Whole School
Progression of Knowledge and Skills
Computing - Learn how basic technology works and how we can use it in our everyday lives.

	Computing systems and networks	Creating media	Data and Information	Programming
Nursery	I can identify devices I can recognise some ways in which the internet can be used to communicate. I can give examples of how I (might) use technology to communicate with people I know.	I can play on a touch screen game and use computers/keyboards/mouse in role play I can dictate short, clear sentences into a digital device. I know the difference between a photography and video. I can take a photograph I can use a painting app and explore the paint and brush tools I can record sounds with different resources	I can sort physical objects, take a picture and discuss what I have done.	I can follow simple oral algorithms I can spot simple patterns I can sequence simple familiar tasks I can use a mouse, touch screen or appropriate access device to target and select options on screen
Reception	I can identify ways that I can put information on the internet. I can talk about how I can use the internet to find things out. I can identify devices I could use to access information on the internet. I can give simple examples of how to find information (e.g. search engine, voice activated searching).	I can type letters with increasing confidence using a keyboard and tablet. I can record my voice over a picture. I can create a simple digital collage. I can move and resize images with my fingers or mouse. I can record a short film using the camera I can record and play a film I can watch films back I can take a photograph and use it in an app I can find ways to change your voice (tube, tin can, shouting to create an echo) I can record sounds/voices in storytelling and explanations	I can identify a chart. I can present simple data on a digital device. I can scan a QR code. I can explore a 360 image. I can talk about AR objects in my class	I can animate a simple image to speak in role I can create a simple animation to tell a story including more than one character. I can input a simple sequence of commands to control a digital device with support (Bee Bot)

	Computing systems and networks	Creating media	Creating media	Data and Information	Programming	Programming
Year 1	**Technology around us**	**Digital painting**	**Digital writing**	**Grouping data**	**Moving a robot**	**Introduction to animation**
	I know that technology helps us. I know that a computer is an example of technology. I know that choices are made when using technology, and know that rules are needed. I know how to identify the right technology to complete a task, recognising that technology know how to be used in different ways. I know how to use different parts (including a mouse and keyboard) of a computer. I know how to use technology safely and responsibly.	I know that computers know how to be used to create art. I know that the freehand tools on a chosen application perform different outcomes. I know that tools can be adjusted to suit my needs and must consider the impact of these adjustments. I know that there are distinct differences between painting on a computer to using brushes. I know how to create a picture using freehand tools, shape and line. I know how to use a range of paint colours and use the fill tool when needed. I know how to use the undo button to correct a mistake.	I know that a keyboard enters text and the 'shift key' changes the output of a key. I know that text can be edited or changed, and must consider the impact of these edits or changes. I know how to use a keyboard to enter or remove text, including letters, numbers or special characters. I know how to select and change the position of text in a document. I know how to choose options to achieve a desired effect including changing the appearance of text.	I know that objects can be counted. I know that that information can be presented in different ways. I know how to collect simple data and show that collected data can be counted. I know how to group objects to answer questions, understanding that objects know how to be grouped by similarities (attribute). I know how to describe a group of objects (based on commonality).	I know that a command produces an outcome. I know that a program is a set of commands that can be run by a computer to complete a task. I know that a series of commands can be issued before they are enacted. I know how to run a command on a device. I know how to create a series of commands that can be run as a program on a device. I know how to predict the outcome of a command or series of commands (program).	I know that a program is a set of commands that can be run by a computer to complete a task. I know that a command produces an outcome. I know that a series of commands can be issued before they are enacted. I know how to run a command on a device. I know how to create a series of commands that can be run as a program on a device. I know how to predict the outcome of a command or series of commands (program).
Year 2	**IT around us**	**Digital photography**	**Making music**	**Pictograms**	**Robot algorithms**	**An introduction to quizzes**
	I know the different types of computers used in school. I know that a computer is part of Information Technology. I understand the term Information Technology and know different forms of IT. I know the uses and rules of different forms of IT. I know the benefits of using IT I know how to describe uses of IT I know how to identify IT in	I know that some digital devices can capture images using a camera. I know how to take and save/store a photograph for future viewing. I know the features of a good photograph and how one could be improved. I understand how light can affect a photograph. I know that some photos are not accurate. I know how to capture a digital image, in either landscape or	I know that computers can used to create sounds of different instruments that may be represented as patterns. I know how to experiment with musical sounds and patterns on a computer. I know how to use a computer to create a pattern, rhythm, and a melody on a theme. I know how to evaluate and	I know a tally chart is used to collect data I know that data can be grouped by their attributes and then compared. I know that tally charts and pictograms need headings which relate to the data. I know that information can be presented in different ways using a computer. I understand why some data (or information when in context) should not be shared.	I know that a sequence is a series of commands (instructions). I know that a program is a sequence that can be run (executed). I understand that there is a different outcome when the order of the instructions is changed. I know that outcomes can be predicted before running (executing) a program.	I know that a sequence is a series of commands (instructions). I know that a program is a sequence that can be run (executed). I understand that there is a different outcome when the order of the instructions is changed. I know that outcomes can be predicted before running (executing) a program. I know how to predict and run a command on a given device.

