



Computing - Curriculum Overview

Year	Subject specific Vocabulary	'The Greats'	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	CD player Whiteboard Remote control Navigate Touch Computer Technology Press Push Pull Toys Lift Sound		<p>Development Matters Statements:</p> <p>Technology</p> <ul style="list-style-type: none"> • Knows how to operate simple equipment, e.g. turns on CD player, uses a remote control, can navigate touch-capable technology with support • Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets • Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images • Knows that information can be retrieved from digital devices and the internet • Plays with a range of materials to learn cause and effect, for example, makes a string puppet using dowels and string to suspend the puppet 					
Reception	iPad Computer Photo Video Internet Type Keyboard Mouse Screen Phone Whiteboard		<p>Development Matters Statements:</p> <p>Technology</p> <ul style="list-style-type: none"> • Uses ICT hardware to interact with age appropriate computer software • Completes a simple program on electronic devices • Can create content such as a video recording, stories, and/or draw a picture on screen • Develops digital literacy skills by being able to access, understand and interact with a range of technologies • Can use the internet with adult supervision to find and retrieve information of interest to them 					

National Curriculum Statements - KS1	<p>Key stage 1 Pupils should be taught to:</p> <ul style="list-style-type: none"> - Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. - Create and debug simple programs. - Use logical reasoning to predict the behaviour of simple programs. - Use technology purposefully to create, organise, store, manipulate and retrieve digital content. - Recognise common uses of information technology beyond school. - Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they 							
	Year 1	<p>Computing Systems and Networks: Technology around us</p> <p>technology, computer, mouse, trackpad, keyboard, screen, double-click, typing.</p> <p>Programming: Moving a robot</p> <p>Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left,</p>	<p>Charles Babbage</p> <p>Augustine 'Ada' Lovelace</p>	<p>Computing Systems and Networks: Technology around us</p> <p>paintz.app Chromebooks</p> <p>To identify technology:</p> <ul style="list-style-type: none"> - I can explain technology as something that helps us - I can locate examples of technology in the classroom - I can explain how these technology examples help us 	<p>Programming: Moving a robot</p> <p>Bee-Bots</p> <p>To explain what a given command will do</p> <ul style="list-style-type: none"> - I can predict the outcome of a command on a device - I can match a command to an outcome - I can run a command on a device <p>To act out a given word</p>	<p>Creating Media: Digital painting</p> <p>paintz.app Surface-Pros</p> <p>To describe what different freehand tools do</p> <ul style="list-style-type: none"> - I can make marks on a screen and explain which tools I used - I can draw lines on a screen and explain which tools I used - I can use the paint tools to draw a picture <p>To use the shape tool and the line tools</p> <ul style="list-style-type: none"> - I can make marks with the square and line tools - I can use the shape and line tools effectively - I can use the shape and line tools to recreate the work of an artist 	<p>Data and Information: Grouping Data</p> <p>Chromebooks</p> <p>To label objects</p> <ul style="list-style-type: none"> - I can describe objects using labels - I can match objects to groups - I can identify the label for a group of objects <p>To identify that objects can be counted</p>	<p>Creating Media: Digital writing</p> <p>Word Chromebooks</p> <p>To use a computer to write</p> <ul style="list-style-type: none"> - I can open a word processor - I can recognise keys on a keyboard - I can identify and find keys on a keyboard <p>To add and remove text on a computer</p> <ul style="list-style-type: none"> - I can enter text into a computer - I can use letter, number, and Space keys



	<p>right, route, plan, algorithm, program.</p> <p>Creating Media: Digital painting</p> <p>paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers.</p> <p>Data and Information: Grouping Data</p> <p>object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same.</p>		<p>To identify a computer and its main parts</p> <ul style="list-style-type: none"> - I can name the main parts of a computer - I can switch on and log into a computer - I can use a mouse to click and drag <p>To use a mouse in different ways</p> <ul style="list-style-type: none"> - I can use a mouse to open a program - I can click and drag to make objects on a screen - I can use a mouse to create a picture <p>To use a keyboard to type on a computer</p> <ul style="list-style-type: none"> - I can say what a keyboard is for - I can type my name on a computer - I can save my work to a file <p>To use the keyboard to edit text</p>	<ul style="list-style-type: none"> - I can follow an instruction - I can recall words that can be acted out - I can give directions <p>To combine 'forwards' and 'backwards' commands to make a sequence</p> <ul style="list-style-type: none"> - I can compare forward and backward movements - I can start a sequence from the