?	Where does plastic go?	Who were the ancient Greeks?	What is the journey of a river from source to sea?	Is there still evidence of the Romans in Britain today?
Control and Programming	Investigate algorithms for making sandwiches/pizza and cleaning teeth.	Make a teacher robot. Develop sequencing skills	Solve problems by sequencing directions and debugging, extending to the use of procedures (actually a function) by identifying repeating patterns.	Make a presentation or story linked to Habitats. Add in sprites and backgrounds to a range of different habitats, and program the sprites to move appropriately.	In a platform game environment, program the sprite to solve problems by sequencing directions and conditionals through increasingly complex levels.	Work through the various levels in each of these different games within the 'Tynker' app. Each game is broken into different sections, each focussing on different computing concepts such as, sequencing, debugging, repeats and conditionals (selection).
Key Skills	When word processing, use font sizes and effects appropriately to fit the purpose and audience of text.	Edit video footage and still images to create a video presentation or animation for an audience. Add text, sound effects	When using a mouse or trackpad, be able to use left/right/double click and scroll. When typing, can hold two	Know how to print a document. Be able to navigate a folder system to locate a specific file e.g. Shared	When using a mouse or trackpad, be able to use left/right/double click and scroll.	Be able to navigate a folder system to locate a specific file e.g. Shared Drive, iPad camera roll or

	Use a range of features of layout and design such as text boxes, columns and borders, to control the layout and presentation of a document.	and other graphic effects to a video presentation. Make use of a range of visual effects such as filters, hues and combining images to give different effects. Layer sounds using music composition software.	hands over different halves of the keyboard and use more than two fingers to enter text. Be able to save, name and retrieve work effectively to a suitable location.	Drive, iPad camera roll or Dropbox. Know and can use keyboard function keys e.g. shift, caps lock, num lock, space bar, return.	When typing, can hold two hands over different halves of the keyboard and use more than two fingers to enter text. Be able to save, name and retrieve work effectively to a suitable location. If appropriate, know how to print a document.	Dropbox. Know and can use keyboard function keys e.g. shift, caps lock, num lock, space bar, return.
Digital Literacy	Use Safari or Google images on iPad or network for use in other multimedia activities relating to Mayans. Save to a shared area or Google Drive/Dropbox folder, if applicable	Discuss that children may get online messages from other people that can make them feel angry, hurt, sad or fearful. Pupils identify actions that will make them strong in the face of cyberbullying.	How do you create a positive online community? What should you do when someone uses mean or scary language on the Internet?	Make a Greeks themed up-jumping game where the power ups are helpful artefacts e.g. helmets or pottery and the enemies are appropriate to the theme, both of which affect the character in relevant ways.	Set the pupils an online quiz/survey to participate in. Show how their answers are automatically collected and, if we ask the right type of question, graphs and charts can be easily produced. If you do not have access to Google or Microsoft forms use online poll to collate information like Strawpoll	Students explore the similarities and differences between in-person and online communications, and then learn how to write clear and respectful emails.
Information Technology	Use Shadow Puppets Edu to showcase their knowledge of Mayans. Children can find images online and save these to the camera roll.	Be able to collect snapshot data from data loggers, selecting the appropriate tool. Be able to enter data into a graphing package and use it to create a range of graphs, and to interpret data. Understand that spreadsheets perform calculations. Explore the effect of changing the cell values in spreadsheets and use them to make and test predictions	Classify different animals by asking questions and sorting by the answer on the J2e website.	Create a comic style retelling of a Greek myth. Use to showcase learning in science. Include speech and thought bubbles, captions and images as appropriate.	Use Chrome Music Lab online to explore how sounds can be manipulated digitally in a variety of ways.	Develop basic word processing skills. Write a persuasive letter relating to the protection of e.g. an ocean habitat, focusing on layout, adding borders, changing fonts, inserting pictures while also teaching skills of saving and opening work correctly.

