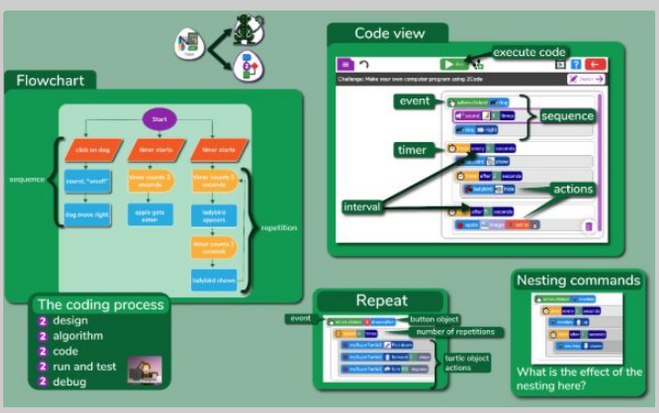
Computing - Year 3 Autumn 1: Scheme of Work

	Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Autumn 1	**Structures & Representations for Unit 3.2 Online Safety:** 	**Key Vocabulary for Unit 3.2 Online Safety:** Password Personal information Blog Permission Vlogs Appropriate Internet Website Spoof Verify Reputable source Inappropriate Permission
	Unit 3.2 Online Safety *3 lessons* • Safety in numbers • Fact or Fiction? • Appropriate content and ratings	• Understand what makes a good password for use on the Internet. • Beginning to realise the outcomes of not keeping passwords safe. • Contribute to a concept map of all the different ways they know that the Internet can help us to communicate. • Contributed to a class blog with clear and appropriate messages. • Understand that passwords help to limit who can see personal / private / confidential information (extension). • Understand that some information held on websites may not be accurate or true. • Begin to understand how to search the Internet and how to think critically about the results that are returned. • Access and assess a 'spoof' website. • Create my own 'spoof' web page mock-up. • Share my 'spoof' web page on a class display board. • Evaluate facts from a website and explain how they fact checked the information that was presented (extension) • Identify some physical and emotional effects of playing/watching inappropriate content/games. • Relate cyberbullying to bullying in the real-world and have strategies for dealing with online bullying including screenshot and reporting.
	Structures & Representations for Unit 3.1 Coding, crash course: 	**Key Vocabulary for Unit 3.1 Coding, crash course:** Coding Code Program Programmer Instructions Object Action Event Algorithm Debugging Command Execute Run Design Collision Sound Predict Collide Interact Implementation
	Unit 3.1. Coding, crash course: *3 lessons* • Introduction to Coding: Objects, Actions and Events • Algorithms • Collision Detection	• Explain what coding is. • Know that for the computer to make something happen, it needs to follow clear instructions. • Create a program using event, object and action code blocks. • Explain what events, objects and actions do in a program. • Explain that an algorithm is a set of instructions. • Describe the algorithms they created. • Explain that for the computer to make something happen, it needs to follow clear instructions. • Plan an algorithm that includes collision detection. • Create a program using collision detection. • Read blocks of code and predict what will happen when it is run

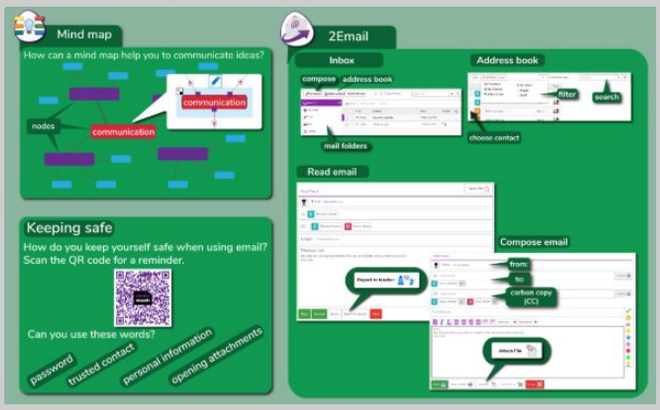
Computing - Year 3 Autumn 2: Scheme of Work

Autumn 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 3.1 Coding, crash course: 	**Key Vocabulary for Unit 3.1 Coding,crash course:** As above 3.1 coding vocabulary and the following: Scene Background Attributes Image Timer Sequence Nested Repeat
Unit 3.1. Coding, crash course: *4 lessons* • Different object types and buttons • Using timers • Using repeat • Design and make an interaction scene	• Create a computer program that includes different object types. • Create a computer program that includes a button object. • Modify the attributes of an object and a button to fit my program design. • Explain what a button does in my program • Create a program that uses a timer-after command. • Create a program that uses a timer-every command. • Understand there can be different ways to solve a problem. • Understand how the turtle object moves. • Use the repeat command with an object. • Create a computer program that includes use of the repeat command. • Use the attributes table to set the attributes of objects. • Plan my scene and code before they create my program. • Confidently make several different things happen in a program
Structures & Representations for Unit 3.3 Spreadsheets, crash course: 	**Key Vocabulary for Unit 3.3 Spreadsheets, crash course:** Spreadsheet Cell Column Row Drag Calculate Total Toolbox
Unit 3.3 Spreadsheets- crash course *2 lessons* • Introduction to spreadsheets • Using tools to calculate totals	• Navigate around a spreadsheet. • Explain what rows and columns are. • Enter data into cells. • Create a table of data on a spreadsheet. • Use tools in a spreadsheet to automatically total rows and columns. • Use calculations to answer questions about data. • Collect some simple data and use a spreadsheet to interpret it (extension).

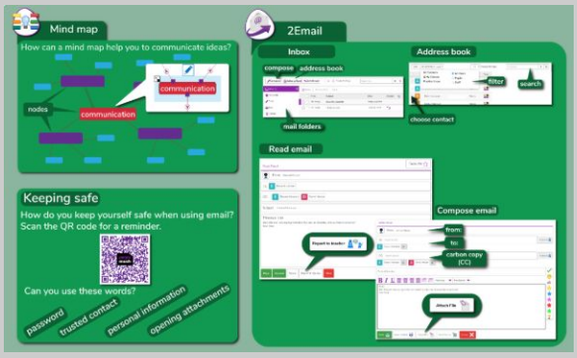
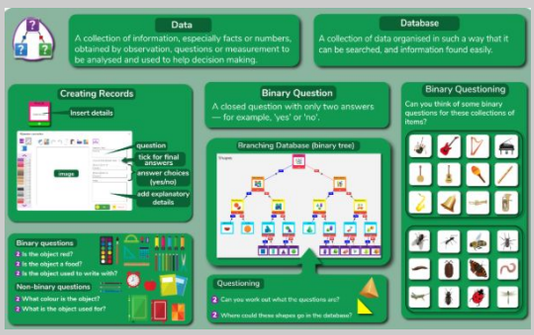
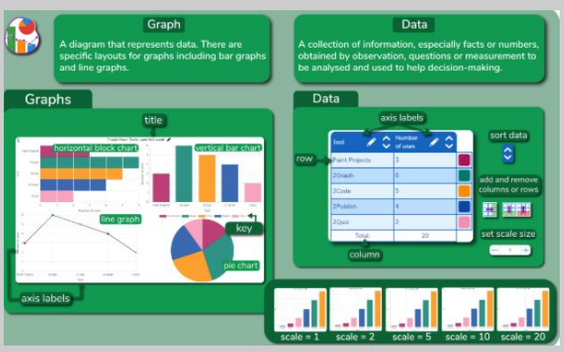
Computing - Year 3 Spring 1: Scheme of Work

Spring 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 3.3 Spreadsheets, crash course: 	**Key Vocabulary for Unit 3.3 Spreadsheets, crash course:** As above for unit 3.3 and the following: Data Table Pie chart Bar graph Advanced mode Cell address
Unit 3.3 Spreadsheets- crash course *2 lessons* • Creating pie charts and bar graphs • Advanced mode and cell addresses	• Create a table of data on a spreadsheet. • Use a spreadsheet program to automatically create charts and graphs from data. • Describe a cell location in a spreadsheet using the notation of a letter for the column followed by a number for the row. • Find specified locations in a spreadsheet.
Structures & Representations for Unit 3.5 Email: 	**Key Vocabulary for Unit 3.5 Email:** Communication Mind mapping Node Link Email Compose Address book Inbox Trusted contact Personal information Password Save to draft
Unit 3.5 Email *4 lessons* • Communication • Composing emails • Using emails safely part 1 • Using emails safely part 2	• List a range of different ways to communicate. • Children can use 2Connect to highlight the strengths and weaknesses of each method. • Open an email and respond to it. • Send emails to other children in the class. • Write rules about how to stay safe using email. • Contribute to classmates' rules. • Create a quiz about email safety which explores scenarios that they could come across in the future.