same place - I can predict the outcome of a sequence involving 'forwards' and 'backwards' commands <p>To combine four directions to make sequences</p> <ul style="list-style-type: none"> - I can compare left and right turns - I can experiment with 'turn' and 'move' 	<p>To make careful choices when painting a digital picture</p> <ul style="list-style-type: none"> - I can choose appropriate shapes - I can make appropriate colour choices - I can create a picture in the style of an artist <p>To explain why I chose the tools I used</p> <ul style="list-style-type: none"> - I can explain that different paint tools do different jobs - I can choose appropriate paint tools and colours to recreate the work of an artist - I can say which tools were helpful and why <p>To use a computer on my own to paint a picture</p> <ul style="list-style-type: none"> - I can make dots of colour on the page - I can change the colour and brush sizes - I can use dots of colour to create a picture in the style of an artist on my own <p>To compare painting a picture on a computer and on paper</p> <ul style="list-style-type: none"> - I can explain that pictures can be made in lots of different ways - I can spot the differences between painting on a computer and on paper - I can say whether I prefer painting using a computer or using paper 	<ul style="list-style-type: none"> - I can count objects - I can group objects - I can count a group of objects <p>To describe objects in different ways</p> <ul style="list-style-type: none"> - I can describe an object - I can describe a property of an object - I can find objects with similar properties <p>To count objects with the same properties</p> <ul style="list-style-type: none"> - I can group similar objects - I can group objects in more than one way - I can count how many objects share a property <p>To compare groups of objects</p>	<ul style="list-style-type: none"> - I can use Backspace to remove text <p>To identify that the look of text can be changed on a computer</p> <ul style="list-style-type: none"> - I can type capital letters - I can explain what the keys that I have already learnt about do - I can identify the toolbar and use bold, italic, and underline <p>To make careful choices when changing text</p> <ul style="list-style-type: none"> - I can select a word by double-clicking - I can select all of the text by clicking and dragging - I can change the font <p>To explain why I used the tools that I chose</p> <ul style="list-style-type: none"> - I can say what tool I used to change the text - I can decide if my changes have improved my writing - I can use 'Undo' to remove changes <p>To compare typing on a computer to writing on paper</p>	<p>can be joined together</p> <ul style="list-style-type: none"> - I can use more than one block by joining them together - I can use a Start block in a program - I can run my program <p>To identify the effect of changing a value</p> <ul style="list-style-type: none"> - I can find blocks that have numbers - I can change the value - I can say what happens when I change a value <p>To explain that each sprite has its own instructions</p> <ul style="list-style-type: none"> - I can show that a project can include more than one sprite - I can delete a sprite - I can add blocks to each of my sprites <p>To design the parts of a project</p>
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	<p><u>Creating Media:</u> Digital writing</p> <p>word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing.</p> <p><u>Programming:</u> Programming animations</p> <p>ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.</p>		<ul style="list-style-type: none"> - I can open my work from a file - I can use the arrow keys to move the cursor - I can delete letters <p>To create rules for using technology responsibly</p> <ul style="list-style-type: none"> - I can identify rules to keep us safe and healthy when we are using technology in and beyond the home - I can give examples of some of these rules - I can discuss how we benefit from these rules 	<p>commands to move a robot</p> <ul style="list-style-type: none"> - I can predict the outcome of a sequence involving up to four commands <p>To plan a simple program</p> <ul style="list-style-type: none"> - I can explain what my program should do - I can choose the order of commands in a sequence - I can debug my program <p>To find more than one solution to a problem</p> <ul style="list-style-type: none"> - I can identify several possible solutions - I can plan two programs - I can use two different programs to get to the same place 		<ul style="list-style-type: none"> - I can choose how to group objects - I can describe groups of objects - I can record how many objects are in a group <p>To answer questions about groups of objects</p> <ul style="list-style-type: none"> - I can decide how to group objects to answer a question - I can compare groups of objects - I can record and share what I have found 	<ul style="list-style-type: none"> - I can make changes to text on a computer - I can explain the differences between typing and writing - I can say why I prefer typing or writing 	<ul style="list-style-type: none"> - I can choose appropriate artwork for my project - I can decide how each sprite will move - I can create an algorithm for each sprite <p>To use my algorithm to create a program</p> <ul style="list-style-type: none"> - I can use sprites that match my design - I can add programming blocks based on my algorithm - I can test the programs I have created
