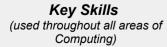# Bidston Village - Computing across the Curriculum Long Term Planning Map – EIB2 (2020-21)

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. Refer to the Skills Sheets for more guidance in this section and essential steps for teaching. 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
English	Fairy tales, Instructions	Narrative, Instructions	Diary, report	Recount, report letter	Explanation, poetry	Narrative, book review, recount
Science (using y6)	Animals inc humans	Scientists / inventors	Electricity	Living things and their habitats	Light	Evolution / Inheritance
PSHE	Being in my world	Celebrating difference	Dreams and goals	Healthy me	Relationships	Changing me
Geography / History	The UK (all 4 kingdoms)	The invention of the radio / steam engine and WWW	Describing maps of the world	Figures in British history: Shakespeare / Emily Davison	Climate	British Monarchy: Queen Victoria v Queen Elizabeth II
RE	Good news God	Christian community	Kingdom of God	Forgiveness	Discipleship	Holy Spirit creations
DT	Bookmarks (embroidery)	Christmas crafts	British sculptors: Anthony Gormley	Stage (for theatre) costume design	Using circuits to light up character	Design own invention, plan, make and evaluate using junk modelling
Art	Renaissance (da Vinci)	Christmas crafts	Drawing: Observational / tones of colour (Lowry)	Colour palettes / mood colours	Colour wheel / complementary colours / hot & cold colours (Kandinsky)	British artists: Brigit Riley – vegetable printing / repeating patterns

Key Skills *(used throughout all areas of Computing)*	
KS2.1	Be able to log into and out of an account on a computer or program independently.
KS2.2	Be able to enter text using more than one finger, beginning to use both hands.
KS2.3	Be able to shut down a program or device at the end of a session.

KS2.4	Can use a mouse/trackpad to move and place items accurately on a screen. Use double click or tap, pinch to zoom, swipe etc.
KS2.5	Be able to save and retrieve work effectively.
KS2.6	With clear guidance, be able to navigate a folder system e.g. Shared Drive, iPad camera roll or Dropbox.
KS2.7	Can use basic keyboard keys e.g. backspace, space bar, return.

Computer Science

Tutorial Link

Code Studio

[Code Studio.](#) Create user accounts for class on the website if not created in Y1. Y2 should be working around Course B 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**

CS2.1, CS2.2, CS2.3, CS2.4, CS2.5

| *Control and Programming* | **Investigate Algorithms** Recipes for making 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 **CS2.2, CS2.3, CS2.5**

Alex the Robot app Revise sequencing of directional command and debugging from Year 1. Use logic and reasoning to create and complete their own/each other's levels.T **CS2.2, CS2.5** | **Learn Code with El Chavo app** Develop sequencing skills in Level 1: Sequences I. **CS2.2, CS2.5**

Hello Ruby Use Hello Ruby to allow children to investigate different computational concepts without a computer. In the PLAY section are multiple activities with printable resources. **CS2.2, CS2.5** | **Learn Code with El Chavo app** Develop sequencing skills in Level 2: Conditionals. **CS2.2, CS2.5**

Switch n Glitch app Develop problem solving skills, by sequencing directions, debugging and employing conditionals. **CS2.1, CS2.2, CS2.3, CS2.5** | **Box Island app** Solve problems by sequencing and debugging directional commands. If used in Year 1 then focus more on repeat and conditional (selection) levels. (Each child can create their own profile or teachers can manually record each child's progress e.g. on ticklist). **CS2.2, CS2.3, CS2.5** | **Scratch Jr app** Introduce Scratch Jr app, using the animals' sprites to create a themed habitat. Choose a background (e.g. underwater) and add suitable animals. Use coding blocks to program them to move appropriately in the habitat. Extend by including multiple backgrounds, and adding speech. T **CS2.1, CS2.2, CS2.3, CS2.4, CS2.5** | **Scratch Jr app** Introduce Scratch Jr app, using the animal sprites to create a themed habitat. Choose a background (e.g. underwater) and add suitable animals. Use coding blocks to program them to move appropriately in the habitat. Extend by including multiple backgrounds, and adding speech. T **CS2.1, CS2.2, CS2.3, CS2.4, CS2.5** |

Key Skills	
CS2.1	Be able to give control devices instructions that contain numerical data.(e.g. move 2 steps etc).
CS2.2	Can use logical reasoning to predict the outcome of a sequence of instructions and test the sequence, amending if necessary.
CS2.3	Can use the repeat command (loops) to program more efficiently.
CS2.4	Is able to make use of simple events e.g. mouse clicks/tap on screen.
CS2.5	Be able to find a bug in a simple program.