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Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Is Earth the only planet we can inhabit?	How did the Anglo-Saxons affect us?	How did the Vikings change Britain?	How diverse is the continent of North America?	How important were the Tudors to British history?	What are the wonders of Wirral?
Control and Programming	Code.org course E lessons 1-5 Decomposition while/repeat/forever if Variables Edit pre-written code	code .org course E lessons 6-10 More conditionals Behaviours and animation	Code.org course E lessons 11-12 Using Loops	Code.org course E lessons 13-14 Using Nested Loops	Using scratch to create an animation based on King Henry VIII.	Code.org course E lessons 15-19Functions (linked to music, Minecraft and artist)
Key Skills	left/right/double click/scroll. Virtual environments: Using Google Classroom and Drive for homework. Create folders to organise documents.	Typing with 2 hands	save/name/retrieve/navigate documents. Use italics, bold and underline. Including images and sounds in presentations.	Typing with 2 hands. Print properties. Design questions using key words.	Create simple formulae in spreadsheets.	Use more advanced keyboard functions. Select sounds, text and video for purpose.
Digital Literacy	Search for specific information. Save media/copyright. upload/download.	upload/download. Use Sketch Nation to create a game around Anglo-Saxons.	Internet safety Check information. upload/download.	Search for specific information. upload/download. Modelling and simulation: Using Google Earth to explore the continent of North America.	Demonstrate internet safety upload/download. Digital surveys/quizzes	e-Safety Think-u-know bandrunner (covering liking/sharing online, keeping information private)
Information Technology	Using J2E databases to compile a database of planets.	Use Garageband to layer and edit sounds, producing a piece of Anglo-Saxon music.	Home learning project: create a presentation about the Vikings in Google Slides.	Excel - organise data Simple formulae Produce bar and pie charts Design fields and records	Digital art Format text. Use Google Sheets to create a formula to calculate areas and perimeters.	Use iMovie App to edit an advertisement about a 'Wonder of the Wirral'.

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Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	What impact did the industrial revolution and the Victorian era have on Britain?	Why is Liverpool considered a major UK city?	What was life like on the home front during WW2?	How diverse is the continent of South America?	How might technology affect our future?	What life skills do we need for the future?
Control and Programming	Code Course F - (LOOPS) lessons 1 to 5	Code Course F - (VARIABLES) lessons 7 to 10	Code Course F - (FOR LOOPS) lessons 14 to 16	Code Course F - (BEHAVIOURS and DEBUGGING) lessons 17 to 18	KODU game Lab to create and publish a video game Code Course F - (SIMULATIONS AND ARTIFICIAL INTELLIGENCE) - lessons 11 and 12	Swift playground app or CodeCombat app to use non-block based programming scripts
Key Skills	left/right click, scroll, zoom. Using 2 hands to type	Add data validation to spreadsheets. Create, edit and refine media to give quality. Present continuous data in graph form.	Check information for bias Take part in collaborative learning using different platforms	Keyboard functions such as CTRL+C, CTRL+V and CTRL+Z Navigate shared folders and systems to locate documents and open files	Debug by filtering out extraneous information Use logical information (not/or/and) to alter and control commands.	Student led revision of key skills in preparation for high school (yearly discussions with local highschool about gaps from previous years)
Digital Literacy	School VLE - Google Classroom orientation	Digital citizenship - the power of words (Code course F lesson 6)	Images in the media Finding Media Balance	Digital Friendships Google Earth - Locate human and physical South American landmarks Google Tours to create an interactive tour of South America	Modelling and Simulations TINKERAD to create computer aided designs	CoSpaces Edu to create own explorable worlds (potential VR opportunity)
Information Technology	Using Google docs - Luddites Newspaper Article	Google sheets - present information from science investigation about light and shadows. Importing and adding graphs. Lux camera app for datalogging light	Green Screen - evacuees experiences documentary iMovie - editing Green Screen using film, text, images and sound.	Garageband/Chrome Music lab to compose carnival music	Tiny Tap app to create revision materials (GPS/Maths based)	Green Screen - to incorporate into leavers production iMovie app - 'trailer' for leavers production