

Computing key knowledge

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	To use 'make believe' technology in play. Photographs show an image. Devices can be used to take photographs and videos. To safely carry a device to different locations we use two hands.					
Reception	Know how to take photos using a digital device. Know how to use devices with care.	Identify the technology used around me.	Know how to make a Bee-Bot move.		Know how to type numbers and letters using a keyboard.	Know how to login to Purple Mash using my username and password.
Year 1	Log in to a device safely. Identify the importance of logging out.		Understand what instructions are and predict what might happen when they are followed. Understand what object and actions are. Explain what an event is.		Identify a spreadsheet program. Enter data into spreadsheet cells. Know how to add clipart to cells.	
Year 2	To know how to refine searches using the Search tool. To use digital technology to share work on PurpleMash to communicate and connect with others locally. To understand how we should talk to others in an online situation. To understand that information put online		Understand what an algorithm is. Create a computer program using an algorithm. Create a program using a given design. Understand an algorithm follows a sequence (often timed). Understand the function of buttons in a program.			Understand how to copy and paste (on 2calculate). Use a spreadsheet for money calculations. Use a program (2calculate) to collect data and produce a graph. Use the totalling tools.

	leaves a digital footprint or trail. To identify the steps that can be taken to keep personal data and hardware secure.					
Year 3	Know that a blog can be used to communicate. Use the internet to communicate effectively. A safe password includes a combination of upper case/lower case letters, numbers and symbols.	Flowcharts are used in computer programming. To repeat you perform something again. There is a command to do this. Explain that nesting is how information is organised into layers or where objects contain other similar objects.	To compare values, you use the more than, less than and equal to symbols. Data can be collected and used to produce a variety of graphs. Cell references can be used in a formula so that you can see the value of the data.	You can sort objects using yes or no questions. A branching database is a way of classifying a group of objects.	Entering data into a graph can help answer questions.	PowerPoint creates presentations. Pictures, text, shapes, animations and videos are different types of media using in presentations.
Year 4	Identify SMART rules. Identify how to protect myself from online identity theft. Possible risks of installing free and paid for software. Explore the positive and negative influences of technology on my health and the environment.	Coding is a set of instructions that a computer can follow. Identify what an algorithm is. Identify how to use basic coding.	Explore how to change font size and style. Recognise different text types and their layouts. Understand that font size and style can affect the impact of a text. Create a text simulation.	Identify what a spread sheet is. Use totalling tools. Explore how to format cells. Create pie charts, bar graphs and line graphs. Create a spread sheet.	Identify what makes a good animated film or cartoon. Explore how animations are created by hand. Explore how to use onion skinning. Explore how to add backgrounds and sound using 2animate. Explore how 2Animate animations can be created in a similar way, using technology.	
Year 5	Identify a simulation. Explore ways to program a simulation.	Identify computer networks and how they provide multiple services.	Identify spreadsheets and their common features.	Identify what a database is.	Design a computer game. Identify how to create a game environment.	Identify the effect of moving points when designing a model.

	Identify how to use different functions and variable types in programs. Program a playable game with timers and score pad.	Use technology safely, respectfully and responsibly. Identify a range of ways to report concerns. Identify how to ensure reliability of sources of communication.	Identify how to enter data on to a spreadsheet and use formulae to calculate. Identify how to create graphs.	Explore how to search for information in a database. Identify how to contribute to a class database. Create a database around a chosen topic.	Explore how to design a game quest. Explore ways to self and peer evaluate.	Design a 3D model to fit certain criteria. Explore ways to refine and print a model.
Year 6	Read and understand a code. Identify how to debug algorithms. Explore a limited range of commands. Explain how to create a project.	Design a more complex programme. Identify how to use different functions. Explain how to use flowcharts and control simulations. Use 2code to make a text-based game.	Create a spreadsheet to answer a mathematical question relating to probability. Use copy and paste shortcuts. Problem solve during mathematical investigations by using tools. Use a spreadsheet to help plan actions.	Explain the purpose of writing a blog and its features. Identify how to plan and write a blog. Explain the importance of having an approval process when creating blog content. Show how to contribute to others' blogs.	Identify what a text-based adventure is. Explore the functionality of 2Create a story Adventure mode to create, debug using plans. Use written plans to code.	Explain all I know about the internet. Explain how the internet can be accessed at my school. Explain what 'The age of the Internet' is.