Longsight Community Primary School
Computing Long Term Plan

	Autumn		Spring		Summer	
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Reception	Title/book	Title/book	Title/book	Title/book	Title/book	Title/book
	Objective details	Objective details	Objective details	Objective details	Objective details	Objective details
Year 1	Online Safety	Grouping and sorting	Data in Pictures: Pictograms	Lego Builders	Maze Explorers	Animated story books
Objectives	• To log in safely and understand why that is important. • To create an avatar and to understand what this is and how it is used. • To be able to create a picture and add their own name to it. • To start to understand the idea of 'ownership' of creative work. • To save work to the My Work area and understand that this is private space. • To learn how to find saved work in the Online Work area.	To sort items using a range of criteria. To sort items on the computer using the 'Grouping' activities in Purple Mash.	To understand that data can be represented in picture format. To contribute to a class pictogram. To use a pictogram to record the results of an experiment.	To emphasise the importance of following instructions. To follow and create simple instructions on the computer. To consider how the order of instructions affects the result.	To understand the functionality of the basic direction keys. To understand how to create and debug a set of instructions (algorithm). To understand	To understand the differences between traditional books and e-books. To explore the tools of 2Create a Story's My Simple Story level. To save the page they have created.

	•To learn about what the teacher has access to in Purple Mash. • To learn how to see messages left by the teacher on their work. • To learn how to search Purple Mash to find resources. • To become familiar with the types of resources available in the Topics section. • To become more familiar with the icons used in the resources in the Topics section. • To start to add pictures and text to work. • To explore the Tools area of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New. • To explore the Games area on Purple Mash. • To understand the importance of logging out when they have finished.					how to change and extend the algorithm list. To create a longer algorithm for an activity.	To add animation to a picture. To play the pages created so far. To save the additional changes and overwrite the file. To add a sound effect to a picture. To add a voice recording to the picture. To add created music to the picture. To add a background to the story. To demonstrate a good understanding of all the tools they have used in 2Create a Story and use these successfully to create their own story. To use the copy and paste feature to create additional pages. To continue and complete an animated story. To create a class display board of the story books

								created by the class.
Year 2	Online safety	Coding	Spreadsheets	Questioning	Effective searching	Creating pictures.	Making Music	Presenting Information
Objectives	To know how to refine searches using the Search tool. To know how to share work electronically using the display boards. To use digital technology to share work on Purple Mash to communicate and connect with others locally. To have some knowledge and understanding about sharing more globally on the Internet. To introduce Email as a communication tool using 2Respond simulations. To understand how we talk to others when they are not there in front of us. To open and send simple online	To understand what an algorithm is. To create a computer program using an algorithm. To create a program using a given design. To understand the collision detection event. To understand that algorithms follow a sequence. To design an algorithm that follows a timed sequence. To understand that different	To use copying, cutting and pasting shortcuts in 2Calculate. To use 2Calcuate totalling tools. To use 2Calculate to solve a simple puzzle. To explore the capabilities of a spreadsheet in adding up coins to match the prices of objects. To add and edit data in a table layout. To use the data to manually create a block graph.	To show that the information provided on pictograms is of limited use beyond answering simple questions. To use yes/no questions to separate information. To construct a binary tree to separate different items. To use binary tree software to answer questions. To use a database to answer more complex search questions. To use the Search tool to find information.	To understand the terminology associated with the Internet and searching. To gain a better understanding of searching the Internet. To create a leaflet to help someone search for information on the Internet.	To explore 2Paint A Picture. To look at the work of Impressionist artists and recreate them using the Impressionism template. To look at the work of pointillist artists such as Seurat. To recreate pointillist art using the Pointillism template. To look at the work of Piet Mondrian and recreate it using the Lines template. To look at the work of William Morris and recreate it using the Patterns template. To look at some surrealist art and create your own using the eCollage	To be introduced to making music digitally using 2Sequence. To explore, edit and combine sounds using 2Sequence. To add sounds to a tune to improve it. To think about how music can be used to express feelings and create tunes which depict feelings. To upload a sound from a bank of sounds into the Sounds section. To record their own sound and upload it	To explore how a story can be presented in different ways. To make a quiz about a story or class topic. To make a fact file on a non-fiction topic. To make a presentation to the class.

	communications in the form of email. To understand that information put online leaves a digital footprint or trail. To begin to think critically about the information they leave online. To identify the steps that can be taken to keep personal data and hardware secure.	objects have different properties. To understand what different events do in code. To create a program using a given design. To understand the function of buttons in a program. To know what debugging means. To understand the need to test and debug a program repeatedly. To debug simple programs.					function in 2Paint A Picture.	into the Sounds section. To create their own tune using the sounds which they have added to the Sounds section.
Year 3	Online Safety	Coding	Spreadsheets	Touch-typing	Email	Simulations	Graphing	Presenting
Objectives	To know what makes a safe password, how to keep passwords safe and the	To understand what a flowchart is and how flowcharts	To add and edit data in a table layout. To find out how spreadsheet programs can	To introduce typing terminology. To understand the correct	To sort objects using just YES/NO questions.	To find out what a simulation is and understand the purpose of simulations.	To enter data into a graph and answer questions. To investigate in order to answer a question.	To create a page in a presentation. To add media to a presentation.

