



Corporation Road Community Primary School

Computing LTP

Computing: Year 5					
Vision: Computing in Corporation Road Primary School will be progressive, building children's computing skills in the areas of 'Computer Science', 'Information Technology' and 'Digital Literacy'. We will strive to ensure that all pupils can 'understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation'. That pupils can 'analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems. That pupils can 'evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems' as outlined in the National Curriculum. We want children to know the application of computing in the wider world and how this can relate to future employment prospects. Our vision is that all pupils are able to keep themselves and others safe online and know when they need support and who/where to get it from. We want all pupils to understand about their own digital presence (including the use of Social Media) and how nothing that is posted online is never really deleted.					
Domains			Key Concepts		
Information Technology			Computing Systems & Networks		
Computer Science			Programming A and Programming B		
Digital Literacy and Creating Media			Audio Media, Visual Media, Combining Audio & Visual Media and Data & Information		
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Sharing Information	Vector Drawing	Video Editing	Flat-file Databases	Selection in Physical Computing	Selection in Quizzes
Domains: - Information Technology	Domains: - Digital Literacy and Creating Media	Domains: - Digital Literacy and Creating Media	Domains: - Digital Literacy and Creating Media	Domains: - Computer Science	Domains: - Computer Science
Key Concepts: - Computing Systems & Networks	Key Concepts: - Visual Media	Key Concepts: - Combining Audio & Visual Media	Key Concepts: - Data & Information	Key Concepts: - Programming A	Key Concepts: - Programming B
End Point: Information Technology Pupils can use technology purposefully to organise, store and retrieve digital content including search technologies, understanding how the results are selected and ranked. They understand how computer networks, the internet and the World Wide Web work and how each of these can provide multiple services. They understand how these forms of networking help people with communication and collaboration. Pupils recognise how information technology is used beyond school, especially how it links to future employment opportunities.	End Point: Digital Literacy and Creating Media Pupils use technology safely, respectfully and responsibly. They understand how to keep personal information private and why it is important to do so. They understand the need to be discerning in evaluating digital content. Pupils recognise acceptable/unacceptable behaviour concerning information technology and can identify a range of ways to report their concerns. Pupils can 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.			End Point: Computer Science End Point Pupils can use a variety of programming language, software and hardware to interact with the real world and solve problems. They can understand and use terms such as programming, coding, algorithm, logic, abstraction, conditions, selection and data to explain how they have solved these problems. They can design, write and debug programmes that interact with hardware and/or to solve a given problem.	

<ul style="list-style-type: none">- To explain that computers can be connected together to form systems.- To recognise the role of computer systems in our lives (identify human elements).- To recognise how information is transferred over the internet (agreed methods, unique addresses and network packets).- To explain how sharing information online lets people in different places work together (access shared files, send information and shared media).- To contributed to a shared project online.- To evaluate different ways of working together online (can be public or private and internet enables effective collaboration).	<ul style="list-style-type: none">- To identify that drawing tools can be used to produce different outcomes (shapes and main drawing tools).- To create a vector drawing by combining shapes (move, resize and rotate objects that have been duplicated).- To use tools to achieve a desired effect (use zoom tool to add detail, alignment grids, resize handles and modify objects).- To recognise that vector drawings consist of layers (change the order of layers).- To group objects to make them easier to work with (copy by duplicating several objects).- To evaluate a vector drawing (create alternatives and suggest improvements).	<ul style="list-style-type: none">- To recognise video as moving pictures, which can include audio (plan a project using a storyboard).- To identify digital devices that can record video (choose the most suitable device).- To capture video using a digital device (use a device and software).- To recognise the features of an effective video.- To identify that video can be improved through reshooting and editing (store, retrieve and export recording, improve by reshooting and editing and select the correct tools to make edits).- To consider the impact of the choices made when making and sharing a video (make edits and evaluate).	<ul style="list-style-type: none">- To use a form to record information (create multiple questions about the same field and order, sort and group data cards).- To compare paper and computer-based databases (navigate a flatfile database to compare different views and explain what 'fields' and 'records' are).- To outline how grouping and then sorting data allows us to answer questions (combine grouping and sorting).- To explain that tools can be used to select specific data (choose multiple criteria).- To explain that computer programs can be used to compare data visually (select an appropriate chart and refine by selecting a particular filter).- To apply my knowledge of a database to ask and answer real-world questions.	<ul style="list-style-type: none">- To control a simple circuit connected to a computer (program a microcontroller to light an LED).- To write a program that includes count-controlled loops (connect more than one output device to a microcontroller).- To explain that a loop can stop when a condition is met, e.g. number of times (experiments with a do until loop).- To conclude that a loop can be used to repeatedly check whether a condition has been met (direct the flow of a program).- To design a physical project which includes selection.- To create a controllable system which includes selection (write an algorithm to control lights and a motor).	<ul style="list-style-type: none">- To explain how selection is used in computer programs (identify and modify conditions).- To relate that a conditional statement connects a condition to an outcome (create a program with different outcomes using selection).- To explain how selection directs the flow of a program.- To design a program which uses selection (identify the outcome of user input in an algorithm).- To create a program which uses selection (implement an algorithm, test and share a program).- To evaluate a program.
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