OVINGHAM CHURCH OF ENGLAND FIRST SCHOOL COMPUTING CURRICULUM PROGRESSION

Reception				
Level Expected at the End of EYFS: • Understanding the World (Technology) Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.				
	Year 1	Year 2	Year 3	Year 4
	Key Stage 1 National Curriculum Expectations : Pupils should be taught to:		Key Stage 2 National Curriculum Expectations : Pupils should be taught to:	
Computer Science	• understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • create and debug simple programs • use logical reasoning to predict the behaviour of simple programs		• design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration	
Information Technology	• use technology purposefully to create, organise, store, manipulate and retrieve digital content		• use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information	
Digital Literacy	• recognise common uses of information technology beyond school • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.		• use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	

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Programming	Children will learn: • 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 • *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* *(repeated in Y2)*	Children will learn: • *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* • 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	Children will learn: • 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 • 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	Children will learn: • 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 • 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
Computing Systems and Networks	Children will learn: • To identify technology • To identify a computer and its main parts • To use a mouse in different ways	Children will learn: • To recognise the uses and features of information technology	Children will learn: • To explain how digital devices function • To identify input and output devices	Children will learn: • To describe how networks physically connect to other networks

	• To use a keyboard to type • To use the keyboard to edit text • To create rules for using technology responsibly	• 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	• 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	• 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

Creating Media	Children will learn: • 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 • 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 with writing on paper	Children will learn: • 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 • 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	Children will learn: • 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 • 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	Children will learn: • 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 • 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

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Data and Information	Children will learn: • 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	Children will learn: • 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	Children will learn: • 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	Children will learn: • 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 •
E-Safety	Children will: • Know what to do if they view content they think is inappropriate or upsetting e.g. know how to minimise a screen if they see something inappropriate then tell a trusted adult. • Begin to evaluate online content by giving opinions about preferred sites. • Know that you can be diverted from a website through a link, advertisement or pop-up. • Understand some online materials are unsuitable and many sites are aimed at selling or phishing for personal details. • Know that anyone can create a web site and it is sometimes difficult to know if information is true.		Children will: • Know what to do if content is inappropriate or upsetting (school policy) e.g. know who to report to and talk to. • Understand the Internet contains fact, fiction and opinion and begin to distinguish between these. • Be aware of online marketing and begin to develop strategies to deal with it • Know that the aim of many sites is to sell something or gain personal information.	