consequences of giving your passwords away. To understand how the Internet can be used to help us to communicate effectively. To understand how a blog can be used to help us communicate with a wider audience. To consider if what can be read on websites is always true. To look at a 'spoof' website. To create a 'spoof' webpage. To think about why these sites might exist and how to check that the information is accurate. To learn about the meaning of age restrictions symbols on digital media and devices. To discuss why PEGI	are used in computer programming. To understand that there are different types of timers. To be able to select the right type of timer for a purpose. To understand how to use the repeat command. To use coding knowledge to create a range of programs. To understand the importance of nesting. To design and create an interactive scene	automatically create graphs from data. To introduce the 'more than', 'less than' and 'equals' tools. To introduce the 'spin' tool and show how it can be used to count through times tables. To introduce the Advanced mode of 2Calculate. To learn about describing cells using their addresses.	way to sit at the keyboard. To learn how to use the home, top and bottom row keys. To practice and improve typing for home, bottom, and top rows. To practice the keys typed with the left hand. To practice the keys typed with the right hand.	To complete a branching database using 2Question. To create a branching database of the children's choice.	To explore a simulation, making choices and discussing their effects. To work through and evaluate a more complex simulation.	To present the results in graphic form	To add animations into a presentation. To add animations into a presentation. To use the skills learnt in previous weeks to design and present an effective presentation.

	restrictions exist. To know where to turn for help if they see inappropriate content or have inappropriate contact from others.								
Year 4	Online Safety	Coding	Spreadsheets	Writing for different audiences.	Logo	Animation	Effective searching	Hardware investigators	Making Music
Objectives	To understand how children can protect themselves from online identity theft. To understand that information put online leaves a digital footprint or trail and that this can aid identity theft. To identify the risks and benefits of installing software including apps. To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism.	To review coding vocabulary and knowledge. To create a simple computer program. To begin to understand selection in computer programming. To understand how an IF statement works. To understand how to use coordinates in computer programming. To understand how an IF statement works. To understand the Repeat until command.	To explore how the numbers entered into cells can be set to either currency or decimal. To explore the use of the display of decimal places. To find out how to add formulae to a cell. To explore how tools can be combined to use 2Calculate to make number games. To explore the use of the timer, random number and spin button tools. To use the line graphing tool in 2Calculate with appropriate data.	To explore how font size and style can affect the impact of a text. To use a simulated scenario to produce a news report. To use a simulated scenario to write for a community campaign.	To input simple instructions in 2Logo. To use 2Logo to create letter shapes. To use the Repeat command in 2Logo to create shapes. To use and build procedures in 2Logo.	To decide what makes a good, animated film or cartoon and discuss favourite animations. To learn how animations are created by hand. To find out how 2Animate animations can be created in a similar way using technology. To learn about onion skinning in animation. To add backgrounds and sounds	To locate information on the search results page. To use search effectively to find out information. To assess whether an information source is true and reliable.	To understand the different parts that make up a desktop computer. To recall the different parts that make up a computer.	• To identify and discuss the main elements of music: Pulse, Rhythm, Tempo, Pitch, Texture. To understand and experiment with rhythm and tempo. To create a melodic phrase. To compose a piece of electronic music.

	Online Safety	Coding	Spreadsheets	Databases	Game Creator	3D modelling	Concept maps	Word processing
	To identify appropriate behaviour when participating or contributing to collaborative online projects for learning. To identify the positive and negative influences of technology on health and the environment. To understand the importance of balancing game and screen time with other parts of their lives.	To begin to understand selection in computer programming. To understand how an IF/ELSE statement works. To understand what a variable is in programming. To use a number variable. To review vocabulary and concepts learnt in Year 4 Coding. To create a playable game.	To interpret a line graph to estimate values between data readings. To use the currency formatting tool in 2Calculate. To use 2Calculate to create a model of a real-life situation. To use the functions of allocating value to images in 2Calculate to make a resource to teach place value.			to animations. Introducing 'stop motion' animation. To share animation the class blog.		
Year 5	Online Safety	Coding	Spreadsheets	Databases	Game Creator	3D modelling	Concept maps	Word processing
Objectives	To gain a greater understanding of the impact that sharing digital content can have. To review sources of support when using technology. To review children' responsibility to one another in	To begin to be able to simplify code. To create a playable game. To understand what a simulation is. To program a simulation using 2Code. To know what decomposition and abstraction	To use formulae within a spreadsheet to convert measurements of length and distance. To use the count tool to answer hypotheses about common letters in use. To use a spreadsheet to model a real-life problem. To use	To learn how to search for information in a database. To contribute to a class database. To create a database around a chosen topic.	To Introduce the 2DIY 3D tool. To begin planning a game. To design the game environment. To design the game quest to make it a playable game.	To be introduced to the 2Design and Make tool. To explore the effect of moving points when designing. To design a 3D model to fit certain criteria. To refine and print a model.	To understand the need for visual representation when generating and discussing complex ideas. To understand the uses of a 'concept map'. To understand and use the correct vocabulary when creating a concept map.	To know what a word processing tool is for. To add and edit images to a word document. To know how to use word wrap with images and text. To change the look of text within a document. To add features to a document to