Digital Literacy

Research: Internet	**Search for and save images online** Use Google Image Search in Safari (using iPad) for use in GReat Fire of London lessons. **DL2.1, DL2.2**	**BBC Science: Circulatory system?** Watch videos and take part in activities related to materials on the BBC Bitesize website. Demonstrate how to use the interactive links to search for the information needed to answer a query. Show how information can be presented as text or images. Sometimes they can listen to a narration of the text using a 'sound ' button. Draw the children's attention to the help button in the form of a question mark. Discuss how to find out more about this topic or related topics using the links at the bottom of the page. **DL2.1**	**BBC Science: What do humans need to stay healthy?** Watch videos and take part in activities on the BBC Bitesize website. **DL2.1**	**Mr Haughton's Infant Encyclopedia** Find out about plants using Mr Haughton's Infant Encyclopedia. Use QR codes for the children to launch the app on iPads QR Stuff link , or save as a web link to the shared area if accessing through the desktop computers. Devise a set of questions for children to use the different types of information (text, video etc). Children can create a fact sheet from the information they have found or use it as part of cross-curricular writing. **T** Link here **DL2.1, DL2.2**	**Internet research** Begin to use simple keywords (guided by teacher) to locate information about topic work in a search engine. Use a child-friendly search engines: **T** Kidrex Kiddle **DL2.8**	**Internet research** Continue to use simple keywords (guided by teacher) to locate information about extreme weather in a search engine. Use a child-friendly search engines: **T** Kidrex Kiddle **DL2.8**
Online Communication and eSafety (SMART crew)	Use Google Classroom 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**					

Purple Mash
Use Purple Mash Display boards and 2Dos to allow children to save and send their work accurately.
DL3.3

*To access the **Common Sense Media** materials you will need to create a teacher account. You will then be able to access and download all the teacher and pupil resources for each lesson*

	Common Sense Materials Device-Free Moments Why is it important that	**Common Sense Materials** That's Private! What kinds of	**Common Sense Materials** Digital Trails What information is OK	**Common Sense Materials** Who Is in Your Online Community?	**Common Sense Materials** Putting a STOP to Online Meanness	**Common Sense Materials** Let's Give Credit! How can you give credit

	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**	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**	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**	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**	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**	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	**Sketch Nation app** Create an up-jumping Egyptian game by drawing a pharaoh as the main character, different Gods as enemies and collect canopic jars as power ups to complete the level. Other Egyptian images can be the platforms. Control the range of variables in the advanced mode in the game to focus on engagement of the audience. **DL3.6**	**Materials resources** From the link, select appropriate digital resources for children to use to explore the different characteristics of materials. **DL2.6**	**Google Earth** Explore Australia on Google Earth. Compare human and physical features. Use search tools, street view zoom and navigation tools. *This could be done in a Geography lesson or as a whole-class starter.* T Link here **DL2.6**	**Growing Simulation** *Science link* Use the link below to simulate different growing conditions for a plant: link here **DL2.6** T	**Weather forecast** Create a model of a weather forecast for different locations. Build your weather forecast **DL2.6**	**Habitat simulations** Use the 'Build A' links below to allow pupils to explore designing different appropriate habitats for specific animals. Build a habitat Build a biome TopMarks **DL2.6**
Key Skills	DL2.1 Be able to navigate a website using links or buttons. DL2.2 Be able to use a search engine to search for given information to answer questions, sorting by text, pictures, sound and video. DL2.3 With support, be able to say what information is personal and should not be shared online. DL2.4 With support, be able to share pictures or work on an online platform. DL2.5 To be able to follow and understand school rules for staying safe online. DL2.6 Be able to make changes in a model/simulation and use them to make and test predictions. DL3.6 Can enter data into a computer simulation, change data and observe changes in results.				

