

Hollybush Primary School: Computing

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Technology around us	Information technology around us	Connecting computers	The internet	Sharing information	Internet communication
	<i>Recognising technology in school and using it responsibly</i>	<i>Identifying IT and how it's responsible use improves our world in school and beyond</i>	<i>Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.</i>	<i>Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.</i>	<i>Identifying and exploring how information is shared between digital systems.</i>	<i>Recognising how the WWW can be used to communicate and be searched to find information.</i>
	To know different types of technology in school (CB1) To know the different parts of a computer	To know the uses and features of information technology To know how information technology is used at home and beyond school (CB2) To know how information technology benefits us To know how to use technology safely To know choices are made when using technology	To explain how digital devices function To know what input and output devices are (CB3) To know how input and output devices are used (CB3) To recognise how digital devices can change the way we work To understand that computer networks allow data to be transferred and shared (NB3) To explore how digital devices can be connected To recognise the physical components of a network To understand that some computers on a network serve particular functions, such as controlling printers or sharing files (NB4)	To describe how networks physically connect to other networks To understand that the internet is a large network that enables computers to share information (NB3) 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 understand that not all websites are as reliable as others (NB3) To evaluate the consequences of unreliable content To recognise trustworthy sources of information on the internet (NSB6)	To explain that computers can be connected together to form systems To recognise the role of computer systems in our lives To recognise how information is transferred over the internet To explain how sharing information online lets people in different places work together To use the internet to allow them to share data with another person (NB5) To contribute to a shared project online To evaluate different ways of working together online	To use a search engine to find web pages (NSB3) To describe how search engines select results To understand how search engines order their search results (NSB4) To recognise why the order of results is important, and to whom To use more advanced features when searching online (NSB5) To use a range of search tools to find exactly what they're looking for (NSB5) To use a broad range of resources online to find exactly what they're looking for (NSB6) To understand how computers are able to communicate and share information (NB6) To use and combine services on the internet to share information (NB6) To evaluate different methods of online communication
Understanding the World (2020DM – 3/4 year olds) To explore how things work – logging onto a chrome book Physical Development (2020DM – R) To use a range of tools competently, safely and confidently (developing their small motor skills).	To use a mouse in different ways To use a keyboard to type To use the keyboard to edit text To create rules for using technology responsibly		To use a range of input and output devices efficiently (CB3)	To create media which can be found on websites To use more complicated input devices (CB4)		

Green is from Target Tracker's 'Using A Computer', UACB2 = Using a Computer Band 2

* the TT statement has replaced the Teach Computing statement if it is very similar

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Digital painting	Digital photography	Stop-frame animation	Audio editing	Vector drawing	3D modelling
	<i>Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.</i>	<i>Capturing and changing digital photographs for different purposes.</i>	<i>Capturing and editing digital still images to produce a stop-frame animation that tells a story.</i>	<i>Capturing and editing audio to produce a podcast, ensuring that copyright is considered.</i>	<i>Creating images in a drawing program by using layers and groups of objects.</i>	<i>Planning, developing, and evaluating 3D computer models of physical objects.</i>
	To know what different freehand tools do To know why I chose the tools I used	To know what makes a good photograph To know how photographs can be improved To know that photos can be changed	To know that animation is a sequence of drawings or photographs To know the need to work consistently and carefully	To know that sound can be digitally recorded To know that a digital recording is stored as a file To know that audio can be changed through editing	To know that vector drawings consist of layers	To know that physical objects can be broken down into a collection of 3D shapes
Personal, Social and Emotional Development (2020DM – R) To show resilience and perseverance in the face of challenge Expressive Arts and Design (2020DM – R) To explore, use and refine a variety of artistic effects to express their ideas and feelings Personal, Social and Emotional Development (ELG) To be confident to try new activities and show independence, resilience and perseverance in the face of challenge Expressive Arts and Design (ELG) To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function	To use the shape tool and the line tools To make careful choices when painting a digital picture To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper <i>To use a program to create a simple document (UACB1)</i>	To use a digital device to take a photograph <i>To make choices on which choice is best for a give task (UACB3)</i> To use tools to change an image <i>To find, open, edit and save files they are working on (UACB2)</i>	To relate animated movement with a sequence of images To plan an animation To review and improve an animation To evaluate the impact of adding other media to an animation	To use a digital device to record sound To show that different types of audio can be combined and played together To evaluate editing choices made <i>To make choices on which choice is best for a give task (UACB3)</i> <i>To use different software programs and different types of hardware (UACB4)</i>	To know 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 <i>To confidently use a range of software tools (UACB5)</i> To group objects to make them easier to work with To evaluate my vector drawing	To use a computer to create and manipulate three-dimensional (3D) digital objects To compare working digitally with 2D and 3D graphics To construct a digital 3D model of a physical object To design a digital model by combining 3D objects To develop and improve a digital 3D model <i>To use a range of computer programs to complete a task (UCAB4)</i> <i>To select appropriate software to use for a given task (UACB5)</i>

CREATING MEDIA (Teach Computing)