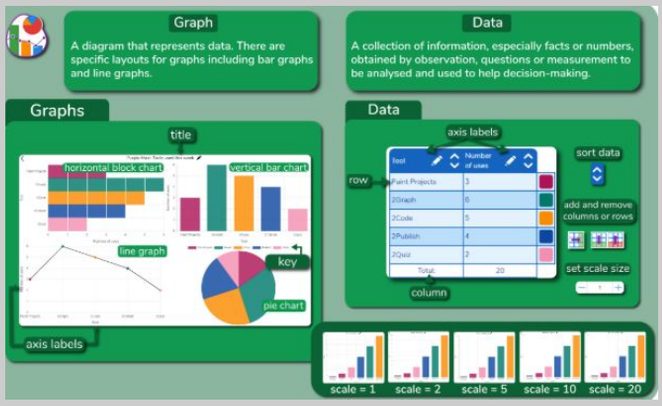
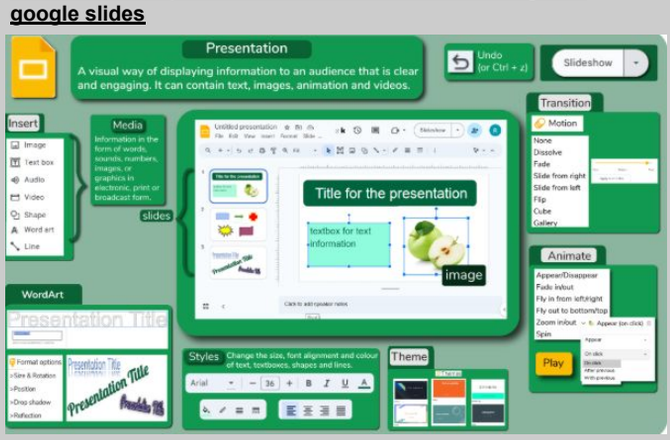
Computing - Year 3 Spring 2: Scheme of Work

Spring 2

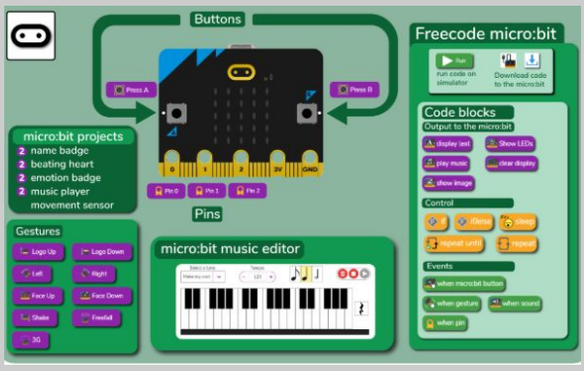
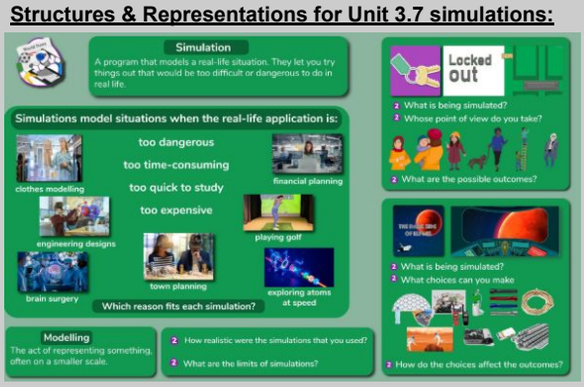
Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 3.5 Emails: 	**Key Vocabulary for Unit 3.5 Emails:** As above for unit 3.5 Email and the following: Attachment Cc- carbon copy BCC- Blind carbon copy
Unit 3.5 emails *2 lessons* • Attachments • Email simulation	• Attach work to an email. • Know what CC means and how to use it. • Read and respond to a series of email communications. • Attach files appropriately and use email communication to explore ideas. • Understand when to use CC or BCC
Structures & Representations for Unit 3.6 Branching Databases: 	**Key Vocabulary for Unit 3.6 Branching Databases:** Databases Branching database Binary trees Debugging
Unit 3.6 Branching databases *3 lessons* • Introducing databases • Branching databases • Creating a branching database on the computer	• Understand how YES/NO questions are structured and answered. • Use YES/NO questioning to play a simple game with a friend. • Explain why they choose a particular question to split my database. • Contribute to a class branching database about fruit. • Complete a branching database about vegetables. • Choose a suitable topic for a branching database. • Select and save appropriate images. • Create a branching database. • Know how to use and debug my own and others branching databases.
Structures & Representations for Unit 3.8 Graphing: 	**Key Vocabulary for Unit 3.8 Graphing:** Graph Chart Tittle Sorting Axis Data Row Column
Unit 3.8 Graphing *1 lesson* • Introducing 2Graph	• Set up a graph with a given number of fields. • Enter data for a graph. • Produce and share graphs made on the computer.

Computing - Year 3 Summer 1: Scheme of Work

Summer 1

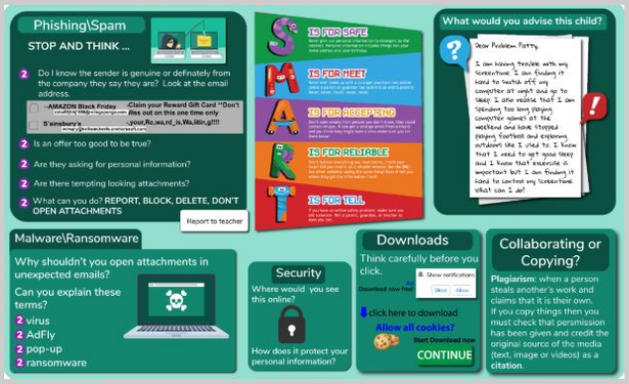
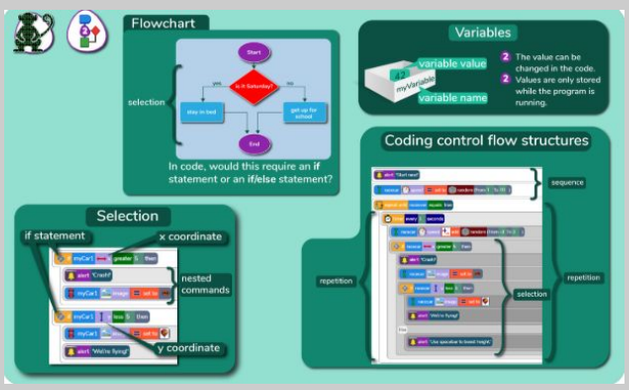
Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 3.8 Graphing: 	**Key Vocabulary for Unit 3.8 Graphing** Graph Chart Investigation Tally chart Survey
Unit 3.8 Graphing *1 lesson* • Using 2graph in an investigation	• Solve a maths question using graphing. • Present the results in a range of graphical formats. • Use the sorting option to make analysis of my data easier. • Can select most appropriate style of graph for my data and explain my reasoning (extension).
Structures & Representations for Unit 3.9 Presenting with google slides 	**Key Vocabulary for Unit 3.9 Presenting with google slides** Textbox Presentation Font formatting Wordart Media Slide Editing Audio Video Borer weight Border dash Fill colour Layer Animation Transition Review
Unit 3.9 Presenting with google slides *5 lessons* • Making a presentation from a blank page • Adding media • Adding shapes and lines • Adding animation • Create a presentation	• Know what Google Slides is. • Know how to open Google Slides. • Add text and format it. • Change the design of the slides. • Insert a new slide. • Insert pictures. • Edit pictures. • Insert video. • Add shapes to a presentation. • Add lines into a presentation. • Use animations in a presentation. • Use transitions in a presentation. • Add text to a presentation. • Add objects including text and pictures to my presentation. • Add animation and transitions to my presentation. • Present my work on Slides.

Computing - Year 3 Summer 2: Scheme of Work

	Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Summer 2	**Structures & Representations for Unit 3.10 micro:bits:** 	**Key Vocabulary for Unit 3.10 micro:bits** Input Algorithm Code Output Program Hardware LED Repeat Software Animation Image Infinite loop Sequence Selection Speaker Gestures Accelerometer
	Unit 3.10 micro:bits *4 lessons* • Name badge • Beating Heart • Emotion Badge • Sounds and gestures	• Explain that the micro:bit is a tiny computer. • Give the micro:bit instructions in code to make a name badge using the LED display output. • Create a micro:bit animation using a sequence of images in a loop. • Explain that the order or sequence of instructions is important. • Make the micro:bit show different pictures on the LED display output depending on which button input is pressed. • Explain that inputs are data sent to a computer. • Explain that outputs are data sent from a computer. • Use the music editor to create sounds and music. • Explain that accelerometer is a sensor, an input that senses movement. • Create code that makes sounds play using different movement gestures.
	Structures & Representations for Unit 3.7 simulations: 	**Key Vocabulary for Unit 3.7 simulations:** Simulations Modelling Advantages Disadvantages Point-of-view Solution Realistic Unrealistic Analysis Decision Evaluation
	Unit 3.7. Simulations *3 lessons* • What are simulations? • Exploring a simulation • Analysing and evaluating a simulation	• Know that a computer simulation can represent real and imaginary situations. • Give some examples of simulations used for fun and for work. • Give suggestions of advantages and problems of simulations. • Explore a simulation. • Use a simulation to try out different options and to test predictions. • Begin to evaluate simulations by comparing them with real situations and considering my usefulness. • Analyse choices made using a branching database. • Children can recognise patterns within simulations and make and test predictions. • Identify the relationships and rules on which the simulations are based. • Evaluate a simulation to determine its usefulness for purpose. • Create my own simple simulation (extension).