	their online behaviour. To know how to maintain secure passwords. To understand the advantages, disadvantages, permissions, and purposes of altering an image digitally and the reasons for this. To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. To learn about how to reference sources in their work. To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information. Ensuring reliability through using	are in Computer Science. To take a real-life situation, decompose it and think about the level of abstraction. To use decomposition to make a plan of a real-life situation. To understand how to use friction in code. To begin to understand what a function is and how functions work in code. To understand what the different variable types are and how they are used differently. To understand how to create a string. To begin to explore text variables when coding. To understand what concatenation is and how it works.	formulae to calculate area and perimeter of shapes. To create formulae that use text variables. To use a spreadsheet to help plan a school cake sale.		To finish and share the game.		To create a concept map. To understand how a concept map can be used to retell stories and information. To create a collaborative concept map and present this to an audience.	enhance its look and usability. To use tables within MS Word to present information. To introduce children to templates. To consider page layout including heading and columns.

	different methods of communication.								
Year 6	Online Safety	Coding	Spreadsheets	Blogging	Text Adventures	Networks	Quizzing	Binary	Spreadsheets
Objectives	To identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g., apps accessing location. To identify secure sites by looking for privacy seals of approval, e.g., https, padlock icon. To identify the benefits and risks of giving personal information and device access to different software. To review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of	To design a playable game with a timer and a score. To plan and use selection and variables. To understand how the launch command works. To use functions and understand why they are useful. To understand how functions are created and called. To use flowcharts to test and debug a program. To create a simulation of a room in which devices can be controlled. To understand the different options of generating user input in 2Code. To understand how user	To use a spreadsheet to investigate the probability of the results of throwing many dice. To use a spreadsheet to calculate the discount and final prices in a sale. Create a formula to help work out the prices of items in the sale. To use a spreadsheet to plan how to spend pocket money and the effect of saving money. To use a spreadsheet to plan a school charity day to maximise the money donated to charity.	To identify the purpose of writing a blog. To identify the features of successful blog writing. To plan the theme and content for a blog. To understand how to write a blog and a blog post. To consider the effect upon the audience of changing the visual properties of the blog. To understand how to contribute to an existing blog. To understand the importance of commenting on blogs. To peer-assess blogs against the agreed success criteria.	To find out what a text-based adventure game is and to explore an example made in 2Create a Story. To use 2Connect to plan a 'Choose your own Adventure' type story. To use 2Connect plans for a story adventure to make the adventure using 2Create a Story. To read and understand given code for a text adventure game. To debug a text adventure. To independently design and implement improvements	To discover what the children know about the Internet. To find out what a LAN and WAN are. To find out how we access the internet in school. To research and find out about the age of the internet. To think about what the future might hold.	To create a picture-based quiz for young children. To learn how to use the question types within 2Quiz. To explore the grammar quizzes. To make a quiz that requires the player to search a database. To make a quiz to test your teachers or parents.	To examine how whole numbers are used as the basis for representing all types of data in digital systems. To recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems). To understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.	To know what a spreadsheet looks like. To navigate and enter data into cells. To introduce some basic data formulae in Excel. To demonstrate how the use of Excel can save time and effort when performing calculations. To use a spreadsheet to model a situation. To demonstrate how Excel can make complex data clear by manipulating the way it is presented. To use formulae for percentages, averages, max and min

	themselves as a user. To have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. To begin to understand how information online can persist and give away details of those who share or modify it. To understand the importance of balancing game and screen time with other parts of their lives, e.g., explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has	input can be used in a program. To understand how 2Code can be used to make a text-based adventure game.		To understand how and why blog posts and comments are approved by the teacher.	to a text adventure game.			To examine how whole numbers are used as the basis for representing all types of data in digital systems. To recognise that the numbers 0, 1, 2 and 3 could be represented by the patterns of two binary digits of 00, 01, 10 and 11 To represent whole numbers in binary, for example counting in binary from zero to 15, or writing a friend's age in binary. To examine how whole numbers are used as the basis for representing all types of data in digital systems. To represent whole numbers in	in spreadsheets. To create a variety of graphs in Excel. To use a spreadsheet to model a real-life situation. To apply spreadsheet skills to solving problems.

	on their health. To identify the positive and negative influences of technology on health and the environment.						binary, for example counting in binary from zero to 15, or writing a friend's age in binary. To explore how division by two can be used as a technique to determine the binary representation of any whole number by collecting remainder terms. To examine how whole numbers are used as the basis for representing all types of data in digital systems. To represent the state of an object in a game as active or inactive using the respective binary values of 1 or 0.	