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Year 2	<p>Computing Systems and Networks: Information Technology around us</p> <p>Information technology (IT), computer, barcode, scanner/scan</p> <p>Programming: Robot algorithms</p> <p>instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition.</p>	<p>Steve Jobs</p> <p>Steve Wozniak</p>	<p>Computing Systems and Networks: Information Technology around us</p> <p>Chromebooks Google slides</p> <p>To recognise the uses and features of information technology - I can identify examples of computers - I can describe some uses of computers - I can identify that a computer is a part of IT</p> <p>To identify the uses of information technology in the school</p>	<p>Programming: Robot algorithms</p> <p>Bee-Bots</p> <p>To describe a series of instructions as a sequence - I can follow instructions given by someone else - I can choose a series of words that can be acted out as a sequence - I can give clear instructions</p> <p>To explain what happens when we change the order of instructions - I can use the same instructions</p>	<p>Creating Media: Digital photography</p> <p>Chromebooks Google Photos Or iPads</p> <p>To use a digital device to take a photograph - I can recognise what devices can be used to take photographs - I can talk about how to take a photograph - I can explain what I did to capture a digital photo</p> <p>To make choices when taking a photograph - I can explain the process of taking a good photograph - I can take photos in both landscape and portrait format - I can explain why a photo looks better in portrait or landscape format</p> <p>To describe what makes a good photograph</p>	<p>Data and Information: Pictograms</p> <p>i2e pictogram i2e chart</p> <p>To recognise that we can count and compare objects using tally charts - I can record data in a tally chart - I can represent a tally count as a total - I can compare totals in a tally chart</p> <p>To recognise that objects can be represented as pictures - I can enter data onto a computer</p>	<p>Creating Media: Digital music</p> <p>Chrome Music Lab Chromebooks</p> <p>To say how music can make us feel - I can identify simple differences in pieces of music - I can describe music using adjectives - I can say what I do and don't like about a piece of music</p> <p>To identify that there are patterns in music - I can create a rhythm pattern - I can play an instrument following a rhythm pattern - I can explain that music is created and played by humans</p>	<p>Programming: Programming quizzes</p> <p>Scratch Jr iPads?</p> <p>To explain that a sequence of commands has a start - I can identify the start of a sequence - I can identify that a program needs to be started - I can show how to run my program</p> <p>To explain that a sequence of commands has an outcome - I can predict the outcome of a sequence of commands</p>

	<p><u>Creating Media:</u> Digital photography</p> <p>device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting,</p> <p><u>Data and Information:</u> Pictograms</p> <p>more than, less than, most, least, common, popular, organise, data, object, tally chart, votes, total, pictogram, enter, data, compare,</p>		<ul style="list-style-type: none"> - I can identify examples of IT - I can sort school IT by what it's used for - I can identify that some IT can be used in more than one way <p>To identify information technology beyond school</p> <ul style="list-style-type: none"> - I can find examples of information technology - I can sort IT by where it is found - I can talk about uses of information technology <p>To explain how information technology helps us</p> <ul style="list-style-type: none"> - I can recognise common types of technology - I can demonstrate how IT devices work together - I can say why we use IT 	<p>to create different algorithms</p> <ul style="list-style-type: none"> - I can use an algorithm to program a sequence on a floor robot - I can show the difference in outcomes between two sequences that consist of the same instructions <p>To use logical reasoning to predict the outcome of a program</p> <ul style="list-style-type: none"> - I can follow a sequence - I can predict the outcome of a sequence - I can compare my prediction to the program outcome <p>To explain that programming projects can have code and artwork</p>	<ul style="list-style-type: none"> - I can identify what is wrong with a photograph - I can discuss how to take a good photograph - I can improve a photograph by retaking it <p>To decide how photographs can be improved</p> <ul style="list-style-type: none"> - I can explore the effect that light has on a photo - I can experiment with different light sources - I can explain why a picture may be unclear <p>To use tools to change an image</p> <ul style="list-style-type: none"> - I can recognise that images can be changed - I can use a tool to achieve a desired effect - I can explain my choices <p>To recognise that photos can be changed</p> <ul style="list-style-type: none"> - I can apply a range of photography skills to capture a photo - I can recognise which photos have been changed - I can identify which photos are real and which have been changed 	<ul