

## Progression through the strands of Teach Computing



**LONGNOR**  
CE Primary School

Computing systems		
	Unit of work	Objective
Class 2	Information technology around us	To recognise the uses and features of information technology To identify the uses of information technology in the school To identify information technology beyond school To explain how information technology helps us To explain how to use information technology safely To recognise that choices are made when using information technology
Class 3	Connecting computers	To explain how digital devices function To identify input and output devices To recognise how digital devices can change the way we work
	Data logging	To explain that a data logger collects 'data points' from sensors over time

Networks		
	Unit of work	Objective
Class 2	Technology around us	To identify technology To identify a computer and its main parts To use a mouse in different ways To use a keyboard to type on a computer To use the keyboard to edit text To create rules for using technology responsibly
Class 3	The internet	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 (WWW) To describe how content can be added and accessed on the World Wide Web (WWW) To recognise how the content of the WWW is created by people
	Connecting computers	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
Class 4	Sharing information	To identify how to use a search engine 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
	Internet communication	To create a project that includes repetition To explain that computers can be connected together 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

## Progression through the strands of Teach Computing



**LONGNOR**  
CE Primary School

<b>Algorithms</b>		
	<b>Unit of work</b>	<b>Objective</b>
Class 2	Moving a robot	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
	Robot algorithms	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
Class 3	Repetition in shapes	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 task into small steps To create a program that uses count-controlled loops to produce a given outcome
Class 4	Selection in quizzes	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

## Progression through the strands of Teach Computing



**LONGNOR**  
CE Primary School

<b>Programming</b>		
	<b>Unit of work</b>	<b>Objective</b>
Class 2	Programming animations	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
	Programming quizzes	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
Class 3	Repetition in games	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 that includes two or more loops which run at the same time To modify an infinite loop in a given program
	Sequencing sounds	To explore a new programming environment To identify that commands have an outcome To explain that a program has a start To recognise that a sequence of commands can have an order
	Events and actions in programs	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
Class 4	Variables in games	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
	Sensing	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 an 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
	Selection in physical computing	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 To explain 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 program that controls a physical computing project
	Selection in quizzes	To design a program which uses selection To create a program which uses selection To evaluate my program

## Progression through the strands of Teach Computing



**LONGNOR**  
CE Primary School

<b>Creating Media</b>		
	<b>Unit of work</b>	<b>Objective</b>
Class 2	Digital photography	To use a digital device to take a photograph To make choices when taking a photograph To describe what makes a good photograph
	Making music	To say how music can make us feel To identify that there are patterns in music To show how music is made from a series of notes
	Digital writing	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
	Digital painting	To describe what different freehand tools do To use the shape tool and the line tools To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper
Class 3	Audio editing	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
	Photo editing	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
	Stop frame animation	To explain that animation is a sequence of drawings or photographs To relate animated movement with a sequence of images
	Desktop publishing	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
Class 4	Webpage creation	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
	3D modelling	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
	Video editing	To explain what makes a video effective To identify digital devices that can record video To capture video using a range of techniques
	Vector drawing	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

## Progression through the strands of Teach Computing



**LONGNOR**  
CE Primary School

Data and Information		
	Unit of work	Objective
Class 2	Pictograms	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
	Grouping data	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
Class 3	Branching databases	To create questions with yes/no answers To identify the object attributes needed to collect relevant data To create a branching database To explain why it is helpful for a database to be well structured To identify objects using a branching database To compare the information shown in a pictogram with a branching database
	Data logging	To explain that data gathered over time can be used to answer questions To use a digital device to collect data automatically 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
Class 4	Introduction to spreadsheets	To identify questions which can be answered using data To explain that objects can be described using data To explain that formulas can be used to produce calculated data To apply formulas to data, including duplicating
	Flat-file databases	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 questions

## Progression through the strands of Teach Computing

Design and development		
	Unit of work	Objective
Class 2	Programming quizzes	To create a program using my own design To decide how my project can be improved
	Making music	To create music for a purpose To review and refine our computer work
Class 3	Repetition in games	To design a project that includes repetition To create a project that includes repetition
	Sequencing sounds	To change the appearance of my project To create a project from a task description
	Events and actions in programs	To design and create a maze-based challenge
Class 4	Variables in games	To design a project that builds on a given example To use my design to create a project To evaluate my project
	Video editing	To create a storyboard 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

Effective use of tools		
	Unit of work	Objective
Class 2	Digital painting	To make careful choices when painting a digital picture To explain why I chose the tools I used
	Digital writing	To make careful choices when changing text To explain why I used the tools that I chose To compare typing on a computer to writing on paper
	Pictograms	To explain that we can present information using a computer
	Digital photography	To decide how photographs can be improved To use tools to change an image To recognise that photos can be changed
Class 3	Audio editing	To evaluate editing choices made
	Photo editing	To make good choices when selecting different tools To recognise that not all images are real To evaluate how changes can improve an image
	Stop frame animation	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
	Desktop publishing	To consider how different layouts can suit different purposes To consider the benefits of desktop publishing
Class 4	Introduction to spreadsheets	To create a spreadsheet to plan an event To choose suitable ways to present data
	3D modelling	To design a digital model by combining 3D objects To develop and improve a digital 3D model
	Vector drawing	To evaluate my vector drawing

# Progression through the strands of Teach Computing

Safety and security		
	Unit of work	Objective
Class 3	The internet	To evaluate the consequences of unreliable content
Class 4	Internet communication	To evaluate different methods of online communication
	Sharing information	To evaluate different ways of working together online

