Computing Progression

	EYFS (Nursery and Reception)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing Systems and Networks	**What is technology?** To recognise different types of technology and how they used. To recognise the screen, keyboard and mouse. To recognise the difference between a tablet, a desktop, laptop and interactive whiteboard. To create rules for using technology responsibly.	**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.	**Information Technology (IT) Around Us** To recognise the uses and features of IT. To identify the uses of IT in school. To identify the uses of IT beyond school. To explain how IT helps us. To explain how to use IT safely. To recognise that choices are made when using IT.	**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. To explain how a computer network can be to share information. To explore how digital devices can be connected. To recognise the physical components of a network.	**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 WWW. To recognise how the content of the WWW is created by people. To evaluate the consequences of unreliable content.	**Systems and Searching** To explain that computers can be connected together to form systems. To recognise the role of computer systems in our lives. To experiment with search engines. 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.	**Communication and Collaboration** To explain the importance of internet addresses. To recognise how data is transferred across the internet. To explain how sharing information online can help people to work together. To evaluate different ways of working together online. To recognise how we communicate using technology. To evaluate different methods of online communication.

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Data and Information	**Grouping Data** To understand that a group has a shared attribute. To identify which group has more and less. To sort objects into groups.	**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.	**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. To explain that we can present information using a computer.	**Branching Databases** To create questions with yes/no answers. To identify the attributes needed to collect data about an object. To create a branching database. To explain why it is helpful for a database to be well structured. To plan the structure of a branching database. To independently create an identification tool.	**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 explain that a data logger collects 'data points' from sensors over time. To recognise how a computer can help us analyse data. To identify the data needed to answer questions. To use data from sensors to answer questions.	**Flat-file Databases** To use a form to record information. To compare paper and computer based databases. To outline how you can answer questions by grouping and then sorting data. To explain that tools can be used to select specific data. To explain that computer programs can be used to compare data visually. To use a real-world database to answer questions.	**Spreadsheets** To create a data set in a spreadsheet. To explain that formulas can be used to produce calculated data. To apply formulas to data. To create a spreadsheet to plan an event. To choose suitable ways to present data.

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Creating Media	**Digital Mark Making** To use shape and line tools. To make choices when mark making e.g. change colour. To explain my choices when mark making. To compare mark making on a computer to on paper.	**Digital Painting** 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	**Digital Photography** To use a digital device to take a photograph. To make choices when taking a photograph. To describe what makes a good photography. To decide how photographs can be improved. To use tools to change an image.	**Stop Frame Animation** 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	**Audio Production** To identify that sound can be recorded. To explain that audio recordings can be edited. To recognise the different parts of creating a podcast project. To apply audio editing skills independently. To combine audio to	**Video Production** To explain what makes a video effective. To identify digital devices that can record video. To capture video using a range of techniques. To create a storyboard. To identify that video can be improved through reshooting and editing.	**Web Page 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.

		picture. To compare painting a picture on a computer and on paper. **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. 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.	To recognise that photos can be changed. **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. To create music for a purpose. To review and refine computer work.	an animation. To evaluate the impact of adding other media to an animation. **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. To consider how different layouts can suit different purposes. To consider the benefits of desktop publishing.	enhance my podcast project. To evaluate the effective use of audio. **Photo Editing** To explain that the composition of digital images can be changed. To explain that colours can be changed in digital images. To explain how cloning can be used in photo editing. To explain that images can be combined. To combine images for a purpose. To evaluate how changes can improve an image.	To consider the impact of the choices made when making a sharing a video. **Introduction to Vector Graphics** 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 apply what I have learned about vector drawings.	To recognise the implications of linking to content owned by other people. **3D Modelling** To recognise that you can work in three dimensions on a computer. To identify that digital 3D objects can be modified. To recognise that objects can be combined in a 3D model. To create a 3D model for a given purpose. To plan my own 3D model. To create my own digital 3D model.
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Programming A	**Physical Commands** To follow basic commands, e.g. forwards, backwards, stop, go. To follow a series of basic commands in a sequence. To describe familiar events or actions as a sequence, e.g. brushing teeth.	**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.	**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. To change the appearance of my project. To create a project from a task description.	**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.	**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	**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. To design a project that builds on a given example. To use my design to create a project. To evaluate my project.

						that controls a physical computing project.	

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Programming B	**Introduction to Algorithms** To choose a command for a given purpose, e.g. forwards, backwards. To understand that a series of commands can be joined together. To physically show given commands.	**Introduction to Animation** 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.	**An Introduction to 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. To create a program using my own design. To decide how my project can be improved.	**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. To design and create a maze-based challenge.	**Repetition in Games** To develop the use of count-controlled loops in a different programming environment. To explain that in programming here 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. To design a project that includes repetition. To create a project that includes repetition.	**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. To design a program which uses selection. To create a program which uses selection. To evaluate my program.	**Sensing Movement** 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 development a program to use inputs and outputs on a controllable device.