style="list-style-type: none"> - I can use a computer to view data in a different format - I can use pictograms to answer simple questions about objects <p>To create a pictogram</p> <ul style="list-style-type: none"> - I can organise data in a tally chart - I can use a tally chart to create a pictogram - I can explain what the pictogram shows <p>To select objects by attribute and make comparisons</p> <ul style="list-style-type: none"> - I can tally objects using a common attribute - I can create a pictogram to arrange objects by an attribute - I can answer 'more than'/'less than' and 'most'/'least' questions about an attribute 	<p>To experiment with sound using a computer</p> <ul style="list-style-type: none"> - I can connect images with sounds - I can use a computer to experiment with pitch - I can relate an idea to a piece of music <p>To use a computer to create a musical pattern</p> <ul style="list-style-type: none"> - I can identify that music is a sequence of notes - I can explain how my music can be played in different ways - I can refine my musical pattern on a computer <p>To create music for a purpose</p> <ul style="list-style-type: none"> - I can create a rhythm which represents an animal I've chosen - I can create my animal's rhythm on a computer - I can add a sequence of notes to my rhythm <p>To review and refine our computer work</p> <ul style="list-style-type: none"> - I can review my work - I can explain how I changed my work 	<ul style="list-style-type: none"> - I can match two sequences with the same outcome - I can change the outcome of a sequence of commands <p>To create a program using a given design</p> <ul style="list-style-type: none"> - I can work out the actions of a sprite in an algorithm - I can decide which blocks to use to meet the design - I can build the sequences of blocks I need <p>To change a given design</p> <ul style="list-style-type: none"> - I can choose backgrounds for the design - I can choose characters for the design - I can create a program based on the new design
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	<p>objects, count, explain, attribute, group, same, different, conclusion, block diagram, sharing.</p> <p>Creating Media: Digital music</p> <p>music, quiet, loud, feelings, emotions, pattern, rhythm, pulse, pitch, tempo, rhythm, notes, create, emotion, beat, instrument, open, edit.</p> <p>Programming: Programming quizzes</p> <p>sequence, command, program, run, start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare,</p>		<p>To explain how to use information technology safely</p> <ul style="list-style-type: none"> - I can list different uses of information technology - I can talk about different rules for using IT - I can say how rules can help keep me safe <p>To recognise that choices are made when using information technology</p> <ul style="list-style-type: none"> - I can identify the choices that I make when using IT - I can use IT for different types of activities - I can explain the need to use IT in different ways 	<ul style="list-style-type: none"> - I can explain the choices that I made for my mat design - I can identify different routes around my mat - I can test my mat to make sure that it is usable <p>To design an algorithm</p> <ul style="list-style-type: none"> - I can explain what my algorithm should achieve - I can create an algorithm to meet my goal - I can use my algorithm to create a program <p>To create and debug a program that I have written</p> <ul style="list-style-type: none"> - I can test and debug each part of the program - I can plan algorithms for different parts of a task 		<p>To recognise that people can be described by attributes</p> <ul style="list-style-type: none"> - I can choose a suitable attribute to compare people - I can collect the data I need - I can create a pictogram and draw conclusions from it <p>To explain that we can present information using a computer</p> <ul style="list-style-type: none"> - I can use a computer program to present information in different ways - I can share what I have found out using a computer - I can give simple examples of why information should not be shared 	<ul style="list-style-type: none"> - I can listen to music and describe how it makes me feel 	<p>To create a program using my own design</p> <ul style="list-style-type: none"> - I can choose the images for my own design - I can create an algorithm - I can build sequences of blocks to match my design <p>To decide how my project can be improved</p> <ul style="list-style-type: none"> - I can compare my project to my design - I can improve my project by adding features - I can debug my program



	<p>debug, features, evaluate, decomposition, code.</p>			<p>- I can put together the different parts of my program</p>				
<p>National Curriculum Statements - KS2</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. - Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. - Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. - 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. - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 							



