



Furness Vale Primary and Nursery School

Progression of Knowledge and Skills in Computing

December 2025

Key Concept: Programming

	Year 1&2		Year 3&4		Year 5&6	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>EYFS</p> <ul style="list-style-type: none"> Understand that instructions lead to specific outcome Order steps of a known task Know directional words forward, backward, left, right Understand that we control computers Press buttons on a floor robot and talk about the movements Input a short sequence of instructions to control a device Try alternative approaches to achieve a goal 	<p>Moving a robot</p> <ul style="list-style-type: none"> To explain what a given command will do To act out a given word To combine forwards and backwards commands to make a sequence To combine four direction commands to make sequences To plan a simple program To find more than one solution to a problem 	<p>Robot algorithms</p> <ul style="list-style-type: none"> To describe a series of instructions as a sequence To explain what happens when we change the order of instructions To use logical reasoning to predict the outcome of a program (series of commands) To explain that programming projects can have code and artwork To design an algorithm To create and debug a program that I have written 	<p>Sequencing sounds</p> <ul style="list-style-type: none"> To explore a new programming environment I can identify that each sprite is controlled by the commands I choose To explain that a program has a start To recognise that a sequence of commands can have an order To change the appearance of my project To create a project from a task description 	<p>Repetition in shapes</p> <ul style="list-style-type: none"> To identify that accuracy in programming is important To create a program in a text-based language To explain what 'repeat' means To modify a count-controlled loop to produce a given outcome To decompose a program into parts To create a program that uses count-controlled loops to produce a given outcome 	<p>Selection in physical computing</p> <ul style="list-style-type: none"> To control a simple circuit connected to a computer To write a program that includes count-controlled loops To explain that a loop can stop when a condition is met, eg number of times To conclude that a loop can be used to repeatedly check whether a condition has been met To design a physical project that includes selection To create a controllable system that includes selection 	<p>Variables in games</p> <ul style="list-style-type: none"> To define a 'variable' as something that is changeable To explain why a variable is used in a program To choose how to improve a game by using variables To design a project that builds on a given example To use my design to create a project To evaluate my project
	<p>Programming animations</p> <ul style="list-style-type: none"> To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value To explain that each sprite has its own instructions To design the parts of a project To use my algorithm to create a program 	<p>Programming quizzes</p> <ul style="list-style-type: none"> To explain that a sequence of commands has a start To explain that a sequence of commands has an outcome To create a program using a given design To change a given design To create a program using my own design To decide how my project can be improved 	<p>Events and actions in programs</p> <ul style="list-style-type: none"> To explain how a sprite moves in an existing project To create a program to move a sprite in four directions To adapt a program to a new context To develop my program by adding features To identify and fix bugs in a program To design and create a maze-based challenge 	<p>Repetition in games</p> <ul style="list-style-type: none"> To develop the use of count-controlled loops in a different programming environment To explain that in programming there are infinite loops and count controlled loops To develop a design which includes two or more loops which run at the same time To modify an infinite loop in a given program To design a project that includes repetition To create a project that includes repetition 	<p>Selection in quizzes</p> <ul style="list-style-type: none"> To explain how selection is used in computer programs To relate that a conditional statement connects a condition to an outcome To explain how selection directs the flow of a program To design a program which uses selection To create a program which uses selection To evaluate my program 	<p>Sensing movement</p> <ul style="list-style-type: none"> To create a program to run on a controllable device To explain that selection can control the flow of a program To update a variable with a user input To use a conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device

Key Concept: Computing Systems and Networks

	Year 1&2		Year 3&4		Year 5&6	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>EYFS</p> <ul style="list-style-type: none"> • Help adults operate equipment around the school, independently operating simple equipment • Identify technology • Identify a computer and its main parts • Use a mouse in different ways 	<p>Technology around us</p> <ul style="list-style-type: none"> • To identify technology • To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type • To use the keyboard to edit text • To create rules for using technology responsibly 	<p>Information technology around us</p> <ul style="list-style-type: none"> • To recognise the uses and features of information technology • To identify information technology in the home • To identify information technology beyond school • To explain how information technology benefits us • To show how to use information technology safely • To recognise that choices are made when using information technology 	<p>Connecting computers</p> <ul style="list-style-type: none"> • To explain how digital devices function • To identify input and output devices • To recognise how digital devices can change the way we work • To explain how a computer network can be used to share information • To explore how digital devices can be connected • To recognise the physical components of a network 	<p>The internet</p> <ul style="list-style-type: none"> • To describe how networks physically connect to other networks • To recognise how networked devices make up the internet • To outline how websites can be shared via the World Wide Web • To describe how content can be added and accessed on the World Wide Web • To recognise how the content of the WWW is created by people • To evaluate the consequences of unreliable content 	<p>Systems and searching</p> <ul style="list-style-type: none"> • To explain that computers can be connected to form systems • To recognise the role of computer systems in our lives • To recognise how information is transferred over the internet • To explain how sharing information online lets people in different places work together • To contribute to a shared project online • To evaluate different ways of working together online 	<p>Communication and collaborations</p> <ul style="list-style-type: none"> • To identify how to use a search engine • To describe how search engines select results • To describe how search engines select results • To explain how search results are ranked • To recognise why the order of results is important, and to whom • To recognise how we communicate using technology • To evaluate different methods of online communication