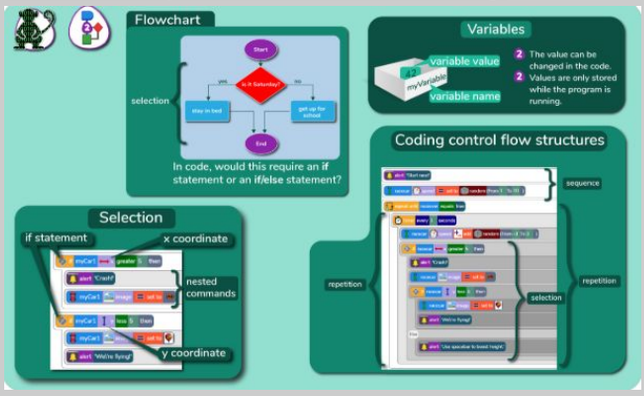
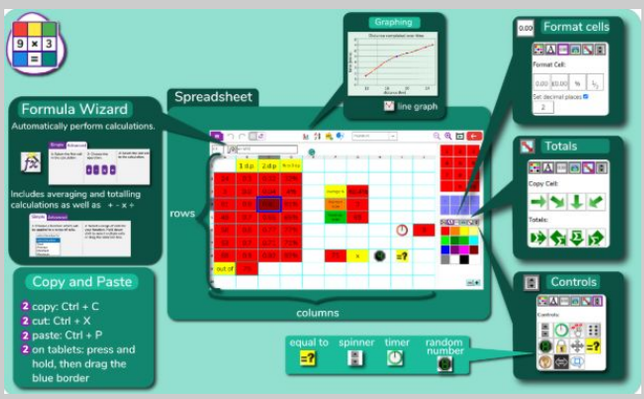
Computing - Year 4 Autumn 1: Scheme of Work

Autumn 1

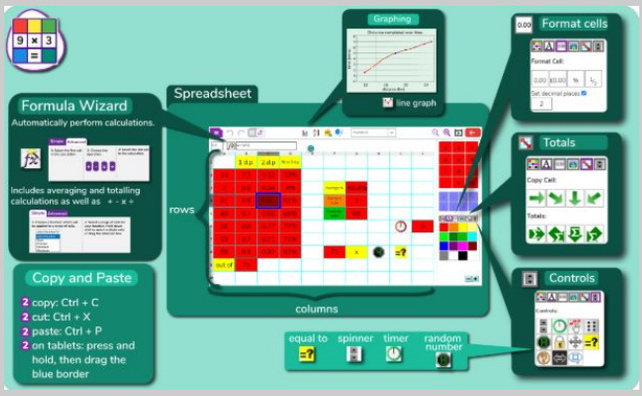
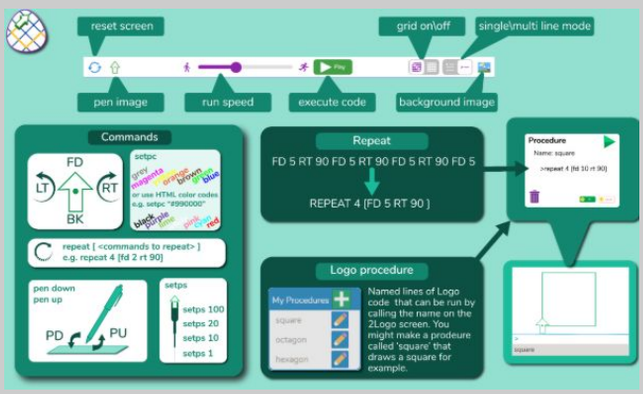
Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 4.2 Online Safety: 	**Key Vocabulary for Unit 4.2 Online Safety:** Adfly Attachment Citation Collaboration Cookies Copyright DIgital Footprint Malware Phishing Plagiarism Ransomware SMART rules Spam Virus Watermark
Unit 4.2 Online Safety *4 lessons* • Going Phishing • Beware Malware • Plagiarism • Healthy Screen-time	• Know that security symbols such as a padlock protect my identity online. • Know the meaning of the term 'phishing' and are aware of the existence of scam websites. • Explain what a digital footprint is and how it relates to identity theft. • Give examples of things that they would not want to be in my digital footprint. • Identify possible risks of installing free and paid for software. • Know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer. • Know what a computer virus is • Determine whether activities that they undertake online, infringe another's' copyright. They know the difference between researching and using information and copying it. • Know about citing sources that they have used. • Take more informed ownership of the way that they choose to use my free time. • Recognise a need to find a balance between being active and digital activities. • Give reasons for limiting screen time.
Structures & Representations for Unit 4.1 Coding: 	**Key Vocabulary for Unit 4.1 Coding:** Algorithm Code Blocks Background Object Implement Predict Run Attributes Event Debug/debugging Action Selection 'If' statements
Unit 4.1 Coding *2 lessons* • Design, Code, Test and Debug • If Statements	• Explore different object types in 2Code. • Use a background and objects to create a scene. • Plan an algorithm for my scene and use 2Code to program it. • Create a program that includes an IF statement. • Interpret a flowchart that depicts an IF statement.

Computing - Year 4 Autumn 1: Scheme of Work

Autumn 2

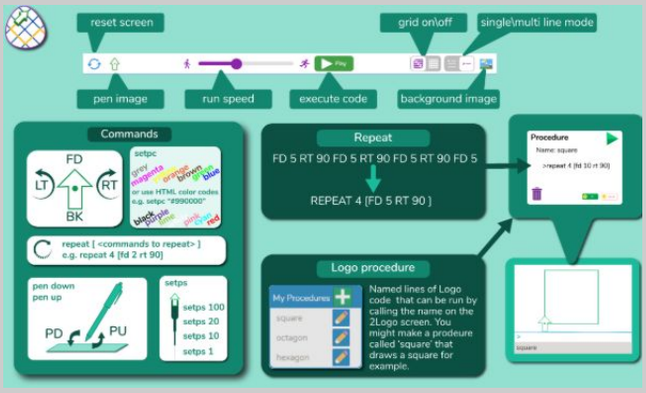
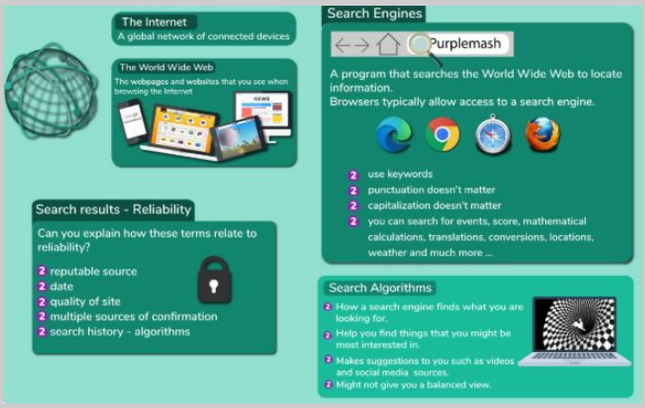
Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 4.1 Coding: 	**Key Vocabulary for Unit 4.1 Coding:** As above for unit 4.1 and the following: Co-ordinates Repeat until 'If/Else' statements Inputs Variable Alert Prompt
Unit 4.1 Coding *4 lessons* Coordinates Repeat Until and If/Else statements Number Variables Making a playable game	• Make use of the X and Y attributes (properties) of objects in my coding. • Create a program that includes an IF statement. • Read code that includes repeat until and IF/ ELSE and explain how it works. • Create a program that includes an IF/ ELSE statement. • Interpret a flowchart that depicts an IF/ ELSE statement. • Explain what a variable is in programming. • Create and use variables when programming. • Read code that includes repeat until and IF/ ELSE and explain how it works. • Create a program that includes and IF/ ELSE statement. • Interpret a flowchart that depicts an IF/ ELSE statement.
Structures & Representations for Unit 4.3 Spreadsheets: 	**Key Vocabulary for Unit 4.3 Spreadsheets:** Formula wizard Percentage Format Cell Decimal Place Average Equal to tool Random number tool Spinner tool Timer
Unit 4.3 Spreadsheets *2 lessons* Formula Wizard and Formatting Cells Using the Timer and Spin Buttons	• Use the number formatting tools within 2Calculate to appropriately format numbers. • Add a formula to a cell to automatically make a calculation in that cell. • Use the timer, random number and spin button tools. • Combine tools to make fun ways to explore number.