<p>Year 3</p>	<p><u>Computing Systems and Networks:</u> Connecting computers</p> <p>digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets.</p> <p><u>Data and Information:</u> Branching database</p> <p>attribute, value, questions, table, objects, branching, database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree.</p>	<p>Alan Turing</p> <p>Joan Clarke</p>	<p><u>Computing Systems and Networks:</u> Connecting computers</p> <p><u>Chromebooks</u> <u>PaintZ</u></p> <p>To explain how digital devices function - I can explain that digital devices accept inputs - I can explain that digital devices produce outputs - I can follow a process - I can explain what makes a secure password</p> <p>To identify input and output devices - I can classify input and output devices - I can describe a simple process - I can design a digital device</p> <p>To recognise how digital devices can change the way that we work</p>	<p><u>Data and Information:</u> Branching database</p> <p>https://www.j2e.com/jit5#branch</p> <p>To create questions with yes/no answers - I can investigate questions with yes/no answers - I can make up a yes/no question about a collection of objects - I can create two groups of objects separated by one attribute</p> <p>To identify the attributes needed to collect data about an object - I can select an attribute to separate objects into groups - I can create a group of objects within an existing group</p>	<p><u>Programming:</u> Sequencing Sounds</p> <p><u>Scratch</u> <u>Scratch app</u></p> <p>To explore a new programming environment - I can identify the objects in a Scratch project (sprites, backdrops) - I can explain that objects in Scratch have attributes (linked to) - I can recognise that commands in Scratch are represented as blocks</p> <p>To identify that commands have an outcome - I can create a program following a design and understand that each sprite is controlled by the commands I choose - I can predict the coding blocks used to move a sprite - I can match coding blocks to their actions</p> <p>To explain that a program has a start - I can start a program in different ways - I can create a sequence of connected commands - I can explain that the objects in my project will respond exactly to the code</p>	<p><u>Creating Media:</u> Sop-frame animation</p> <p><u>iMotion</u> <u>Stop Motion Studios</u></p> <p>To explain that animation is a sequence of drawings or photographs - I can draw a sequence of pictures - I can create an effective flip book—style animation - I can explain how an animation/flip book works</p> <p>To relate animated movement with a sequence of images - I can predict what an animation will look like</p>	<p><u>Creating Media:</u> Desktop publishing</p> <p>https://www.canva.com/</p> <p>To recognise how text and images convey information - I can explain the difference between text and images - I can recognise that text and images can communicate messages clearly - I can identify the advantages and disadvantages of using text and images - I understand how to use emojis respectfully online</p> <p>To recognise that text and layout can be edited - I can change font style, size, and colours for a given purpose - I can edit text - I can explain that text can be changed to communicate more clearly</p> <p>To choose appropriate page settings - I can explain what 'page orientation' means</p>	<p><u>Programming:</u> Events and actions in programs</p> <p><u>Scratch</u></p> <p>To explain how a sprite moves in an existing project - I can explain the relationship between an event and an action - I can choose which keys to use for actions and explain my choices - I can identify a way to improve a program</p> <p>To create a program to move a sprite in four directions - I can choose a character for my project - I can choose a suitable size for a character in a maze - I can program movement</p>
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	<p><u>Programming:</u> Sequencing Sounds</p> <p>Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the code, order, note, chord, algorithm, bug, debug, code.</p> <p><u>Creating Media:</u> Sop-frame animation</p> <p>animation, flip book, stopframe, frame, sequence, image, photograph, setting, character, events, onion</p>		<ul style="list-style-type: none"> - I can explain how I use digital devices for different activities - I can recognise similarities between using digital devices and using non-digital tools - I can suggest differences between using digital devices and using non-digital tools <p>To explain how a computer network can be used to share information</p> <ul style="list-style-type: none"> - I can recognise different connections - I can explain how messages are passed through multiple connections - I can discuss why we need a network switch <p>To explore how digital devices can be connected</p>	<ul style="list-style-type: none"> - I can arrange objects into a tree structure <p>To create a branching database</p> <ul style="list-style-type: none"> - I can select objects to arrange in a branching database - I can group objects using my own yes/no questions - I can test my branching database to see if it works <p>To explain why it is helpful for a database to be well structured</p> <ul style="list-style-type: none"> - I can create yes/no questions using given attributes - I can compare two branching database structures - I can explain that questions need to be ordered carefully to split objects 	<p>To recognise that a sequence of commands can have an order</p> <ul style="list-style-type: none"> - I can explain what a sequence is - I can combine sound