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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Digital writing	Making music	Desktop publishing	Photo editing	Video editing	Web page creation
	<i>Using a computer to create and format text, before comparing to writing non-digitally.</i>	<i>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</i>	<i>Creating documents by modifying text, images, and page layouts for a specified purpose.</i>	<i>Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.</i>	<i>Planning, capturing, and editing video to produce a short film.</i>	<i>Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.</i>
Physical Development (2020DM – R) To know and talk about the different factors that support their overall health and wellbeing: sensible amounts of 'screen time'	To know that the look of text can be changed on a computer To know why I used the tools that I chose	To know how music can make us feel To know that there are patterns in music	To know how text and images convey information To know how different layouts can suit different purposes To know the benefits of desktop publishing	To know that digital images can be changed To know how images can be changed for different uses To know that not all images are real	To know video consists of moving pictures, which can include audio To know digital devices that can record video To know the features of an effective video To know that video can be improved through reshooting and editing	To know the need to preview pages To know the need for a navigation path To know the implications of linking to content owned by other people
Physical Development (2020DM – 3/4 year olds) To match their developing physical skills to tasks and activities in the setting Expressive Arts and Design (2020DM – R) To explore, use and refine a variety of artistic effects to express their ideas and feelings Expressive Arts and Design (ELG) To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function	To use a computer to write To add and remove text on a computer To make careful choices when changing text To compare writing on a computer with writing on paper <i>To use a program to create a simple document (UACB1)</i>	To create a musical pattern To create music for a purpose To review and refine our computer work <i>To find, open, edit and save files they are working on (UACB2)</i>	To edit text and layout To choose appropriate page settings To add content to a desktop publishing publication	To change the composition of an image To make good choices when selecting different tools To evaluate how changes can improve an image <i>To make choices on which choice is best for a give task (UACB3)</i> <i>To confidently use a range of software tools (UACB5)</i>	To capture video using a digital device To consider the impact of the choices made when making and sharing a video <i>To use different software programs and different types of hardware (UACB4)</i>	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)

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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Grouping data	Pictograms	Branching databases	Data logging	Flat-file databases	Introduction to spreadsheets
	<i>Exploring object labels, then using them to sort and group objects by properties.</i>	<i>Collecting data in tally charts and using attributes to organise and present data on a computer.</i>	<i>Building and using branching databases to group objects using yes/no questions.</i>	<i>Recognising how and why data is collected over time, before using data loggers to carry out an investigation.</i>	<i>Using a database to order data and create charts to answer questions</i>	<i>Answering questions by using spreadsheets to organise and calculate data</i>
	To know that objects can be counted	To know that objects can be represented as pictures To recognise that people can be described by attributes To know that we can present information using a computer	To know the object attributes needed to collect relevant data To know why it is helpful for a database to be well structured	To know that data gathered over time can be used to answer questions To know that a data logger collects 'data points' from sensors over time	To know how grouping and then sorting data allows us to answer questions To know that tools can be used to select specific data To know that computer programs can be used to compare data visually	To know questions which can be answered using data To know that objects can be described using data To know that formulas can be used to produce calculated data
	To label objects 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	To count and compare objects using tally charts To create a pictogram To select objects by attribute and make comparisons	To create questions with yes/no answers To create a branching database To identify objects using a branching database To compare the information shown in a pictogram with a branching database	To use a digital device to collect data automatically 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	To use a form to record information To compare paper and computer-based databases To apply my knowledge of a database to ask and answer real-world questions	To apply formulas to data, including duplicating To create a spreadsheet to plan an event To choose suitable ways to present data

PROGRAMMING A (Teach Computing)

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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Moving a robot	Robot algorithms	Sequencing sounds	Repetition in shapes	Selection in physical computing	Variables in games
	<i>Writing short algorithms and programs for floor robots, and predicting program outcomes.</i>	<i>Creating and debugging programs, and using logical reasoning to make predictions.</i>	<i>Creating sequences in a block-based programming language to make music.</i>	<i>Using a text-based programming language to explore count-controlled loops when drawing shapes.</i>	<i>Exploring conditions and selection using a programmable microcontroller.</i>	<i>Exploring variables when designing and coding a game</i>
Personal, Social and Emotional Development (DM2020 -3/4 yr olds) To know why rules are important Personal, Social and Emotional Development (ELG) To know the reasons for rules, to know right from wrong and try to behave accordingly	To know what a given command will do	To know what happens when we change the order of instructions To know that programming projects can have code and artwork	To know that commands have an outcome To know that a program has a start To know that a sequence of commands can have an order	To know that accuracy in programming is important To know what 'repeat' means	To know that a loop can stop when a condition is met, e.g. number of times To know that a loop can be used to repeatedly check whether a condition has been met	To know a 'variable' as something that is changeable To know why a variable is used in a program
Personal, Social and Emotional Development (DM2020 -3/4 yr olds) To increasingly follow rules	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 describe a series of instructions as a sequence To use logical reasoning to predict the outcome of a program (series of commands) To design an algorithm To create and debug a program that I have written	To explore a new programming environment To change the appearance of my project To create a project from a task description	To create a program in a text-based language 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 control a simple circuit connected to a computer To write a program that includes count-controlled loops To design a physical project which includes selection To create a controllable system which includes selection	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

PROGRAMMING B (Teach Computing)

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EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Programming animations	Programming quizzes	Events and actions in programs	Repetition in games	Selection in quizzes	Sensing
	<i>Designing and programming the movement of a character on screen to tell stories.</i>	<i>Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.</i>	<i>Writing algorithms and programs that use a range of events to trigger sequences of actions</i>	<i>Using a block-based Programming language to explore count controlled and infinite loops when creating a game.</i>	<i>Exploring selection in programming to design and code an interactive quiz.</i>	<i>Designing and coding a project that captures inputs from a physical device.</i>
			To know how a sprite moves in an existing project	To know that in programming there are infinite loops and count controlled loops	To know how selection is used in computer programs To know that a conditional statement connects a condition to an outcome To know how selection directs the flow of a program	To know that selection can control the flow of a program
			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	To develop the use of count-controlled loops in a different programming environment 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	To design a program which uses selection To create a program which uses selection To evaluate my program	To create a program to run on a controllable device To update a variable with a user input To use an conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device