COMPUTNG Pupils should be taught….	EYFS	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
Computing systems and networks	Talk about technology that is used at home and in school. Operate simple equipment. Use a safe part of the Internet to play and learn.	To identify technology To recognise the features and uses of information technology (use of mouse and keyboard) To identify information technology (in the home and at school) To recognise choices are made when using technology To explain how information technology benefits us To show how to use technology safely To create rules for using technology responsibly To recognise how digital devices can change the way we work	To recognise the features and uses of information technology (use of mouse and keyboard) To identify information technology (in the home and at school) To recognise choices are made when using technology To explain how information technology benefits us To show how to use technology safely To create rules for using technology responsibly To recognise how digital devices can change the way we work	To describe what an input is To explain that a process acts on the inputs To identify input and output devices To explain that an output is produced by the process To explain that a computer system accepts an input and processes it to produce an output To recognise that a digital device is made of several parts To recognise that computers can be connected to each other To identify networks around me To explain how computer systems change the way we work To identify the benefits of computer networks To explain how information is passed through multiple connections	To describe how networks connect to other networks To outline how information can be shared via the World Wide Web To recognise that the World Wide Web is part of the internet To explain that the global interconnection of networks is the internet To recognise the need for security on the internet To know how to access the World Wide Web To describe the types of content/media that can be added, created, and shared on the World Wide Web To explain how the content of the World Wide Web is created, owned, and shared by people To know that the internet enables us to view the World Wide Web To explain that the World Wide Web comprises of websites and web pages To describe the current limitations of World Wide Web media To evaluate the reliability of content and the consequences of unreliable content To explain the benefits of the World Wide Web	To recognise that computers can be part of a system in an electronic device To understand that computers can be connected together to form systems To see that computers communicate with other devices (including other computers) To recognise input, process, and output in larger computer systems To recognise how information is transferred across the internet To recognise that data is transferred using agreed protocols (methods) To explain that data is transferred in packets To recognise that connections between computers allow us to access shared stored files To explain that the internet lets people in different places work together To explain that the internet allows different media to be shared To recognise that internet collaborations can be public or private	To recall how to use a search engine To compare the results from different search engines To demonstrate that different search terms produce different results To explain that search terms need to be chosen carefully To evaluate the results of search terms To identify that results from search engines can include adverts, and that the adverts can be targeted To identify different ways to communicate without technology To list methods of communicating using the internet To choose an appropriate method of internet communication for a given purpose To evaluate different methods of online communication To explain which types of media can be shared through the internet To explain that communicating through the internet can be public or private To decide what I should/should not share To classify internet communication by messenger and recipient or audience
Creating media	To move objects on a screen. To create shapes and text on a screen.	To use a computer to paint a picture (recognise options and different tools available) To use brush tool/s to draw shapes and lines To correct mistakes To change brush colour and size	To recognise that some digital devices can capture images To know what to press to take a picture To know how to use a device safely	To use a computer to create an animation To capture images To use tools to review subject position To play, review and edit images (add text, sound effects)	To recognise that sound can be digitally recorded To recognise that recorded audio is stored as a file To recognise that audio can be edited and altered To press buttons to start and stop recording	To select shape / line / text to add to a drawing To drag out an object on the page To duplicate / select / delete an object To modify an object (reposition, rotate, resize, alter, recolour)	To create 3D graphical objects on a computer screen To alter the view of the 3D space To place a 3D object in a 3D space To select / duplicate / delete an object

	To use technology to show my learning.	Change fill colour, line size and line colour enter text into a computer (use backspace, move cursor, letter keys, number keys, backspace keys, shift for capitals, simple punctuation) Use delete and undo Change text position Use bold, underline and italic Change fonts Change text colour	To capture a digital image To edit (including portrait and landscape) and save an image To focus and zoom To review, edit (crop or colour) and delete images To consider that some images are not real To use a computer to create music To create music for a purpose To consider how musical sequences create different effects To review, edit and refine computer work To store, edit and retrieve work on a computer To share work between devices To print / share work	To export a film To recognise the relationship between frames and motion To recognise the need for consistency in working (capturing device in fixed position) To recognise the need to edit images To recognise the impact of adding other media To show that page orientation can be changed To add text to a placeholder To organise text and image placeholders in a page layout To add and remove images to and from placeholders To edit text in a placeholder To move resize and rotate images To choose fonts and apply effects to text To review a document	To locate recorded audio To apply effects / delete audio To save / export an audio file o recognise that digital images can be manipulated To recognise that images can