Skills Progression document for Computing

Skills Progression						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
HT1	- choose a piece of technology to do a job - recognise that some technology can be used in different ways - identify the main parts of a computer - use a mouse in different ways - use a keyboard to type - use the keyboard to edit text - show how to use technology safely	-describe uses of computers -identify information technology in school -identify information technology outside of school -show how to use information technology safely	-identify input and output devices -explain that a computer system accepts an input processes it to produce an output -explain that a computer system can be used to share information -identify network devices around me -explain how networks can be connected to other networks	-describe how networks connect to networks online whether physically or through cloud based technology -explain the types of content that can be created, shared and viewed on the internet. -explore the reliability of information viewed online and the consequence of misinformation -explain and explore the benefits of the internet	- describe the input and output of a search engine - demonstrate that different search terms produce different results - evaluate the results of search terms - identify some of the limitations of search engines - explain how search engines make money by selling targeted advertising space	- identify how to use a search engine - describe how search engines select results - explain how search results are ranked - recognise why the order of results is important, and to whom - recognise how we communicate using technology - evaluate different methods of online communication
HT2	- create a picture using freehand tools - use shape and line tools when precision is needed - use a range of paint colours - use the fill tool to colour an enclosed area - use the undo button to correct a mistake - combine a range of tools to create a piece of artwork	-capture a digital image -take photographs in both landscape and portrait -to view photos on a digital device -decide which photos to keep, share or delete -hold a camera still to capture an image -use zoom to change the composition of a photo -consider lighting before taking a photo	-plan an animation using a storyboard -capture an image using a device with a camera e.g. iPad - use the onion skinning tool to review subject positions -move a subject between image captures -review a series of captured frames or images as an animation -add media (music) to enhance an animation	-record sound onto a digital device using an input (microphone) -recordings can be edited using a piece of software (Audacity) -evaluate and share created content with others	- explain what makes a video effective -identify digital devices that can record video - capture video using a range of techniques - create a storyboard - identify that video can be improved through reshooting and editing - consider the impact of the choices made when making and sharing a video	- review an existing website and consider its structure - plan the features of a web page - consider the ownership and use of images (copyright) - recognise the need to preview pages - outline the need for a navigation path - recognise the implications of linking to

		-use filters to change an original image	-review a completed project			content owned by other people
HT3	-enact a given word -predict the outcome of a command on a device -list which commands can be given on a device -run a command on a floor robot -choose a command for a given purpose -choose a series of words that can be enacted as a program -choose a series of commands that can be run as a program -build a sequence of commands in steps -combine commands in a program -run a program on a device	-choose a series of words that can be enacted as a sequence -chose a series of instructions that can be run as a program -create a program -trace a sequence to make a program -run a program on a device -debug a program	-build a sequence of commands -combine commands in a program -order commands in a program -create a sequence of commands to produce a given outcome	-To use an indefinite loop to produce a given outcome - To use a count-controlled loop 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 plan a program that includes appropriate loops to produce a given outcome	- control a simple circuit connected to a computer - write a program that includes count-controlled loops - explain that a loop can stop when a condition is met - explain that a loop can be used to repeatedly check whether a condition has been met - design a physical project that includes selection - create a program that controls a physical computing project	- define a 'variable' as something that is changeable - explain why a variable is used in a program - choose how to improve a game by using variables - design a project that builds on a given example - use my design to create a project - evaluate my project
HT4	- identify some attributes of an object - collect simple data - show that collected data can be counted - describe the properties of an Object - choose an attribute to group objects by	-digital devices enable us to display large quantities of data in a variety of formats	-create questions with yes/no answers -choose questions that will evenly divide objects into subgroups -identify an object using a branching database -explain that a well-structured branching database will help identify objects quickly	-identify questions that can be answered by using a table of data e.g. does the temperature rise during the week? - use a digital device to collect data automatically - choose how often to automatically collect data samples - use a set of logged data to find information	- use a form to record information - compare paper and computer-based databases - outline how grouping and then sorting data allows us - answer questions - explain that tools can be used to select specific data	-To identify questions which can be answered using data - explain that objects can be described using data - explain that formulas can be used to produce calculated data - apply formulas to data, including duplicating - create a spreadsheet to plan an event

				- use a computer program to sort data by one attribute - export information in different formats	- explain that computer programs can be used to compare data visually - apply my knowledge of a database to ask and answer real-world questions	- choose suitable ways to present data
	- group objects to answer questions - explain that objects can be grouped by similarities (attribute) describe a group of objects (based on commonality)					
HT5	-use letter, number and space keys to enter text into a computer -use punctuation and special characters -select text -use backspace key to remove text -position the cursor in a chosen location -use undo key -choose options to achieve a desired effect -change the appearance of text on a computer	-experiment with musical patterns on a computer -experiment with different sounds on a computer -use a computer to create a musical pattern -use a computer to compose a rhythm and a melody on a given theme -use a computer to play the same music in different ways e.g. tempo -evaluate a musical composition created on a computer -improve a musical composition created on a computer	-change the orientation of a page in publisher -organise text and images in a document using placeholders -add and remove images from a placeholder -move, resize and rotate images in a document -select and change fonts to apply effects to a text -review a document before printing or sharing with another person	- recognise that digital images can be manipulated - recognise that digital images can be changed for different purposes - choose the most appropriate tool for a particular purpose - consider the impact of changes made on the quality of the image	- identify that drawing tools can be used to produce different outcomes - create a vector drawing by combining shapes - use tools to achieve a desired effect -recognise that vector drawings consist of layers - group objects to make them easier to work with - evaluate my vector drawing	- use a computer to create and manipulate three-dimensional (3D) digital objects - compare working digitally with 2D and 3D graphics - construct a digital 3D model of a physical object - identify that physical objects can be broken down into a collection of 3D shapes - design a digital model by combining 3D objects - develop and improve a digital 3D model

HT6	-find commands to move a sprite -use a start block in a program -create an algorithm for a sprite -test programs I have created	-choose a series of words that can be enacted as a sequence -explain what happens when we change the order of instructions -choose a series of commands that can be run as a program -trace a sequence to make a prediction -test a prediction by running a sequence -create and debug a program I have written -run a program on a device	-build a sequence of commands by using events blocks in scratch -combine commands in a program -order commands in a program -create a sequence of commands to produce a given outcome	- list an everyday task as a set of instructions including repetition - use an indefinite loop to produce a given outcome - use a count-controlled loop to produce a given outcome - plan a program that includes appropriate loops to produce a given outcome - recognise tools that enable more than one process to be run at the same time (concurrency) - create two or more sequences that run at the same time - recognise that not all tools enable more than one process to be run at once	- explain how selection is used in computer programs - relate that a conditional statement connects a condition to an outcome - explain how selection directs the flow of a program - design a program which uses selection - create a program which uses selection - evaluate my program	- create a program to run on a controllable device - explain that selection can control the flow of a program - update a variable with a user input - use a conditional statement to compare a variable to a value - design a project that uses inputs and outputs on a controllable device - develop a program to use inputs and outputs on a controllable device