commands - I can order notes into a sequence <p>To change the appearance of my project</p> <ul style="list-style-type: none"> - I can build a sequence of commands - I can decide the actions for each sprite in a program - I can make design choices for my artwork <p>To create a project from a task description</p> <ul style="list-style-type: none"> - I can identify and name the objects I will need for a project - I can relate a task description to a design - I can implement my algorithm as code 	<ul style="list-style-type: none"> - I can explain why little changes are needed for each frame - I can create an effective stop-frame animation <p>To plan an animation</p> <ul style="list-style-type: none"> - I can break down a story into settings, characters and events - I can describe an animation that is achievable on screen - I can create a storyboard <p>To identify the need to work consistently and carefully</p> <ul style="list-style-type: none"> - I can use onion skinning to help me make small changes between frames - I can review a sequence of frames to check my work 	<ul style="list-style-type: none"> - I can recognise placeholders and say why they are important - I can create a template for a particular purpose <p>To add content to a desktop publishing publication</p> <ul style="list-style-type: none"> - I can choose the best locations for my content - I can paste text and images to create a magazine cover - I can make changes to content after I've added it <p>To consider how different layouts can suit different purposes</p> <ul style="list-style-type: none"> - I can identify different layouts - I can match a layout to a purpose - I can choose a suitable layout for a given purpose <p>To consider benefits of desktop publishing</p> <ul style="list-style-type: none"> - I can identify the uses of desktop publishing in the real world - I can say why desktop publishing might be helpful - I can compare work made on desktop 	<p>To adapt a program to a new context</p> <ul style="list-style-type: none"> - I can use a programming extension - I can consider the real world when making design choices - I can choose blocks to set up my program <p>To develop my program by adding features</p> <ul style="list-style-type: none"> - I can identify additional features (from a given set of blocks) - I can choose suitable keys to turn on additional features - I can build more sequences of commands to make my design work <p>To identify and fix bugs in a program</p> <ul style="list-style-type: none"> - I can test a program against a given design
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	<p>skinning, consistency, evaluation, delete, media, import, transition.</p> <p>Creating Media: Desktop publishing</p> <p>text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits.</p> <p>Programming: Events and actions in programs</p> <p>motion, event, sprite, algorithm, logic,</p>		<ul style="list-style-type: none"> - I can recognise that a computer network is made up of a number of devices - I can demonstrate how information can be passed between devices - I can explain the role of a switch, server, and wireless access point in a network <p>To recognise the physical components of a network</p> <ul style="list-style-type: none"> - I can identify how devices in a network are connected together - I can identify networked devices around me - I can identify the benefits of computer networks 	<p>into similarly sized groups</p> <p>To plan the structure of a branching database</p> <ul style="list-style-type: none"> - I can independently create questions to use in a branching database - I can create questions that will enable objects to be uniquely identified - I can create a physical version of a branching database <p>To independently create an identification tool</p> <ul style="list-style-type: none"> - I can create a branching database that reflects my plan - I can work with a partner to test my identification tool - I can suggest real-world uses for branching databases 		<ul style="list-style-type: none"> - I can evaluate the quality of my animation <p>To review and improve an animation</p> <ul style="list-style-type: none"> - I can explain ways to make my animation better - I can evaluate another learner's animation - I can improve my animation based on feedback <p>To evaluate the impact of adding other media to an animation</p> <ul style="list-style-type: none"> - I can add other media to my animation - I can explain why I added other media to my animation - I can evaluate my final film 	<p>publishing to work created by hand</p>	<ul style="list-style-type: none"> - I can match a piece of code to an outcome - I can modify a program using a design <p>To design and create a maze-based challenge</p> <ul style="list-style-type: none"> - I can make design choices and justify them - I can implement my design - I can evaluate my project
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	<p>move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions.</p>							