be changed for different purposes To use the most appropriate tool for a particular purpose To open/retrieve an image To rotate / flip / crop an image To adjust colours, apply filters and add effects To retouch and reuse parts of an image To draw, add text, add an element	To group / modify / change multiple objects To locate the record function on a device To hold the device safely To pan up and down To focus, zoom and compose To use techniques to create specific effects To locate video recorded on a device and play back To select part of a video To apply effects to a section of a video To delete a section of video To save and export a video file	To reposition objects in three dimensions To rotate objects in three dimensions To resize an object in three dimensions To recolour an object To use an object as a placeholder To recognise that blank objects must be used as placeholders to create holes To recognise the role of scale in design To select multiple objects To create a web page To add text to a web page To add images to a web page To add other content To preview a page (different screen sizes) To add additional pages To insert hyperlinks between pages To insert hyperlinks to another site To embed content
Programming	To make a floor robot move. To use simple software to make something happen. To make choices about the buttons and icons I press, touch or click on.	To predict the outcome of a command on a device To list commands that can be given to a device To explain what a command does To match a command to an outcome To recognise how to run a command To choose a command for a given purpose To choose a series of words that can be enacted as a command To build a sequence of commands in steps	To choose a series of words that can be enacted as a sequence To explain what happens when a series of instructions are changed To choose a series of commands that can be run as a program To make predictions about a sequence To test a prediction by running a sequence To debug a sequence within a program To run a program on a device	To explain that a program has a start To identify that a program includes sequences of commands To build a sequence of commands To combine commands in a program To order commands in a program To explain that the order of commands can affect the outcome (same commands, different order -> same or different outcome)	To relate what 'repeat' means To list an everyday task as a set of instructions including repetition To identify a loop within a program To explain that an indefinite loop will run until the program is stopped To identify patterns in a sequence, eg 'step 3 times' means the same as 'step, step, step' To use an indefinite loop to produce a given outcome To use a count-controlled loop to produce a given outcome	To define that conditional statements are used in computer programs To relate that a conditional statement connects a condition to an outcome To outline that a condition is something that can be either true or false To explain that instructions in a program will produce specific outcomes To relate that a count-controlled loop contains a condition To experiment with a 'repeat until' loop To explain that program flow can branch according to a condition	o experiment with the value of an existing variable To choose a name that identifies the role of a variable to make it more usable (to humans) To decide where in a program to set a variable To update a variable with a user input To use an event in a program to update a variable To use a variable in a conditional statement to control the flow of a program To use the same variable in more than one location in a program

		To combine commands in a program To run a program on a device		To create a sequence of commands to produce a given outcome	To plan a program that includes appropriate loops to produce a given outcome To recognise tools that enable more than one process to be run at the same time (concurrency) To create two or more sequences that run at the same time	To use a condition in an 'if... then…' statement to produce a given outcome To show that a condition can switch program flow in one of two ways To conclude that a loop can be used to repeatedly check whether a condition has been met To use a condition in an 'if... then... else…' statement to produce given outcomes		
Data and information	To talk about different kinds of information such as pictures, video, text and sound.	To identify attributes of an object To collect simple data To add data to a table or simple graph To show that collected data can be counted To describe the properties of an object To group objects to answer questions To recognise that information can be presented in different ways	To enter data on a computer Use a computer to view data in different formats To use a computer to answer comparison questions To use a computer program to present data in different ways To give examples of why some information shouldn't be shared	To retrieve information from different levels of the branching database To create questions with yes/no answers	To suggest questions that can be answered using a given data set To identify the data that we need to answer questions To identify that sensors are input devices To use a digital device to collect data automatically To recognise that a sensor can be used as an input device for data collection To choose how often to automatically collect data samples To explain that a data logger captures 'data points' from sensors over time To use a larger data set to find information To use a computer program to sort data by one attribute To present data in a table To present data in a graph	To navigate a flat-file database To design a structure for a flat-file database To choose different ways to view data To ask questions that need more than one attribute to answer To choose which attribute to sort data by to answer a given question To choose which attribute and value to search by to answer a given question (operands) To choose multiple criteria to search data to answer a given question (AND and OR) To select an appropriate graph to visually compare data To choose suitable ways to present information to other people	To explain that objects/artifacts can be described using data To propose simple, relevant questions that can be answered using data To explain that computers deal with different data types in different ways To outline that there are different software tools to work with data To explain that formulas can be used to produce calculated data To recognise that data can be calculated using different operations To recognise that changing inputs also changes outputs o apply formulas to data, including duplication To choose suitable ways to represent data