Computing - Year 4 Spring 1: Scheme of Work

	Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Spring 1	**Structures & Representations for Unit 4.3 Spreadsheets:** 	**Key Vocabulary for Unit 4.3 Spreadsheets:** As above for unit 4.3 Spreadsheets and the following: Line graph Resize Data Chart Budget Calculation Tools Place Value 'Is equal to' took Set image
	Unit 4.3 Spreadsheets *3 lessons* Line graphs Using a spreadsheet for budgeting Exploring place value witha spreadsheet	• Use a series of data in a spreadsheet to create a line graph. • Use a line graph to find out when the temperature in the playground will reach 20°C. • Make practical use of a spreadsheet to help myself plan actions. • Use the currency formatting in 2Calculate. • Allocate values to images and use these to explore place value. • Use a spreadsheet made in 2Calculate to check my understanding of a mathematical concept.
	Structures & Representations for Unit 4.5 Logo: 	**Key Vocabulary for Unit 4.5 Logo:** Logo Run speed Grid Logo Commands Prediction Pen up Pen down Multi Line mode Debugging Repeat
	Unit 4.5 Logo *3 lessons* Introduction to 2logo Creating letters using 2 logo Using 'repeat' command in 2logo	• Know what the common instructions are in 2Logo and how to type them. • Follow simple 2Logo instructions to create shapes on paper. • Follow simple instructions to create shapes in 2Logo. • Create 2Logo instructions to draw patterns of increasing complexity. • Understand the pu and pd commands. • Write 2Logo instructions for a word of four letters. • Follow 2Logo code to predict the outcome. • Create shapes using the Repeat command. • Find the most efficient way to draw shapes.

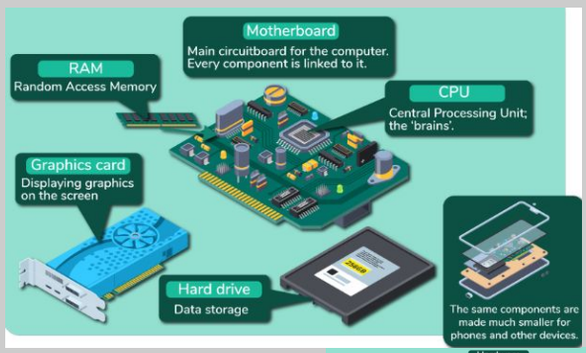
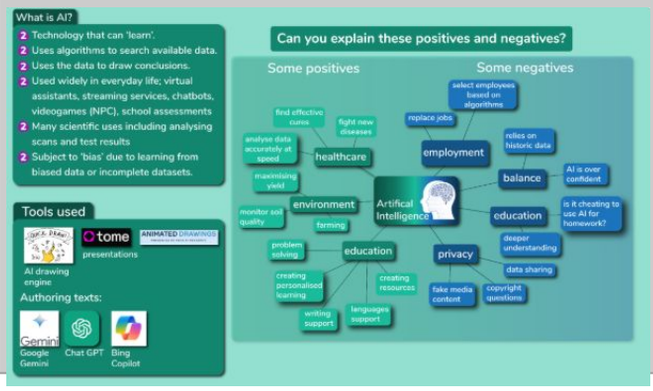
Computing - Year 4 Spring 2: Scheme of Work

Spring 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 4.5 Logo: 	**Key Vocabulary for Unit 4.5 Logo:** As above for unit 4.5 logo and the following: Procedure SETPC SETPS
Unit 4.5. Logo *1 lesson* Using procedures	• Use the Procedure feature. • Create 'flowers' or 'crystals' using 2Logo.
Structures & Representations for Unit 4.6 animation: 	**Key Vocabulary for Unit 4.6 animation:** Animation Frame FPS (frame per second) Pause Onion Skinning Stop Motion
Unit 4.6 Animation *3 lessons* Animating an object 2 animate tools Stop Motion Animation	• Put together a simple animation using paper to create a flick book. • Understand animation frames. • Make a simple animation using 2Animate. • Know what the Onion Skin tool does in animation. • Use the Onion Skin tool to create an animated image. • Use backgrounds and sounds to make more complex and imaginative animations. • Know what 'stop motion' animation is and how it is created. • Use ideas from existing 'stop motion' films to recreate my own animation. • Share my animations and commented on each other's work using display boards and blogs in Purple Mash.
Structures & Representations for Unit 4.7 Effective searching: 	**Key Vocabulary for Unit 4.7 Effective searching:** Search engine Results Page Internet Key words
Unit 4.7 Effective searching *2 lessons* Using a search engine Use search effectively to answer questions	• Structure search queries to locate specific information. • Use search to answer a series of questions. • Write search questions for a friend to solve.

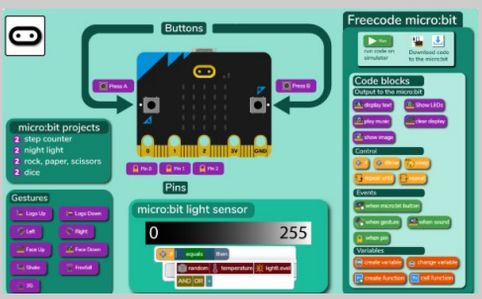
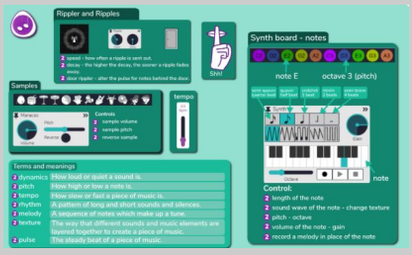
Computing - Year 4 Summer 1: Scheme of Work

Summer 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 4.7 Effective searching: 	**Key Vocabulary for Unit 4.7 Effective searching:** As above for unit 4.7 Effective searching and the following: Reliability Easter eggs Balanced view
Unit 4.7 Effective searching *1 lesson* Reliable information searching	• Analyse the contents of a web page for clues about the credibility of the information.
Structures & Representations for Unit 4.8 hardwire investigators:  	**Key Vocabulary for Unit 4.8 Hardwire investigators:** Hardware Software RAM Components Peripherals Motherboard CPU Hard drive Graphics card Network card Input Output
Unit 4.8 Hardwire Investigators *2 lessons* Hardware Parts of a computer	• Name the different parts of a desktop computer. • Know what the function of the different parts of a computer is. • Create a leaflet to show the function of computer parts.
Structures & Representations for Unit 4.10 Artificial intelligence: 	**Key Vocabulary for Unit 4.10 Artificial intelligence:** Artificial intelligence Algorithm Data
Unit 4.10 Artificial Intelligence *Unit 3 lessons* What is Artificial Intelligence? How Artificial Intelligence can help us The future of Artificial Intelligence	• Define artificial intelligence in my own words. • Identify at least three examples of artificial intelligence. • Define artificial intelligence. • Understand where AI can help us in our daily lives. • Use critical thinking and creativity in envisioning the future of AI. • Express my ideas about the future of AI. • Children can collaborate effectively

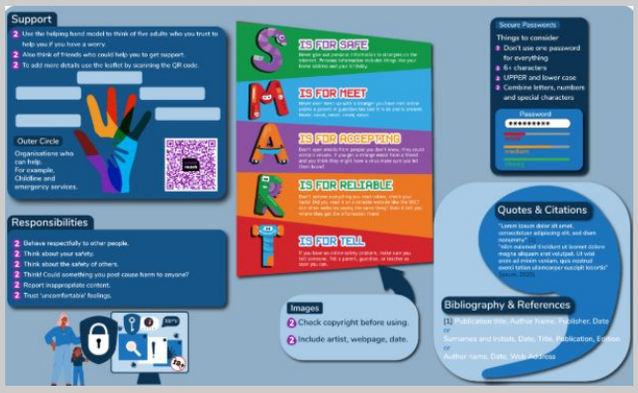
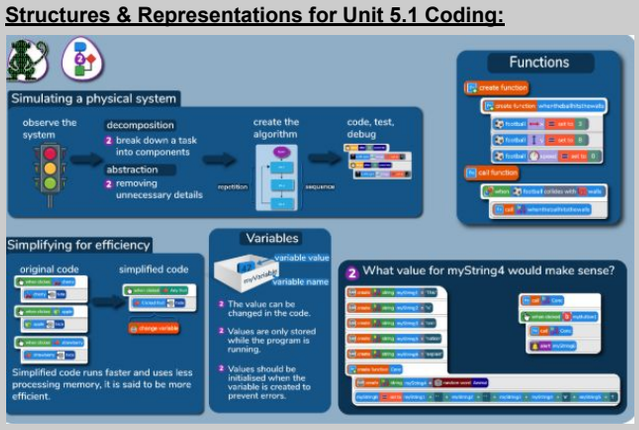
Computing - Year 4 Summer 2: Scheme of Work