Year 4	<p>Computing Systems and Networks: The internet</p> <p>internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership,</p>	William Higinbotham	<p>Computing Systems and Networks: The internet</p> <p>Chrome Music Lab</p> <p>To describe how networks physically connect to other networks</p> <ul style="list-style-type: none"> - I can describe the internet as a network of networks - I can demonstrate how information is shared across the internet 	<p>Creating Media: Presentation skills</p> <p>PowerPoint</p> <p>To create a PowerPoint presentation</p> <ul style="list-style-type: none"> - I can create slide templates and organise slides with hyperlinks. <p>To use multiple tools and features successfully</p>	<p>Programming: Repetition in shapes</p> <p>FMSLogo Surface Pros or Turtle Academy Chromebooks</p> <p>To identify that accuracy in programming is important</p> <ul style="list-style-type: none"> - I can program a computer by typing commands - I can explain the effect of changing a value of a command - I can create a code snippet for a given purpose <p>To create a program in a text-based language</p>	<p>Data and Information: Data Logging</p> <p>micro:bits</p> <p>To explain that data gathered over time can be used to answer questions</p> <ul style="list-style-type: none"> - I can choose a data set to answer a given question - I can suggest questions that can 	<p>Creating Media: Photo editing</p> <p>https://www.getpaint.net/download.html Surface Pros or Pixlr or PhotoPea Chromebooks</p> <p>To explain that the composition of digital images can be changed</p> <ul style="list-style-type: none"> - I can improve an image by rotating it - I can explain why I might crop an image - I can use photo editing software to crop an image 	<p>Programming: Repetition in games</p> <p>Scratch</p> <p>To develop the use of count-controlled loops in a different programming environment</p> <ul style="list-style-type: none"> - I can list an everyday task as a set of instructions including repetition - I can predict the outcome of a snippet of code

	<p>permission, information, accurate, honest, content, adverts</p> <p>Creating Media: Presentation skills</p> <p>Programming: Repetition in shapes</p> <p>Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure.</p>		<p>- I can discuss why a network needs protecting</p> <p>To recognise how networked devices make up the internet</p> <ul style="list-style-type: none"> - I can describe networked devices and how they connect - I can explain that the internet is used to provide many services - I can recognise that the World Wide Web contains websites and web pages <p>To outline how websites can be shared via the World Wide Web (WWW)</p> <ul style="list-style-type: none"> - I can explain the types of media that can be shared on the WWW - I can describe where websites are stored when uploaded to the WWW 	<p>- I can add theme, transitions and animation to a presentation.</p> <ul style="list-style-type: none"> - I can use action settings - I can insert audio and video. <p>To present to my peers</p> <ul style="list-style-type: none"> - I can discuss the information found within my slides. - I can evaluate slide layout and make improvements. 	<p>- I can use a template to draw what I want my program to do</p> <ul style="list-style-type: none"> - I can write an algorithm to produce a given outcome I can test my algorithm in a text-based language <p>To explain what 'repeat' means</p> <ul style="list-style-type: none"> - I can identify repetition in everyday tasks - I can identify patterns in a sequence I can use a count-controlled loop to produce a given outcome <p>To modify a count-controlled loop to produce a given outcome</p> <ul style="list-style-type: none"> - I can identify the effect of changing the number of times a task is repeated - I can predict the outcome of a program containing a count-controlled loop - I can choose which values to change in a loop <p>To decompose a task into small steps</p> <ul style="list-style-type: none"> - I can identify 'chunks' of actions in the real world - I can use a procedure in a program - I can explain that a computer can repeatedly call a procedure <p>To create a program that uses count-controlled loops to produce a given outcome</p>	<p>be answered using a given data set</p> <ul style="list-style-type: none"> - I can identify data that can be gathered over time <p>To use a digital device to collect data automatically</p> <ul style="list-style-type: none"> - I can explain what data can be collected using sensors - I can use data from a sensor to answer a given question - I can identify that data from sensors can be recorded <p>To explain that a data logger collects 'data points' from sensors over time</p> <ul style="list-style-type: none"> - I can recognise that a data logger collects data at given points - I can identify the intervals used to collect data 	<p>- I understand that editing images can be unethical</p> <p>To explain that colours can be changed in digital images</p> <ul style="list-style-type: none"> - I can explain that different colour effects make you think and feel different things - I can experiment with different colour effects - I can explain why I chose certain colour effects <p>To explain how cloning can be used in photo editing</p> <ul style="list-style-type: none"> - I can add to the composition of an image by cloning - I can identify how a photo edit can be improved - I can remove parts of an image using cloning <p>To explain that images can be combined</p> <ul style="list-style-type: none"> - I can experiment with tools to select and copy part of an image - I can use a range of tools to copy between images 	<p>- I can modify a snippet of code to create a given outcome</p> <p>To explain that in programming there are infinite loops and count-controlled loops</p> <ul style="list-style-type: none"> - I can modify loops to produce a given outcome - I can choose when to use a count-controlled and an infinite loop - I can recognise that some programming languages enable more than one process to be run at once <p>To develop a design that includes two or more loops which run at the same time</p> <ul style="list-style-type: none"> - I can choose which action will be repeated for each object - I can explain what the outcome of the
