

Key Content for Computing

Early Years Foundational Knowledge of Computing						
EYFS: <ul style="list-style-type: none"> • explore technology around them • listen to audio • watch video • mark make using technology 			Reception: <ul style="list-style-type: none"> • Login in to a device with increasing confidence • know that a beebot can be programmed to move forwards/ backwards and left/ right • know how to programme a beebot to move through four commands • select and use technology for particular purposes • know how to access the internet and use pre selected websites • know that a digital device can be used to create pictures or text • know how to use a device to sort objects and create patterns 			
Cycle/Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Knowledge of Computing	<ul style="list-style-type: none"> • login to Chrmebooks using QR codes quickly • know computers make some tasks easier • know that devices can connect to the internet • know that technology can be used for a range of purposes • identify the use of technology in everyday life • start to use some features of computing in other subject areas 	<ul style="list-style-type: none"> • Select appropriate technology/devices to fulfill set tasks • use google classroom to find and submit work and tasks • use computing appropriately in other subject areas 	<ul style="list-style-type: none"> • use email address and password to login to a chromebook • use email as a communication tool and a way of sharing work • know how to share a document on Google 	<ul style="list-style-type: none"> • use saved passwords to autofill when logging in to their accounts on Myon/ AR/ Freckle etc • use comments on Google Docs and other software to evaluate and edit • know that versions of a doc can be restored 	<ul style="list-style-type: none"> • use knowledge of bias in website content to evaluate usefulness • know the dangers the online world can pose • select appropriate computing techniques to present work in other subjects 	<ul style="list-style-type: none"> • evaluate the usefulness of different social media platforms • know how to be respectful digital citizens • use computing to solve problems with greater complexity • know collaborative work techniques and use these appropriately

Computing Systems and Using Technology	<ul style="list-style-type: none"> Identify a computer and its main parts know that mouse or trackpad and keyboard control the computer 	<ul style="list-style-type: none"> know where information can be used at home, school and beyond know how to use information technology safely 	<ul style="list-style-type: none"> know that computers have input and output devices know that a computer network can be used to share information know the basic components of a network's infrastructure 	<ul style="list-style-type: none"> know the internet is a network of networks know how content can be added and accessed on the world wide web know the internet can be biased and be able to evaluate the honesty, accuracy and reliability of websites 	<ul style="list-style-type: none"> know what a computer system is know how information is transferred over the internet know that people can work together remotely via the internet 	<ul style="list-style-type: none"> know how search engines select results know and evaluate different methods of online communication know the need of staying safe online
Creating Media	<ul style="list-style-type: none"> know that digital devices can be used to create a picture know which tools to select when painting digitally know the basics of formatting text (size, font and colour) 	<ul style="list-style-type: none"> know what devices can be used to take photographs know what makes a good photograph know that images can be edited and improved and how to do this Know that digital devices can be used to make music 	<ul style="list-style-type: none"> know that animation is a sequence of drawings or images know that desktop publishing can be used to present and publish information using text and images know and use the terms: templates, orientation, placeholders know different layouts suit different purposes 	<ul style="list-style-type: none"> know that sounds can be digitally recorded know that input(microphones) and output devices(speakers or headphones) will be needed to record digital audio know that digitally recorded audio can be edited through the use of different tracks know that images can be changed for different uses know how to change digital images 	<ul style="list-style-type: none"> know that video is moving pictures that may incorporate audio know which devices to use to capture video know the features of an effective video know what a vector image is know how to create a vector drawing by combining shapes know that vector drawings consist of layers 	<ul style="list-style-type: none"> know the features of a good website know how to combine the previous years' content to create a website know the importance of navigation paths know the importance of layout in website design know that a computer can be used to create and manipulate three-dimensional(3D) digital objects know how to design a digital model by combining 3D objects
Data and Information	<ul style="list-style-type: none"> know how to group objects by using labels know how to sort objects using labels 	<ul style="list-style-type: none"> know and use a tally chart to compare objects know that objects can be represented as pictures in a pictogram know that we can present information and data using a computer 	<ul style="list-style-type: none"> know what a branching database is know when to use a branching database know how to create a branching database know what attributes are and how to use them to sort objects 	<ul style="list-style-type: none"> know what a data logger is and what it does know what data points, data sets and logging intervals are know that collected data can be used to answer questions 	<ul style="list-style-type: none"> know how a flat file database can be used to organise data in records know how to interrogate a database to answer questions know that computer programs can be used to compare data visually 	<ul style="list-style-type: none"> know when a spreadsheet should be used know how to apply formulas in a spreadsheet know how to use spreadsheets to plan an event know that spreadsheets can be used to present visual representations of data
Programming	<ul style="list-style-type: none"> know what an algorithm is know the four direction commands and use to create a sequence know that a series of commands can be joined together to create a simple program 	<ul style="list-style-type: none"> design a program know that a sequence of commands has a start and an outcome create a program using own design 	<ul style="list-style-type: none"> know that sprites are controlled by the commands chosen know how to use blocks to create a program create a program to move a sprite in four directions identify and fix bugs in a program 	<ul style="list-style-type: none"> know that accuracy is important in programming know what a text based programming language is know what the term repeat means and use this knowledge to 	<ul style="list-style-type: none"> know that programs can be used to control physical computing know that conditions can be used to control the flow of actions depending on whether a condition is true or false 	<ul style="list-style-type: none"> know the concept of variables in programming know how to create a project that uses variables know that variables can be updated through user inputs

				<p>create a program of count controlled loops</p> <ul style="list-style-type: none"> • know the difference between count controlled loops and infinite loops • know that two or more loops can run at the same time • know how to create a program that includes repetition 	<ul style="list-style-type: none"> • know the concept of selection (if... then...) • know what a microcontroller is • know and use the if...then...else structure of selection • Know how to combine selection and conditions to create a program 	<ul style="list-style-type: none"> • know how to use conditional statements to compare a variable to a value • know how to use inputs, outputs and variables on a controllable device
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