Norwich Road Academy – Long term subject plan - Computing

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	**Technology Around Us** Role play (technological toys e.g. iron, microwave, telephone, computer) To use and operate simple technological devices in everyday life. To talk about and use 'make believe' technology in play	**Technology Around Us** Role play (technological toys e.g. iron, microwave, telephone, computer) To use and operate simple technological devices in everyday life. To talk about and use 'make believe' technology in play	**Technology Around Us** Role play (technological toys e.g. iron, microwave, telephone, computer) To use and operate simple technological devices in everyday life. To talk about and use 'make believe' technology in play	**Technology Around Us** Role play (technological toys e.g. iron, microwave, telephone, computer) To use and operate simple technological devices in everyday life. To talk about and use 'make believe' technology in play	**Technology Around Us** Role play (technological toys e.g. iron, microwave, telephone, computer) To use and operate simple technological devices in everyday life. To talk about and use 'make believe' technology in play	**Technology Around Us** Role play (technological toys e.g. iron, microwave, telephone, computer) To use and operate simple technological devices in everyday life. To talk about and use 'make believe' technology in play
Reception	**E-safety and sequencing** To put things in the right order (sequence) To know what to do if I see something on the internet that makes me feel 'funny in my tummy' **Digital Literacy** To read an ebook To navigate an ebook To put words in the correct sequence so that they make sense		**Algorithms - Jam Sandwiches** To create an algorithm To debug an algorithm To follow algorithms To create a sequence of instructions **Data and information – Sorting** To sort objects into groups To put objects in the correct order (sequence) To arrange objects in height order		**Programming** To move my bee around the screen using an algorithm To understand left and right To know what a quarter turn is (some may know 90°) To create an algorithm **Data and information – Handling data** To count to 20 To keep accurate records To make my own pictogram To display information in a pictogram To read a pictogram and ask questions	
Year 1	**Computing systems and networks – Technology around us** 1. To identify technology 2. To identify a computer and its main parts 3. To use a mouse in different ways 4. To use a keyboard to type on a computer 5. To use the keyboard to edit text	**Creating media – Digital painting** 1. To describe what different freehand tools do 2. To use the shape tool and the line tools 3. To make careful choices when painting a digital picture 4. To explain why I chose the tools I used	**Programming A – Moving a robot** 1. To explain what a given command will do 2. To act out a given word 3. To combine forwards and backwards commands to make a sequence 4. To combine four direction commands to make sequences	**Data and information – Grouping data** 1. To label and group objects 2. To group and count objects 3. To describe an object 4. To make a variety of groups 5. To compare groups 6. To group objects to answer questions	**Creating media – Digital writing** 1. To use a computer to write 2. To add and remove text on a computer 3. To identify that the look of text can be changed on a computer 4. To make careful choices when changing text 5. To explain why I used the tools that I chose	**Programming B – Introduction to animation** 1. To choose a command for a given purpose 2. To show that a series of commands can be joined together 3. To identify the effect of changing a value 4. To explain that each sprite has its own instructions

	6. To create rules for using technology responsibly	5. To use a computer on my own to paint a picture 6. To compare painting a picture on a computer and on paper	5. To plan a simple program 6. To find more than one solution to a problem		6. To compare typing on a computer to writing on paper	5. To design the parts of a project 6. To use my algorithm to create a program
Year 2	**Computing systems and networks – IT around us** 1. To recognise the uses and features of information technology 2. To identify the uses of information technology in the school 3. To identify information technology beyond school 4. To explain how information technology helps us 5. To explain how to use information technology safely 6. To recognise that choices are made when using information technology	**Creating media – Digital photography** 1. To use a digital device to take a photograph 2. To make choices when taking a photograph 3. To describe what makes a good photograph 4. To decide how photographs can be improved 5. To use tools to change an image 6. To recognise that photos can be changed	**Programming A – Robot algorithms** 1. To describe a series of instructions as a sequence 2. To explain what happens when we change the order of instructions 3. To use logical reasoning to predict the outcome of a program (series of commands) 4. To explain that programming projects can have code and artwork 5. To design an algorithm 6. To create and debug a program that I have written	**Data and information – Pictograms** 1. To recognise that we can count and compare objects using tally charts 2. To recognise that objects can be represented as pictures 3. To create a pictogram 4. To select objects by attribute and make comparisons 5. To recognise that people can be described by attributes 6. To explain that we can present information using a computer	**Creating media – Making music** 1. To say how music can make us feel 2. To identify that there are patterns in music 3. To show how music is made from a series of notes 4. To show how music is made from a series of notes 5. To create music for a purpose 6. To review and refine our computer work	**Programming B – An introduction to quizzes** 1. To explain that a sequence of commands has a start 2. To explain that a sequence of commands has an outcome 3. To create a program using a given design 4. To change a given design 5. To create a program using my own design 6. To decide how my project can be improved
Year 3	**Computing systems and networks – Connecting computers** 1. To explain how digital devices function 2. To identify input and output devices 3. To recognise how digital devices can change the way we work 4. To explain how a computer network can be used to share information	**Creating media – Animation** 1. To explain that animation is a sequence of drawings or photographs 2. To relate animated movement with a sequence of images 3. To plan an animation 4. To identify the need to work consistently and carefully 5. To review and improve an animation	**Programming A – Sequence in music** 1. To explore a new programming environment 2. To identify that commands have an outcome 3. To explain that a program has a start 4. To recognise that a sequence of commands can have an order	**Data and information – Branching databases** 1.To explore questions with yes/ no answers 2.To group objects more than once 3.To create a branching database 4.To structure a branching database 5.To plan my own branching database 6.To independently create a branching database	**Creating media – Desktop publishing** 1. To recognise how text and images convey information 2. To recognise that text and layout can be edited 3. To choose appropriate page settings 4. To add content to a desktop publishing publication	**Programming B – Events and actions** 1. To explain how a sprite moves in an existing project 2. To create a program to move a sprite in four directions 3. To adapt a program to a new context 4. To develop my program by adding features 5. To identify and fix bugs in a program

