Year 3 - Progression of Knowledge and Skills IT

Term	Knowledge	Skills
Autumn 1 ***New scheme: Intro to Purple Mash - 2 lessons***	• It is important to be able to log in to a site, log out at the end and keep passwords safe. • Purple Mash uses "2Dos" to set work. • You can access non-visible parts of a screen using scrolling. • Typing is the action or skill of writing something by means of a keyboard (physical or virtual) and that it is important to have a good posture when typing. • Home, top and bottom row keys are areas on a keyboard where specific keys are located. • Two hands need to be used to be efficient at typing and these should be positioned correctly.	• Access Purple Mash from home and school. • Log out of Purple Mash. • Give reasons why it is important to keep a password safe. • Opening, saving and handing in work through "2Dos". • Scroll up and down and from side to side where applicable. • Check that posture is correct when typing. • • Locate the home, top and bottom keys. • Use both hands to type letters, building up to words. • Position the left and right hands correctly.

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Autumn 2	• There are different methods of communication and they each have strengths and weaknesses. • Emails are electronic versions of letters, and they can be sent and received almost instantly to anyone with an email address. • It is important to use email systems safely. • Pictures, documents and other file types can be attached to emails. • Address books can be created to store email addresses. • Emails can be sent in bulk.	• Explain the advantages and disadvantages of different communication methods. • Open 2Email. • Identify key areas and functions: Inbox, alerts, reply, formatting tools. • Open an email and reply to it. • Compose an email including address, subject and message. • Know how to report a concern to a teacher verbally as well as the report to teacher feature in 2Email. • Limit the information shared using email. • Recognise personal and private information and how to distinguish between them. • Attach files to an email. • Be cautious of email received that have an attachment. • Use the address book within 2Email to find contacts. • Send an email to multiple contacts using the address book.

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Spring 1 Using PowerPoint/Presenting Media	• Presentation software is a way of creating and displaying information to an audience that is clear and engaging. • Simple presentations can be made quickly by using features such as textboxes, word art and images. • Presentations can include additional slides, video and audio. • Designs of slides can be changed. • Animations can be incorporated within a Microsoft PowerPoint presentation. • Transitions can be applied between slides. • Timings can be added to transitions and animations.	• Explain what Microsoft PowerPoint is. • Locate and open Microsoft PowerPoint. • Identify some of the basic layout features of Microsoft PowerPoint. • Open a blank presentation. • Insert text boxes, word art and images into a presentation slide. • Insert new slides. • Use the audio feature to record from an external microphone and insert on a slide. • Use the video feature to insert a video from stock, the device or an appropriate online video. • Resize and manipulate media content appropriately on a slide. • Use slide design tools, previewing where needed. • Apply an animation to an image after previewing different styles first.

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Term	Knowledge	Skills
		• Select and apply a suitable transition after previewing different styles first. • Select and apply suitable timings to animations and transitions.
Spring 2 **Coding**	• Flowcharts are a type of diagram that represent an algorithm as a diagram. • Timers are used in coding to help control when a block of commands are run. • Repeat controls the number of times that a command or series of command blocks will run • Testing, debugging and fixing are an important part of the process of making computer programs. • Understanding what nesting is and the effect it has on a program can help when trying to debug a program.	• Identify the points where the flowchart starts, ends or represents an input/output. • Identify any delays such as a timer. • Identify any processes. • Follow the flow of the chart and interpret what it is representing. • Create a representation of the flowchart by using 2Code. • Begin to distinguish the different timer commands. • Understand that the repeat command is useful for avoiding unnecessary repetition. • Identify the repeat command as part of the control blocks group.

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Spring 2 Coding		• Insert a repeat command into the coding area and set it a specified number of times to repeat. • Recognise examples of nesting in a 2Code program. • Test what happens when changing how a program is nested. • Use the knowledge of nesting to help debug a program that isn't working as intended.
Summer 1 Micro:Bit (*New scheme, 4 lessons)*	• A micro:bit is a tiny computer which needs instructions in code to make it work. • A micro:bit can produce outputs. • A micro:bit can receive inputs. • Code from the coding environment can be transferred onto a micro:bit.	• Explain that a micro:bit is a piece of hardware that can have code created for it that makes use of its inputs and outputs. • Recognise and locate key hardware components on the micro:bit such as its display, speaker and accelerometer. • Identify and use code blocks that produce outputs. • Code a micro:bit to make different outputs happen depending on different inputs.

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Summer 1 Micro:Bit		• Identify and use code blocks that are associated with receiving inputs. • Use event commands such as 'when micro:bit button' and 'when gesture' in programs to meet specific intentions. • Make a program that requires inputs (event commands as above) that produce an output. • Use the simulator within the Freecode/MakeCode micro:bit environment to test code before transferring to micro:bit. • Use the transfer feature to move code to a micro:bit.
Summer 2 **Branching databases**	• A database is a collection of data organised in a way that it can be searched, and information found easily. • Objects can be sorted using yes/no questions and relate this to how computer binary databases work. • Branching databases can be created using programs such as 2Question.	• Explain what a database is. • Provide examples of common uses of a database. • Explain binary databases are also known as branching databases due to the branch like structure. • Identify questions that can be used to sort physical objects. • Add record cards within 2Question

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Summer 2 Branching databases	• It is important to test and debug if needed when creating branching databases so that they work as intended. • Cells all have their own individual address. They are referenced using letters and numbers. • Formulas can be added to a spreadsheet to speed up calculations when data is changed. • Spreadsheets can be used to model a real-life situation and improve the efficiency of day-to-day tasks.	2Question using a plan. • Insert question texts and choice button texts for each card. • Use the final answer card option for end of a branch. • Plan and create own branching database. • Test whether the database works as it should. • Identify and fix errors, testing again. • Read a cell address and find a cell address. • Complete a task to show their knowledge of cell addresses. • Understand what a formula is in a spreadsheet. • Follow the steps of the formula wizard to create formulae using the 4 operators. • Write formulae directly in the formula bar knowing the need for the equals symbol to denote a formula. • Model a real-life situation using the spreadsheet, for example with budgeting.