Information Technology

Word Processing and Desktop Publishing						
	Pic Collage app Create a poster about science topic. Use images found online and photos taken around the school to enhance their work. Include simple captions and labels. **IT2.1** **Purple Mash** Use writing projects for Great Inventors **IT2.1, IT2.2**	**Pic Collage app** Write a story arc about the Forest School. Focus on word processing and formatting skills. They could also take an image of themselves and import into the app, cutting themselves out of the classroom and inserting into an ocean image. **IT2.1, IT2.2**	**Tiny Tap app** Make an interactive guide to Australia using 'Soundboards' and 'Ask a Question' activities. Choose photos pupils have taken themselves, use drawing tools to create their own pictures and add from Tiny Tap image search. **T** **IT2.1, IT2.4 , IT2.5, IT2.6**	**Primary Writer app** Word process their own pieces of writing and then select an appropriate background for the content of the writing. Focus on capitalisation, punctuation and spacing. **IT2.2**	**Microsoft Word/ Google Docs** Begin to present a poem from English and teach basic formatting of text. **IT2.1, IT2.2**	**Tiny Tap app** Make an interactive guide to the weather. Use a range of the different activities available to make their work varied and interesting. Choose photos they have saved from the web, use drawing tools to create their own pictures and add from Tiny Tap image search. **T** **IT2.1, IT2.4 , IT2.5, IT2.6, IT2.10**
Multimedia	**Shadow Puppet Edu** Link to literacy (Trolls). Add captions to the photos. Record a narration of their knowledge to create a film. Once they have saved their work, review and decide how to make improvements. **IT2.1, IT2.5, IT2.6**	**Chatter Kids app** Make Owls speak to explain about them. Take a picture from a book or download an image from the internet to the iPad. Encourage children to plan what they are going to say, scripting if necessary. Add to the app, mark the mouth and record 30 seconds of speech. Playback, evaluate, re-record if necessary and save as a video. **IT2.5, IT2.6**	**Doodle Buddy app or Brushes Redux app** Design and create Australian digital art. Focus on colour choice, and line width and style. **IT2.3**	**Koma Koma app** Create a stop animation movie to show plants growing. Use plasticine, craft materials or drawings. **IT2.3, IT2.5** **Green Screen (Do Ink app paid)** Film children relating their knowledge within UK scenes **IT2.5 COVERED IN AUT1**	**Purple Mash 2Explore** Record simple musical melodies. **IT2.6** **Voice Record app** Record science ideas. Listen back and redo to improve. **IT2.6**	**Purple Mash 2Sequence** Look at layering instruments, looping a series of 8 beats into a repeating pattern. **IT2.6**
	Lit Film Fest Use the Lit Film Fest 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. At the end of the project, children can use their work to create a video presentation. **IT2.1, IT2.5, IT2.6**					
	Purple Mash Branching Database		**Graphs**		**Database**	

Data Handling	Use 2Question to create a branching database to identify materials for different purposes. Questions being answered by pupils eg do you need waterproof material? Do you need a stretchy material? Etc **IT2.8**	Make graphs linked to maths using 2Count and 2Graph or the Math is Fun online tool. **IT2.7 HI-IMPACT SESSION**	Animal database website Use the database to search for different animals that have been selected by the teacher. Search by name, location, group or whether they are endangered. Children can find information and answer specific questions about the found animals. **IT2.8** BBC Maths game to organise animals data. **IT2.7**
Key Skills	IT2.1 When producing text, can add and edit text, considering style, colour. layout and font. IT2.2 Be able to say where letters are located on the keyboard, increasingly using appropriate punctuation. IT2.3 Can use simple tools within suitable software to create digital art. IT2.4 Be able to purposefully use different image editing tools, including crop, resize, and flip, exploring effects such as symmetry and filters. IT2.5 Be able to sequence and arrange pictures or video clips for a purpose. IT2.6 Be able to select and record musical phrases, sound-effects or voice-overs to enhance multimedia work. IT2.7 Can make use of different types of graphs to represent data collected. Be able to enter data accurately to provide the answers to questions. IT2.8 With help be able to search a pre-prepared database as part of a group, constructing questions and suggesting plausible answers.		