	5. To explore how digital devices can be connected 6. To recognise the physical components of a network	6. To evaluate the impact of adding other media to an animation	5. To change the appearance of my project 6. To create a project from a task description		5. To consider how different layouts can suit different purposes 6. To consider the benefits of desktop publishing	6. To design and create a maze-based challenge
Year 4	**Computing systems and networks – The Internet** 1. To describe how networks physically connect to other networks 2. To recognise how networked devices make up the internet 3. To outline how websites can be shared via the World Wide Web (WWW) 4. To describe how content can be added and accessed on the World Wide Web (WWW) 5. To recognise how the content of the WWW is created by people 6. To evaluate the consequences of unreliable content	**Creating media – Audio editing** 1. To identify that sound can be digitally recorded 2. To use a digital device to record sound 3. To explain that a digital recording is stored as a file 4. To explain that audio can be changed through editing 5. To show that different types of audio can be combined and played together 6. To evaluate editing choices made	**Programming A – Repetition in shapes** 1. To identify that accuracy in programming is important 2. To create a program in a text-based language 3. To explain what 'repeat' means 4. To modify a count-controlled loop to produce a given outcome 5. To decompose a task into small steps 6. To create a program that uses count-controlled loops to produce a given outcome	**Data and information – Data logging** 1. To consider what data can be collected 2. To collect data over time 3. To use data loggers effectively 4. To analyse collected data 5. To plan questions that can be answered using a data logger 6. To answer questions using a data logger	**Creating media – Photo editing** 1. To explain that the composition of digital images can be changed 2. To explain that colours can be changed in digital images 3. To explain how cloning can be used in photo editing 4. To explain that images can be combined 5.To combine images for a purpose 6.To evaluate how changes can improve an image	**Programming B – Repetition in games** 1. To develop the use of count-controlled loops in a different programming environment 2. To explain that in programming there are infinite loops and count controlled loops 3. To develop a design that includes two or more loops which run at the same time 4. To modify an infinite loop in a given program 5. To design a project that includes repetition 6. To create a project that includes repetition
Year 5 (Year 5/6 to follow this plan 2025/6)	**Computing systems and networks – Systems and searching** 1. To explain that computers can be connected together to form systems 2. To recognise the role of computer systems in our lives 3. To experiment with search engines	**Creating media – Video editing** 1. To explain what makes a video effective 2. To identify digital devices that can record video 3. To capture video using a range of techniques 4. To create a storyboard 5. To identify that video can be improved	**Programming A – Selection in physical computing** 1. To control a simple circuit connected to a computer 2. To write a program that includes count-controlled loops 3. To explain that a loop can stop when a condition is met	**Data and information – Flat-file databases** 1. To use a form to record information 2. To compare paper and computer-based databases 3. To outline how grouping and then sorting data allows us to answer questions	**Creating media – Vector drawing** 1. To identify that drawing tools can be used to produce different outcomes 2. To create a vector drawing by combining shapes 3. To use tools to achieve a desired effect	**Programming B – Selection in quizzes** 1. To explain how selection is used in computer programs 2. To relate that a conditional statement connects a condition to an outcome 3. To explain how selection directs the flow of a program

	4. To describe how search engines collect results 5. To explain how search results are ranked 6. To recognise why the order of results is important and to whom	through reshooting and editing 6. To consider the impact of the choices made when making and sharing a video	4. To explain that a loop can be used to repeatedly check whether a condition has been met 5. To design a physical project that includes selection 6. To create a program that controls a physical computing project	4. To explain that tools can be used to select specific data 5. To explain that computer programs can be used to compare data visually 6. To apply my knowledge of a database to ask and answer real-world questions	4. To recognise that vector drawings consist of layers 5. To group objects to make them easier to work with 6. To evaluate my vector drawing	4. To design a program which uses selection 5. To create a program which uses selection 6. To evaluate my program
Year 5/6 Cycle 1 24/25	**Computing systems and networks – Communication and collaboration** 1. To explain the importance of internet addresses 2. To recognise how data is transferred across the internet 3. To explain how sharing information online can help people to work together 4. To evaluate different ways of working together online 5. To recognise how we communicate using technology 6. To evaluate different methods of online communication	**Creating media – Web page creation** 1. To review an existing website and consider its structure 2. To plan the features of a web page 3. To consider the ownership and use of images (copyright) 4. To recognise the need to preview pages 5. To outline the need for a navigation path 6. To recognise the implications of linking to content owned by other people	**Programming A – Variables in games** 1. To define a 'variable' as something that is changeable 2. To explain why a variable is used in a program 3. To choose how to improve a game by using variables 4. To design a project that builds on a given example 5. To use my design to create a project 6.To evaluate my project	**Data and information – Introduction to Spreadsheets** 1. To collect and organise data 2. To understand the structure of a database 3. To begin to use formulas 4. To calculate data 5. To use a spreadsheet effectively 6. To present data effectively	**Creating media – 3D Modelling** 1. To recognise that you can work in three dimensions on a computer 2. To identify that digital 3D objects can be modified 3. To recognise that objects can be combined in a 3D model 4. To create a 3D model for a given purpose 5. To plan my own 3D model 6. To crate my own 3D model	**Programming B – Sensing** 1. To create a program to run on a controllable device 2. To explain that selection can control the flow of a program 3. To update a variable with a user input 4. To use a conditional statement to compare a variable to a value 5. To design a project that uses inputs and outputs on a controllable device 6. To develop a program to use inputs and outputs on a controllable device