Key Concept: Data and Information

	Year 1&2		Year 3&4		Year 5&6	
EYFS	Year 1	Year2	Year 3	Year 4	Year 5	Year 6
<p>EYFS</p> <ul style="list-style-type: none"> • Label objects • Identify that objects can be counted • Count objects with same properties • Compare groups of objects • Describe objects in different ways • Recognise objects can be represented as pictures • Begin to explain that information can be presented using a computer 	<p>Grouping data</p> <ul style="list-style-type: none"> • To label objects • To identify that objects can be counted • To describe objects in different ways • To count objects with the same properties • To compare groups of objects • To answer questions about groups of objects 	<p>Pictograms</p> <ul style="list-style-type: none"> • To recognise that we can count and compare objects using tally charts • To recognise that objects can be represented as pictures • To create a pictogram • To select objects by attribute and make comparisons • To recognise that people can be described by attributes • To explain that we can present information using a computer 	<p>Branching databases</p> <ul style="list-style-type: none"> • To create questions with yes/no answers • To identify the object attributes needed to collect relevant data • To create a branching database • To identify objects using a branching database • To explain why it is helpful for a database to be well structured • To compare the information shown in a pictogram with a branching database 	<p>Data logging</p> <ul style="list-style-type: none"> • To explain that data gathered over time can be used to answer questions • To use a digital device to collect data automatically • To explain that a data logger collects 'data points' from sensors over time • To use data collected over a long duration to find information • To identify the data needed to answer questions • To use collected data to answer questions 	<p>Flat-file databases</p> <ul style="list-style-type: none"> • To use a form to record information • To compare paper and computer-based databases • To outline how grouping and then sorting data allows us to answer questions • To explain that tools can be used to select specific data • To explain that computer programs can be used to compare data visually • To apply my knowledge of a database to ask and answer real world question 	<p>Introduction to Spreadsheets</p> <ul style="list-style-type: none"> • To identify questions which can be answered using data • To explain that objects can be described using data • To explain that formula can be used to produce calculated data • To apply formulas to data, including duplicating • To create a spreadsheet to plan an event • To choose suitable ways to present data

Key Concept: Creating Media

	Year 1&2		Year 3&4		Year 5&6	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>EYFS</p> <ul style="list-style-type: none"> Identify and find keys on a keyboard Add and remove text using basic typing skills (including use of space bar, backspace to delete and basic, age-appropriate punctuation) Digital painting 	<p>Digital painting</p> <ul style="list-style-type: none"> To describe what different freehand tools do To use the shape tool and the line tools To make careful choices when painting a digital picture To explain why I chose the tools I used To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper 	<p>Digital photography</p> <ul style="list-style-type: none"> To know what devices can be used to take photographs To use a digital device to take a photograph To describe what makes a good photograph To decide how photographs can be improved To use tools to change an image To recognise that images can be changed 	<p>Stop-frame animation</p> <ul style="list-style-type: none"> To explain that animation is a sequence of drawings or photographs To relate animated movement with a sequence of images To plan an animation To identify the need to work consistently and carefully To review and improve an animation To evaluate the impact of adding other media to an animation 	<p>Audio production</p> <ul style="list-style-type: none"> To identify that sound can be digitally recorded To use a digital device to record sound To explain that a digital recording is stored as a file To explain that audio can be changed through editing To show that different types of audio can be combined and played together To evaluate editing choices made 	<p>Video production</p> <ul style="list-style-type: none"> To recognise video as moving pictures, which can include audio To identify digital devices that can record video To capture video using a digital device To recognise the features of an effective video To identify that video can be improved through reshooting and editing To consider the impact of the choices made when making and sharing a video 	<p>Web page creation</p> <ul style="list-style-type: none"> To review an existing website and consider its structure To plan the features of a web page To consider the ownership and use of images (copyright) To recognise the need to preview pages To outline the need for a navigation path To recognise the implications of linking to content owned by other people
<p>EYFS</p> <ul style="list-style-type: none"> Create/edit a drawing using a range of 'tools' such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape Explain why tools were chosen and used 	<p>Digital writing</p> <ul style="list-style-type: none"> To use a computer to write To add and remove text on a computer To identify that the look of text can be changed on a computer To make careful choices when changing text To explain why I used the tools that I chose To compare writing on a computer 	<p>Digital music</p> <ul style="list-style-type: none"> To say how music can make us feel To identify that there are patterns in music To describe how music can be used in different ways To show how music is made from a series of notes To create music for a purpose To review and refine our computer work 	<p>Desktop publishing</p> <ul style="list-style-type: none"> To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a desktop publishing publication To consider how different layouts can suit different purposes To consider the benefits of desktop publishing 	<p>Photo editing</p> <ul style="list-style-type: none"> To explain that digital images can be changed To change the composition of an image To describe how images can be changed for different uses To make good choices when selecting different tools To recognise that not all images are real To evaluate how changes can improve an image 	<p>Introduction to Vector graphics</p> <ul style="list-style-type: none"> To identify that drawing tools can be used to produce different outcomes To create a vector drawing by combining shapes To use tools to achieve a desired effect To recognise that vector drawings consist of layers To group objects to make them easier to work with To evaluate my vector drawing 	<p>3D Modelling</p> <ul style="list-style-type: none"> To use a computer to create and manipulate three-dimensional (3D) digital objects To compare working digitally with 2D and 3D graphics To construct a digital 3D model of a physical object To identify that physical objects can be broken down into a collection of 3D shapes To design a digital model by combining 3D objects To develop and improve a digital 3D model