

Computing Curriculum Overview

	Autumn		Spring		Summer	
Year 1	Systems and Networks - technology Around Us <ul style="list-style-type: none"> identify technology identify a computer and its main parts use a mouse in different ways use a keyboard to type on a computer use a keyboard to edit text create rules for using technology responsibly 	Creating Media - Digital Painting <ul style="list-style-type: none"> describe what different freehand tools do use a shape tool and the line tools make careful choices when painting a digital picture explain why I chose the tool I used use a computer on my own to paint a picture compare painting a picture on a computer and on paper 	Creating Media - Digital Writing <ul style="list-style-type: none"> use a computer to write add and remove text on a computer identify that the look of text can be changed on a computer make careful choices when changing text explain why I used the tools that I chose compare typing on a computer to writing on paper 	Data and Information - Grouping Data <ul style="list-style-type: none"> label objects identify that objects can be counted describe objects in different ways count objects with the same properties compare groups of objects 	Programming - Moving a Robot <ul style="list-style-type: none"> explain what a given command will do act out a given word combine forwards and backwards commands to make sequences plan a simple program find more than one solution to a problem 	Programming - Introduction to Animation <ul style="list-style-type: none"> choose a command for a given purpose show that a series of commands can be joined together identify the effect of changing a value explain that each sprite has its own instructions design the parts of a project use my algorithms to create a programme
Year 2	Information technology Around Us <ul style="list-style-type: none"> recognise the uses and features of information technology identify the uses of information technology in the school identify information technology beyond school explain how information technology helps us explain how to use information technology safely recognise that choices are made when using information technology 	Creating Media - Digital photography <ul style="list-style-type: none"> use a digital device to take a photograph make choices when taking a photograph describe what makes a good photograph decide how photographs can be improved use tools to change an image recognise that photos can be changed 	Making Music <ul style="list-style-type: none"> say how music can make us feel identify that there are patterns in music describe how music can be used in different ways show how music is made from a series of notes create music for a purpose review and refine our computer work 	Data and Information - Pictograms <ul style="list-style-type: none"> recognise that we can count and compare objects using tally charts recognise that objects can be represented as pictures create a pictogram select objects by attribute and make comparisons recognise that people can be described by attributes explain that we can present information using a computer 	Programming - Robot Algorithms <ul style="list-style-type: none"> describe a series of instructions as a sequence explain what happens when we change the order of instructions use logical reasoning to predict the outcome of a program (series of commands) explain that programming projects can have code and artwork design an algorithm create and debug a program that I have written 	Programming B - quizzes <ul style="list-style-type: none"> explain that a sequence of commands has a start explain that a sequence of commands has an outcome create a program using a given design change a given design create a program using my own design decide how my project can be improved
Year 3&4	Connecting Computers <ul style="list-style-type: none"> explain how digital devices function identify input and output devices recognise how digital devices can change the way that we work explain how a computer network can be used to share information explore how digital devices can be connected recognise the physical components of a network 	Stop Frame Animation <ul style="list-style-type: none"> explain that animation is a sequence of drawings or photographs relate animated movement with a sequence of images plan an animation identify the need to work consistently and carefully review and improve an animation evaluate the impact of adding other media to an animation 	Sequence in Music <ul style="list-style-type: none"> explore a new programming environment identify that commands have an outcome explain that a program has a start recognise that a sequence of commands can have an order change the appearance of my project create a project from a task description 	Branching Databases <ul style="list-style-type: none"> create questions with yes/no answers identify the object attributes needed to collect relevant data create a branching database explain why it is helpful for a database to be well structured identify objects using a branching database compare the information shown in a pictogram with a branching database 	Desktop Publishing <ul style="list-style-type: none"> recognise how text and images convey information recognise that text and layout can be edited choose appropriate page settings add content to a desktop publishing publication consider how different layouts can suit different purposes consider the benefits of desktop publishing 	Events and Actions <ul style="list-style-type: none"> explain how a sprite moves in an existing project create a program to move a sprite in four directions adapt a program to a new context develop my program by adding features identify and fix bugs in a program design and create a maze-based challenge
Year 5	Sharing Information <ul style="list-style-type: none"> explain that computers can be connected together to form systems recognise the role of computer systems in our lives recognise how information is transferred over the internet explain how sharing information online lets people in different places work together contribute to a shared project online evaluate different ways of working together online 	Vector Drawing <ul style="list-style-type: none"> identify that drawing tools can be used to produce different outcomes create a vector drawing by combining shapes use tools to achieve a desired effect recognise that vector drawings consist of layers group objects to make them easier to work with evaluate my vector drawing 	Video Editing <ul style="list-style-type: none"> explain what makes a video effective use a digital device to record video capture video using a range of techniques create a storyboard identify that video can be improved through reshooting and editing consider the impact of the choices made when making and sharing a video 	Flat file Databases <ul style="list-style-type: none"> use a form to record information compare paper and computer-based databases outline how grouping and then sorting data allows us to answer questions explain that tools can be used to select specific data explain that computer programs can be used to compare data visually apply my knowledge of a database to ask and answer real-world questions 	Programming - Selection in physical computing <ul style="list-style-type: none"> control a simple circuit connected to a computer write a program that includes count-controlled loops explain that a loop can stop when a condition is met explain that a loop can be used to repeatedly check whether a condition has been met design a physical project that includes selection create a program that controls a 	Programming - Selection in Quizzes <ul style="list-style-type: none"> explain how selection is used in computer programs relate that a conditional statement connects a condition to an outcome explain how selection directs the flow of a program design a program which uses selection create a program which uses selection evaluate my program

					physical computing project	
Year 6	<p>Communication</p> <ul style="list-style-type: none"> ● Identify how to use a search engine ● Describe how search engines select results ● Explain how search results are ranked ● Recognise why the order of results is important, and to whom ● Recognise how we communicate using technology ● Evaluate different methods of online communication 	<p>Creating Media - 3D modelling</p> <ul style="list-style-type: none"> ● Use a computer to create and manipulate three-dimensional (3D) digital objects ● Explain why we might represent 3D objects on a computer ● Compare working digitally with 2D and 3D graphics ● Construct a digital 3D model of a physical object ● Identify that physical objects can be broken down into a collection of 3D shapes ● Create digital 3D objects of an appropriate size ● Design a digital model by combining 3D objects ● Develop and improve a digital 3D model 	<p>Creating Media - Web page creation</p> <ul style="list-style-type: none"> ● Review an existing website and consider its structure ● Plan the features of a web page ● Consider the ownership and use of images (copyright) ● Recognise the need to preview pages ● Outline the need for a navigation path ● Recognise the implications of linking to content owned by other people 	<p>Data and Information - Spreadsheets</p> <ul style="list-style-type: none"> ● Identify questions which can be answered using data ● Explain that objects can be described using data Explain that formulas can be used to produce calculated data ● Apply formulas to data, including duplicating ● Create a spreadsheet to plan an event ● Choose suitable ways to present data 	<p>Programming A - Variables in games</p> <ul style="list-style-type: none"> ● Define a 'variable' as something that is changeable ● Explain why a variable is used in a program ● Choose how to improve a game by using variables ● Design a project that builds on a given example ● Use my design to create a project ● Evaluate my project 	<p>Programming B - Sensing</p> <ul style="list-style-type: none"> ● Create a program to run on a controllable device ● Explain that selection can control the flow of a program ● Update a variable with a user input ● Design a project that uses inputs and outputs on a controllable device ● Develop a program to use inputs and outputs on a controllable device