Summer 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 4.10 Artificial Intelligence: 	**Key Vocabulary for Unit 4.10 Artificial Intelligence:** Artificial intelligence Algorithm Data
Unit 4.10 Artificial Intelligence *Unit 1 lessons* Artificial Intelligence in action	• Try to distinguish between creative compositions made by humans and those made using artificial intelligence. • Use artificial intelligence to create images and music.
Structures & Representations for Unit 4.11 Micro:bits: 	**Key Vocabulary for Unit 4.11 Micro:bits:** Accelerometer Sensor Data Variable Infinite loop Logic Light sensor LED Conditionals Gestures Selection Simulation
Unit 4.11 Micro:bits *4 lessons* Step Counter Night Light Rock, Paper, Scissors Making a Dice	• Turn a micro:bit into a step counter using the accelerometer and variables. • Explain that accelerometer is a sensor, an input that senses movement. • Explain that variables are containers for storing data which can be accessed and updated. • Code a micro:bit to make a light that switches on when it gets dark using sensors and logic. • Explain that sensors are inputs that sense things in the real world, such as movement and light. • Explain that logic is how computers make decisions in code based on whether things are true or false. • Code a micro:bit rock, paper, scissors game using inputs, random numbers, variables and logic. • Explain how inputs, random numbers, variables, and logic can make a computer simulation of a real-world game. • Code a micro:bit dice using inputs, random numbers, variables and logic. • Explain how combining inputs, random numbers, variables, and logic can make a computer simulation of a real dice.
Structures & Representations for Unit 4.9 making Music: 	**Key Vocabulary for Unit 4.9 Making Music:** BPM Melody Rhythm Dynamics Pitch Tempo Synths Harmonious Pulse Texture
Unit 4.9 Making music *4 Lesson* *Links to music curriculum in the final half term so will be covered in those lessons* Understanding Music Rhythm and tempo Melody and pitch Creating music	• Use appropriate musical language to discuss music. • Identify sounds in a piece of music. • Explain how a piece of music makes me feel. • Identify and recall a simple rhythm. • Explain what tempo is, and how changing it can change the mood of a piece of music. • Create my own simple rhythm using Busy Beats. • Show an understanding of melody. • Create a melodic pattern using 2Sequence and Busy Beats. • Use a variety of notes, experimenting with pitch. • Explore and understand how music is created. • Experiment with pitch, rhythm, and melody to create a piece of house music on Busy Beats.

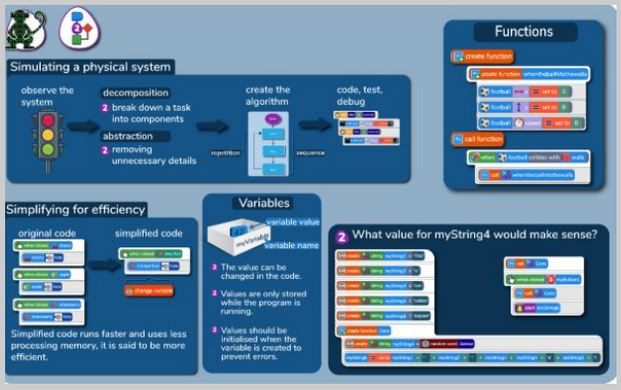
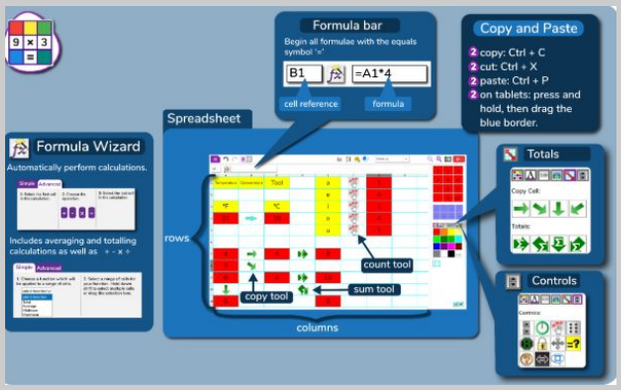
Computing - Year 5 Autumn 1: Scheme of Work

Autumn 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 5.2 Online safety: 	**Key Vocabulary for Unit 5.2 Online safety:** Smart Rules Responsibility Encrypt Critical thinking Image Manipulation Avatar Citation Validity Reliability Plagiarism Bibliography Copyright Creative Commons LIcence Communication
Unit 5.2 Online Safety *4 lessons* Responsibilities and Support when Online Protecting Privacy Citing Sources Reliability	• Think critically about the information that they share online both about myself and others. • Know who to tell if they are upset by something that happens online. • Use the SMART rules as a source of guidance when online. • Think critically about what they share online, even when asked by a usually reliable person to share something. • Have clear ideas about good passwords. • See how they can use images and digital technology to create effects not possible without technology. • Have experienced how image manipulation could be used to upset myself or others even using simple, freely available tools and little specialist knowledge. • Cite all sources when researching and explain the importance of this. • Select keywords and search techniques to find relevant information and increase reliability. • Show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each
Structures & Representations for Unit 5.1 Coding: 	**Key Vocabulary for Unit 5.1 Coding:** Event Object Action Variable Selection Co-ordinates Input Simplify Efficient Computer generated variable Physical System
Unit 5.1 coding *2 lessons* Coding Efficiently Simulating a Physical System	• Use simplified code to make my programming more efficient. • Use variables in my code. • Create a simple playable game. • Plan an algorithm modelling the sequence of traffic lights. • Select the right images to reflect the simulation they are making. • Use my plan to program the simulation to work in 2Code.

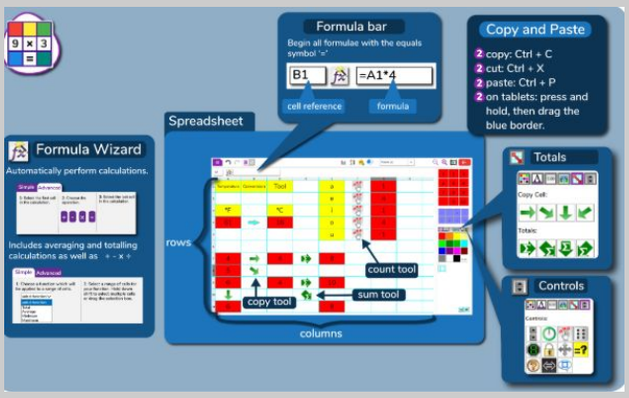
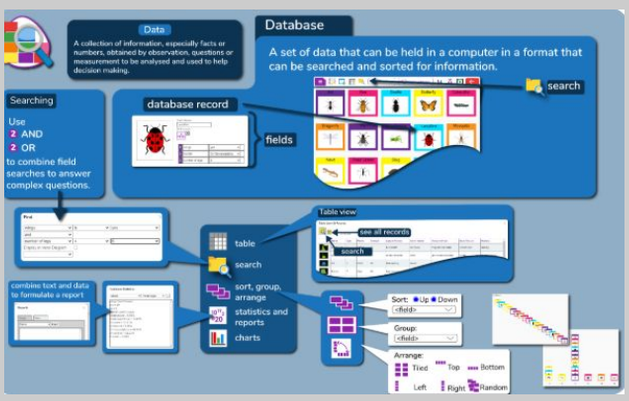
Computing - Year 5 Autumn 2: Scheme of Work

Autumn 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 5.1 Coding: 	**Key Vocabulary for Unit 5.1 Coding:** As above 5.1. vocabulary and the following: Decomposition Abstraction Friction Function Tabs Random Concatenation Print to screen
Unit 5.1 coding *4 lessons* Decomposition and Abstraction Friction and Functions Introducing Strings Text Variables and Concatenation	• Make good attempts to break down my task into smaller achievable steps. • Recognise the need to start coding at a basic level of abstraction to remove superfluous details from my program that do not contribute to the aim of the task • Create a program which represents a physical system. • Create and use functions in my code to make my programming more efficient. • Create and use strings in programming. • Set/change variable values appropriately. • Know some ways that text variables can be used in coding. • Create a string and use it in my program. • Use strings to produce a range of outputs in my program
Structures & Representations for Unit 5.3 Spreadsheets: 	**Key Vocabulary for Unit 5.3 Spreadsheets:** Advanced mode Formula wizard Copy and paste Conversion Variable 'How many' tool
Unit 5.3 spreadsheets *2 lessons* Conversions of Measurements The Count Tool	• Create a formula in a spreadsheet to convert m to cm. • Apply this to creating a spreadsheet that converts miles to km and vice versa. • Use a spreadsheet to work out which letters appear most often. • Use the 'how many' tool.