school and beyond. I know how to show others how to use IT safely and responsibly	portrait mode. I know how to use the zoom on the camera to change the composition of the photos and consider the use of light before taking my photo. I know how to use filters to edit the appearance of the photo.	improve music composed on a computer	I know how to enter and view data on a computer. I recognise that people, animals and objects can be described by attributes. I know how to use a computer to answer single-attribute and comparison questions.	I know how to predict and run a command on a given device. I know how to list commands, giving commands for a given purpose. I know how to choose a series of commands that know how to be run as a program, building a sequence of commands in steps. I know how to run a program on a device.	I know how to list commands, giving commands for a given purpose. I know how to choose a series of commands that know how to be run as a program, building a sequence of commands in steps. I know how to run and debug a program on a device

Declarative knowledge (sometimes known as conceptual knowledge) refers to rules, facts or principles and the relationship between them. Know how to be described as 'knowing that.'
Procedural knowledge is the knowledge of methods or processes that know how to be performed, often described as 'knowing how.'

E-Safety

Nursery	I can recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset. I can explain how this could be either in real life or online.
Reception	I can describe ways that some people can be unkind online. I can offer examples of how this can make others feel. I can identify rules that help keep us safe and healthy in and beyond the home when using technology. I can give some simple examples. I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location). I can describe the people I can trust and can share this with; I can explain why I can trust them.
Year 1	I can recognise that there may be people online who could make me feel sad, embarrassed or upset. If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust. I can recognise that information can stay online and could be copied. I can describe what information I should not put online without asking a trusted adult first I can describe how to behave online in ways that do not upset others and can give examples. I can explain rules to keep us safe when we are using technology both in and beyond the home. I can give examples of some of these rules. I can recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). I can explain why I should always ask a trusted adult before I share any information about myself online. I can explain how passwords can be used to protect information and devices.
Year 2	I can explain how other people's identity online can be different to their identity in real life. I can describe ways in which people might make themselves look different online. I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help. I can explain how information put online about me can last for a long time. I know who to talk to if I think someone has made a mistake about putting something online. I can give examples of bullying behaviour and how it could look online. I understand how bullying can make someone feel. I can talk about how someone can/would get help about being bullied online or offline. I can explain simple guidance for using technology in different environments and settings. I can say how those rules/guides can help me I can describe why other people's work belongs to them. I can recognise that content on the internet may belong to other people.

	Vocabulary Progression					
	Technology around us	**Digital painting**	**Digital writing**	**Grouping data**	**Moving a robot**	**Introduction to animation**
Year 1	Technology, Computer, mouse, trackpad, keyboard, screen, double-click, typing.	Paint program, tool, paintbrush, erase, fill, undo, primary colours, shape tools, line tool, fill tool, undo tool, tools, feelings, colour, brush style, pointillism, brush size, pictures, painting, computers, like, prefer, dislike	Word processor, keyboard, keys, letters, type, Numbers, space, backspace, text cursor, Capital letters, toolbar, bold, italic, underline , Mouse, select, font, Undo, redo, format, Compare, typing, writing	Object, label, group, search, image, property, colour, size, shape, value, data set, property, size, shape, more, less, most, fewest, more, less, most, least, the same	Forwards, backwards, turn, clear, go, commands, Instructions, directions, Left, right, Plan, algorithm, program, Route	ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, Block, joining, Start block, run, program, background, delete, reset, algorithm, predict, Effect, change, value, block, Instructions, appropriate, design, programming blocks
	IT around us	**Digital photography**	**Making music**	**Pictograms**	**Robot algorithms**	**An introduction to quizzes**
Year 2	Information technology (IT), computer, barcode, scanner/scan	Device, camera, photograph, capture, image, digital, Landscape, portrait, Framing, subject, compose, Light sources, flash, focus, background, Editing, filter, Format, lighting, focus	Music, quiet, loud, feelings, emotions, Pattern, rhythm, pulse, pitch, tempo, notes, instrument, Create, beat, Open, edit	More than, less than, most, least, organise, data, object, tally chart, votes, total, Pictogram, enter, data, compare, count, Tally chart, explain, more, less, most, least, more common, least common, Attribute, group, same, different, most popular, least popular, conclusion, block diagram, common, sharing	Instruction, sequence, clear, unambiguous, algorithm, program, order, instructions, prediction, Artwork, design, route, mat, Debugging, decomposition	Sequence, command, program, run, start, outcome, predict, blocks, Sprite, algorithm, design, Actions, project, modify, change, build, match, Compare, debug, features, evaluate