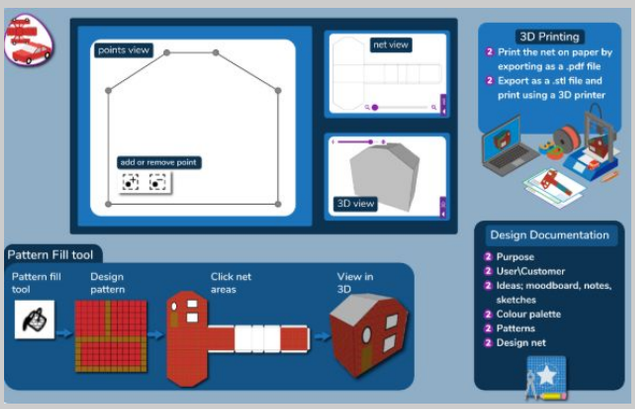
Computing - Year 5 Spring 1: Scheme of Work

Spring 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 5.3 Spreadsheets: 	**Key Vocabulary for Unit 5.3 Spreadsheets:** As above 5.3. vocabulary and the following: Area Perimeter Modelling Format cell Formula Totalling Tool Variable Budget Profit
Unit 5.3. Spreadsheets *3 lessons* Formulae including the advanced mode Using text variables to perform calculations Event planning with a spreadsheets	• Use a spreadsheet to work out the area and perimeter of rectangles. • Use these calculations to solve a real-life problem. • Create simple formulae that use different variables. • Create a formula that will work out how many days there are in x number of weeks or years. • Create simple formulae that use different variables. • Create a formula that will work out how many days there are in x number of weeks or years.
Structures & Representations for Unit 5.4 Databases: 	**Key Vocabulary for Unit 5.4 Databases:** Database Search Record Field Sort Group Arrange Statistics Database Report Chart Avatar Collaborative
Unit 5.4 databases *3 lessons/ 4 lessons (combine lesson ¾)* Searching a Database Creating a Class Database Creating a Topic Database	• Understand the different ways to search a database. • Search a database to answer questions correctly. • Design an avatar for a class database. • Successfully enter information into a class database. • Create my own database on a chosen topic. • Add records to my database. • Know what a database field is and can correctly add field information. • Understand how to word questions so that they can be effectively answered using a search of my database.

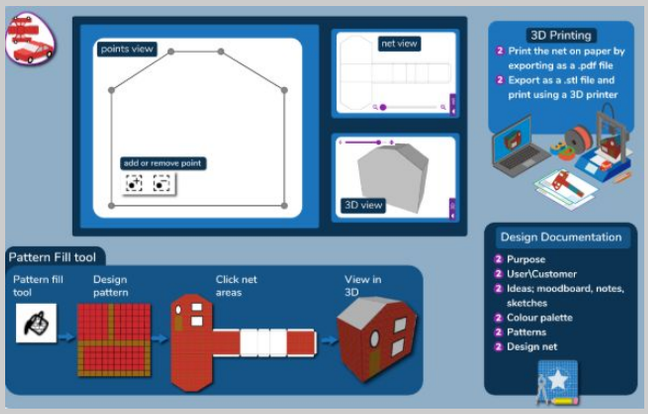
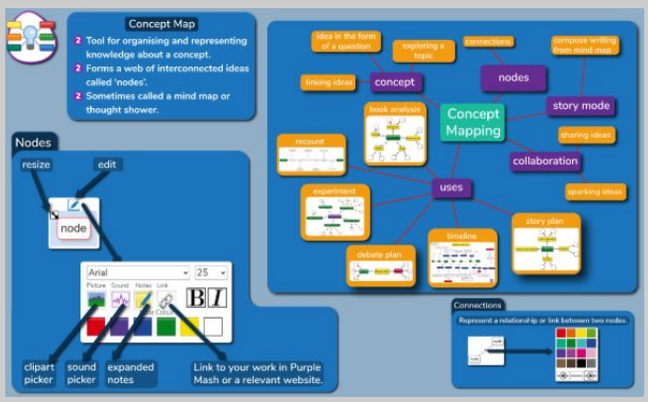
Computing - Year 5 Spring 2: Scheme of Work

Spring 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 5.5 Game Creator: 	**Key Vocabulary for Unit 5.5 Game Creator:** Evaluation Theme Scene Texture Image Screenshot Quest Instructions Feedback Promotion
Unit 5.5 Game Creator *5 lessons* Setting the scene Creating the game environment The game quest Finishing and sharing Evaluation	• Review and analyse a computer game. • Describe some of the elements that make a successful game. • Begin the process of designing my own game. • Design the setting for my game so that it fits with the selected theme. • Upload images or use the drawing tools to create the walls, floor, and roof. • Design characters for my game. • Decide upon, and change, the animations and sounds that the characters make. • Make my game more unique by selecting the appropriate options to maximise the playability. • Write informative instructions for my game so that other people can play it • Evaluate my my own and peers' games to help improve my design for the future.
Structures & Representations for Unit 5.6 game modelling: 	**Key Vocabulary for Unit 5.6 Game modelling:** Net Template 3D view Pattern fill
Unit 5.6 3D Modelling *1 lesson* Introducing 2Design and Make	• Know what the 2Design and Make tool is for. • Explore the different viewpoints in 2Design and Make whilst designing a building

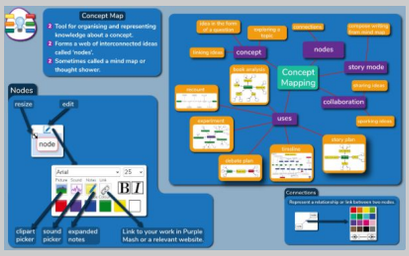
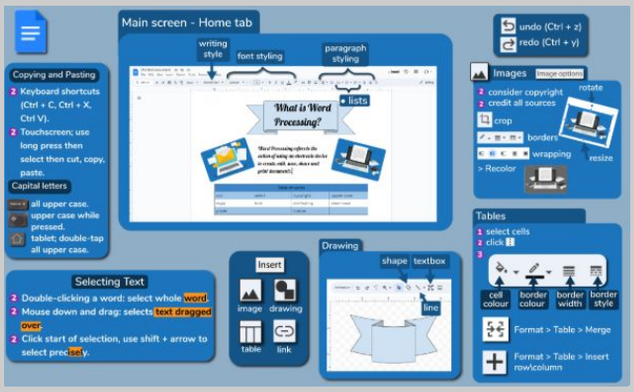
Computing - Year 5 Summer 1: Scheme of Work

Summer 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 5.6 Game modelling: 	**Key Vocabulary for Unit 5.6 Game modelling:** As above for unit 5.6 and the following: Points Design Brief 3D printing
Unit 5.6 3D modelling *3 lessons* Moving points Designing for a purpose Printing and making	• Adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form. • Explore how to edit the polygon 3D models to design a 3D model for a purpose. • Refine one of my designs to prepare it for printing. • Print my design as a 2D net and then created a 3D model. • Explore the possibilities of 3D printing.
Structures & Representations for Unit 5.7 Concept Maps: 	**Key Vocabulary for Unit 5.7 Concept Maps:** Concept Concept Map Node Connections Story Mode
Unit 5.7 Concept Maps *3 lessons* Introduction to concept mapping Using 2 connect 2 connect story mode	• Make connections between thoughts and ideas. • See the importance of recording concept maps visually. • Children understand what is meant by 'concept maps', 'stage', 'nodes' and 'connections.' • Create a basic concept map. • Use 2Connect Story Mode to create an informative text.

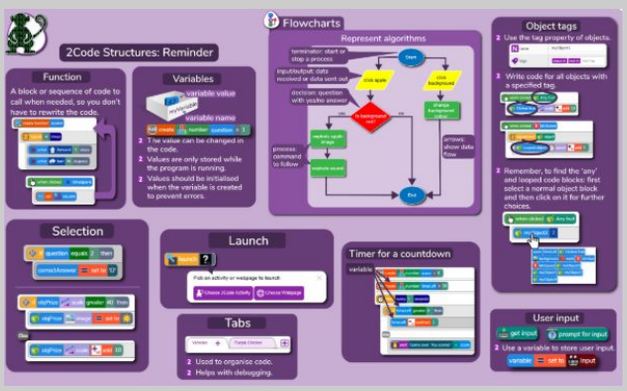
Computing - Year 5 Summer 2: Scheme of Work

Summer 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 5.7 Concept maps: 	**Key Vocabulary for Unit 5.7 Concept Maps:** As above 5.7 vocabulary and the following: Collaborate Presentation mode
Unit 5.7 concept maps *1 lesson* Collaborative concept maps	• Use 2Connect collaboratively to create a concept map. • Use Presentation Mode to present my concept maps to an audience.
Structures & Representations for Unit 5.8 Word processing on google docs: 	**Key Vocabulary for Unit 5.8 Word processing on google docs:** Word processing tool Document Front screen Caps lock Cursor Selecting/ highlight Font Text formatting Page orientation Copyright Creative commons Attributing Image editing Cropping Text wrapping Styles Bulleted lists Numbered lists Text Box Caption Breaks Hyperlink Sharing Editing options Merge cells Column Row Template Spell check Grammar check
Unit 5.8. Word processing with Google Docs *8 lessons - to be merged into 5 lessons by combining objectives* 1. Making a Document from a Blank Page Inserting Images: Considering Copyright 2. Editing Images Adding the Text 3. Finishing Touches Sharing Files 4. Presenting Information Using Tables 5. Writing a Letter Using a Template	• Know what a word processing tool is for. • Create a word processing document, altering the look of the text and navigating around the document • Know how to add images to a document. • Know the correct way to search for images that they are permitted to reuse. • Know how to attribute the original artist of an image. • Edit my images within Docs to best present them alongside text. • Understand wrapping of images and text. • Add appropriate text to my document, formatting in a suitable way. • Use styles to format a document. • Use bullet points and numbering. • Add text boxes and shapes. • Use page breaks, headers and footers. • Add hyperlinks to places in the document and to an external website. • Add an automated contents page • Share my documents with selected users. • Understand the different permissions when sharing in Google docs. • Share using a share link. • Create a vector drawing in my document. • Add tables to present information • Edit properties of tables including borders, colours, merging cells, adding and removing rows and columns • Use a template and edit it appropriately. • Use the spelling and grammar tools built into Google docs.

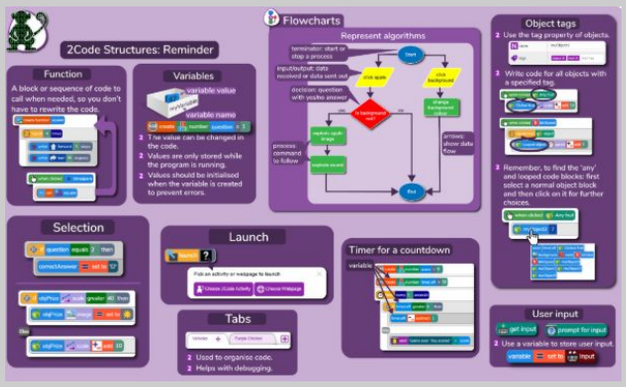
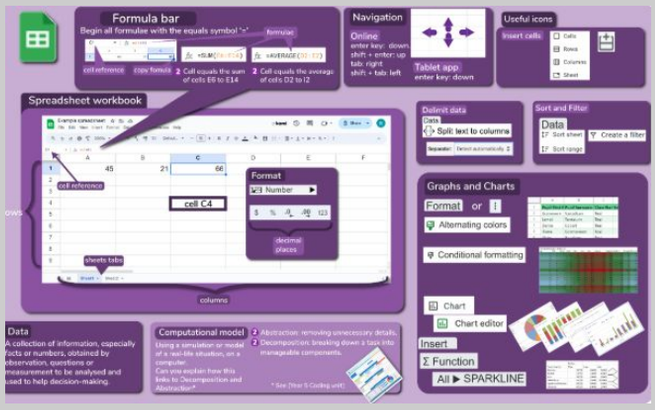
Computing - Year 6 Autumn 1: Scheme of Work

Autumn 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 6.2 Online Safety: 	**Key Vocabulary for Unit 6.2 Online Safety:** Secure website Location sharing Spoof Phishing Passwords PEGI rating Digital footprint Inappropriate Screen time Data analysis Print screen
Unit 6.2 online safety *3 lessons* Message in a game Online behaviour Screen time	• Use the example game and further research to refresh my memories about risks online including sharing location, secure websites, spoof websites, phishing, and other email scams. • Use the example game and further research to refresh my memories about the steps they can take to protect myself including protecting my digital footprint, where to go for help, smart rules and security software. • Understand how what they share impacts upon myself and upon others in the long-term. • Know about the consequences of promoting inappropriate content online and how to put a stop to such behaviour when they experience it or witness it as a bystander • Take more informed ownership of the way that they choose to use my free time. • Recognise a need to find a balance between being active and digital activities. • Give reasons for limiting screen time. • Talk about the positives and negative aspects of technology and balance these opposing views.
Structures & Representations for Unit 6.1 Coding: 	**Key Vocabulary for Unit 6.1 Coding:** Launch command X and y attributes Function Text object Tabs
Unit 6.1 coding *3 lessons* Designing and making a more Complex Program Using Functions	• Plan a program which includes a timer and a score. • Follow my plans to create a program. • Debug when things do not run as expected. • Create a program that makes use of functions. • Create a program that uses multiple functions with the code arranged in tabs. • Explain how my code executes when my program is run.

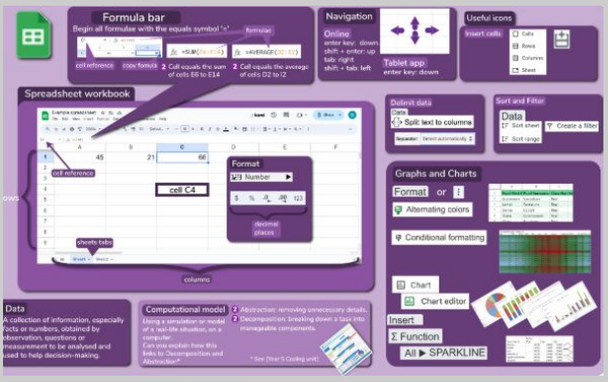
Computing - Year 6 Autumn 2: Scheme of Work

Autumn 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 6.1 Coding: 	**Key Vocabulary for Unit 6.1 Coding:** As above from the 6.1 vocabulary and the following: Flowchart Simulations Procedure Input Concatenation Text adventure
Unit 6.1.coding *3 lessons* Flowcharts and Control Simulations User Input Using Text-based Adventures	• Follow flowcharts to create and debug code. • Create flowcharts for procedures. • Be creative with the way they code to generate novel visual effects. • Code programs that take text input from the user and use this in the program. • Attribute variables to user input. • Aware of the need to code for all possibilities when using user input • Follow through the code of how a text adventure can be programmed in 2Code. • Design my own text-based adventure game based on one they have played. • Adapt an existing text adventure so it reflects my own ideas.
Structures & Representations for Unit 6.9 Spreadsheets (google sheets): 	**Key Vocabulary for Unit 6.9 Spreadsheets (google sheets):** Spreadsheet Data Row Column Cell Cell reference Workbook Sheet Formula Formulae Calculation Formula bar Series Computational model Template Budget Expense Formatting currency
Unit 6.9 spreadsheets (google sheets) *3 lessons* What is a Spreadsheet? Basic Calculations Modelling	• Know some uses of a spreadsheet tool. • Children can navigate around a spreadsheet using cell references. • Enter data into cells. • Understand new vocabulary relating to spreadsheets: cells, columns, rows, cell names, sheets, workbook. • Use a spreadsheet to carry out basic calculations including addition, subtraction, multiplication and division formulae. • Use the series fill function. • Children recognise how using formulae allows the data to change and the calculations to update automatically. • Use a spreadsheet to model a situation. • Use a spreadsheet to solve a problem. • Use the SUM function

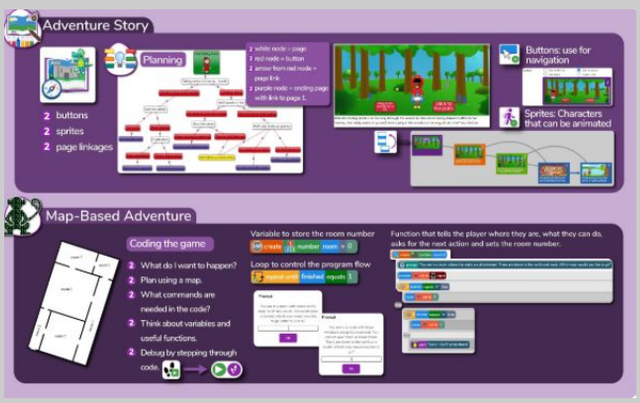
Computing - Year 6 Spring 1: Scheme of Work

Spring 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 6.9 Spreadsheets (google sheets): 	**Key Vocabulary for Unit 6.9 Spreadsheets (google sheets):** As above for unit 6.9 vocabulary and the following: Delimiter Sorting Smart fill Auto fit Sorting Filter Average Minimum Maximum Horizontal axis Vertical axis Conditional formatting Profit
Unit 6.9 spreadsheets *5 Lessons* Organising Data Advanced Formulae and Big Data Charts and Graphics Using a Spreadsheet to Plan a Cake Sale Using a Spreadsheet to Solve Problems	• Use a variety of methods including flash fill, convert text to tables and splitting cells for organising and presenting my data in a spreadsheet. • Know what is meant by a delimiter. • Understand how to sort data • Know how to incorporate formulae for percentages, averages, max and min into my spreadsheets. • Gain familiarity with range notation. • Know some shortcuts that help to make data meaningful. • Begin to develop a critical eye when it comes to the conclusions that can be made from data. • Know that there are ways to represent my data graphically and that spreadsheets can make the process of representing data easier. • Gain an understanding of how a graphical representation can make data easier to interpret. • Make a variety of charts using Sheets. • Illustrate my data using sparklines and data bars. • Understand how a spreadsheet can be used to plan an event. • Understand the advantages of using formulae when data is subject to change. • Modell a real-life situation using a spreadsheet. • Apply all new spreadsheet skills to solving problems and presenting data. • Explore printing spreadsheets.
Structures & Representations for Unit 6.4 Blogging: 	**Key Vocabulary for Unit 6.4 Blogging:** Blog Vlog Archive Blog Post
Unit 6.4 Blogging *1 lesson* What is a blog	• Understand how a blog can be used as an informative text. • Understand the key features of a blog.

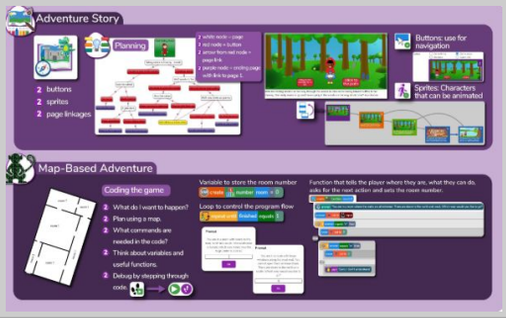
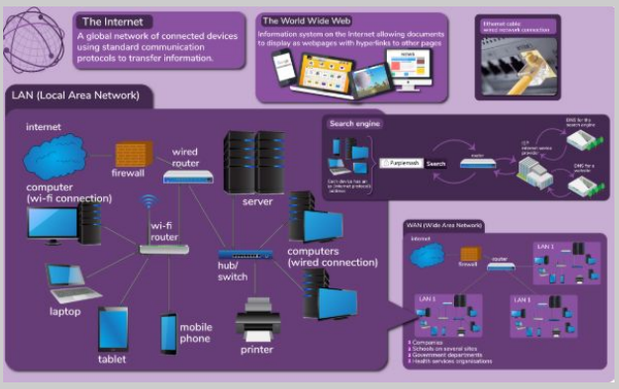
Computing - Year 6 Spring 2: Scheme of Work

Spring 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 6.4 Blogging: 	**Key Vocabulary for Unit 6.4 Blogging:** As above for unit 6.4 vocabulary and the following: Collaborate Nodes Connections Commenting Approval
Unit 6.4 blogging *3 lessons* Planning a blog Writing a blog Sharing and commenting	• Work collaboratively to plan a blog. • Create a blog or blog post with a specific purpose. • Understand that the way in which information is presented has an impact upon the audience. • Post comments and blog posts to an existing class blog. • Understand the approval process that my posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying. • Assess the effectiveness and impact of a blog. • Understand that content included in my blog carefully considers the end user.
Structures & Representations for Unit 6.5 text adventures: 	**Key Vocabulary for Unit 6.5 text adventures:** Text adventure Sprite Link Step Through Selector Flow of Control
Unit 6.5 text adventures *3 lessons* What Is a Text Adventure? Planning a Story Adventure Making a Story-based Adventure Game Coding Comprehension of Text Adventure Game	• Describe what a text adventure is. • Map out a story-based text adventure. • Use 2Connect to record my ideas. • Use the full functionality of 2Create a Story Adventure mode to create, test and debug using my plan. • Split my adventure game design into appropriate sections to facilitate creating it. • Explain the features and purpose of code within a given text adventure. • Step through each line of code and follow the flow of execution.

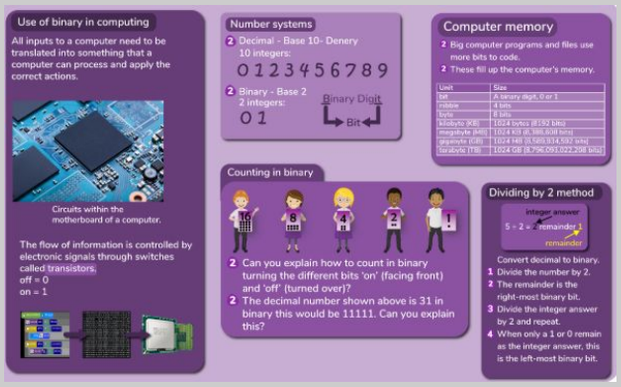
Computing - Year 6 Summer 1: Scheme of Work

Summer 1

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 6.5 text adventures: 	**Key Vocabulary for Unit 6.5 text adventures:** As above unit 6.5 and the following: Variable Repeat while loop Function
Unit 6.5. Text Adventures *1 lesson* Debugging and Improving a Text Adventure.	• Make logical attempts to debug more complex code involving a combination of functions, variables and a loop. • Suggest and implement ideas to further develop the program.
Structures & Representations for Unit 6.6. Networks: 	**Key Vocabulary for Unit 6.6. Networks:** Internet World Wide Web Website Network Web server Web page Hosting Data LAN (local area network) WAN (wide area network) WLAN (wireless local area network) Router Hub/ switch Ethernet Wi-Fi Search Engine IP address ISP (Internet service provider) DNS (domain name server)
Unit 6.6 Networks *3 lessons* The World Wide Web and the Internet Our School Network and Accessing the Internet Research	• Know the difference between the World Wide Web and the internet. • Know about my school network. • Research and find out about Tim Berners-Lee. • Consider some of the major changes in technology which have taken place during my lifetime and the lifetime of my teacher/another adult.
Structures & Representations for Unit 6.7 Quizzing: 	**Key Vocabulary for Unit 6.7 Quizzing:** Audience Preview Case-sensitive
Unit 6.7 Quizzing *2 lessons* Introducing 2DIY Using 2Quiz	• Use the 2DIY activities to create a picture-based quiz. • Consider the audience's ability level and interests when setting the quiz. • Share my quiz and responded to feedback. • Understand the different question types within 2Quiz. • Have ideas about what sort of questions are best suited to the different question types. • Use 2Quiz to make and share a science quiz (or another subject). • Consider the audience's ability level and interests when setting the quiz. • Share my quiz with peers. • Give and respond to feedback

Computing - Year 6 Summer 2: Scheme of Work

Summer 2

Focus - Purple Mash Computing Lessons	Destinations (I will be able to ..)
Structures & Representations for Unit 6.7 Quizzing: 	**Key Vocabulary for Unit 6.7 Quizzing:** As above for unit 6.7 and the following: Cloze Statistics Survey Participants Data analysis
Unit 6.7 Quizzing *2 or 3 lessons (combine lesson 4 and 5)* Exploring grammar quizzes and making a database quiz Using a survey	• Try out the different types of grammar games. • Choose an appropriate tool to make my own grammar game(s). • Use a 2Investigate quiz to answer quiz questions. • Design my own quiz based on one of the 2Investigate example databases. • Use my knowledge of quiz types to create a quiz show quiz based on a curriculum area.
Structures & Representations for Unit 6.8 Understanding Binary: 	**Key Vocabulary for Unit 6.8 Understanding Binary:** Binary Denary Base 10 Decimal system Transistor Microprocessor Nanotechnology Bit Nibble, Byte, Kilobyte, Gigabyte, Terabyte Sequence Switch Integer Remainder Game States
Unit 6.8 Understanding Binary *4 lessons* What is binary? Counting in binary COnverting decimal to binary Game States	• Explain how all data in a computer is saved in the computer memory in a binary format. • Explain that binary uses only the integers 0 and 1. • Relate 0 to an 'off' switch and 1 to and 'on' switch. • Count up from 0 in binary using visual aids if needed. • Relate bits to computer storage. • Convert numbers to binary using the division by two method. • Check my own answers using the converter tool. • Make use of a variable set to 0 or 1 to control game states.