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	<p>Data and Information: Data Logging</p> <p>data, table, layout, input device, sensor, logger, logging, data point, interval, analyse, dataset, import, export, logged, collection, review, conclusion_</p> <p>Creating Media: Photo editing</p> <p>image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground,</p>		<p>- I can describe how to access websites on the WWW</p> <p>To describe how content can be added and accessed on the World Wide Web (WWW)</p> <p>- I can explain what media can be found on websites</p> <p>- I can recognise that I can add content to the WWW</p> <p>- I can explain that internet services can be used to create content online</p> <p>To recognise how the content of the WWW is created by people</p> <p>- I can explain that websites and their content are created by people</p> <p>- I can suggest who owns the content on websites</p>		<p>- I can design a program that includes count-controlled loops</p> <p>- I can make use of my design to write a program</p> <p>- I can develop my program by debugging it</p>	<p>- I can talk about the data that I have captured</p> <p>To recognise how a computer can help us analyse data</p> <p>- I can view data at different levels of detail</p> <p>- I can sort data to find information</p> <p>- I can explain that there are different ways to view data</p> <p>To identify the data needed to answer questions</p> <p>- I can propose a question that can be answered using logged data</p> <p>- I can plan how to collect data using a data logger</p> <p>- I can use a data logger to collect data</p> <p>To use data from sensors to answer questions</p>	<p>- I can explain why photos might be edited</p> <p>To combine images for a purpose</p> <p>- I can describe the image I want to create</p> <p>- I can choose suitable images for my project</p> <p>- I can create a project that is a combination of other images</p> <p>To evaluate how changes can improve an image</p> <p>- I can review images against a given criteria</p> <p>- I can use feedback to guide making changes</p> <p>- I can combine text and my image to complete the project</p>	<p>repeated action should be</p> <p>- I can evaluate the effectiveness of the repeated sequences used in my program</p> <p>To modify an infinite loop in a given program</p> <p>- I can identify which parts of a loop can be changed</p> <p>- I can explain the effect of my changes</p> <p>- I can re-use existing code snippets on new sprites</p> <p>To design a project that includes repetition</p> <p>- I can evaluate the use of repetition in a project</p> <p>- I can select key parts of a given project to use in my own design</p> <p>- I can develop my own design explaining what my project will do</p>
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	<p>zoom, undo, font.</p> <p><u>Programming:</u> Repetition in games</p> <p>Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate.</p>	<p>- I can explain that there are rules to protect content</p> <p>To evaluate the consequences of unreliable content</p> <p>- I can explain that not everything on the World Wide Web is true</p> <p>- I can explain why some information I find online may not be honest, accurate, or legal</p> <p>- I can explain why I need to think carefully before I share or reshare content</p>			<p>- I can interpret data that has been collected using a data logger</p> <p>- I can draw conclusions from the data that I have collected</p> <p>- I can explain the benefits of using a data logger</p>	<p>To create a project that includes repetition</p> <p>- I can refine the algorithm in my design</p> <p>- I can build a program that follows my design</p> <p>- I can evaluate the steps I followed when building my project</p>
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<p>Year 5</p>	<p><u>Computing Systems and Networks:</u> Systems and searching</p> <p>system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking.</p> <p><u>Creating Media:</u> Video production</p> <p>video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject,</p>	<p>Margret Hamilton</p> <p>Katherine Johnston</p> <p>Evelyne Boyd Granville</p>	<p><u>Computing Systems and Networks:</u> Systems and searching</p> <p>To explain that computers can be connected together to form systems - I can explain that systems are built using a number of parts - I can describe the input, process, and output of a digital system - I can explain that computer systems communicate with other devices</p> <p>To recognise the role of computer systems in our lives - I can identify tasks that are managed by computer systems - I can identify the human elements of a computer system</p>	<p><u>Creating Media:</u> Video production</p> <p><u>iMovie</u> <u>iPads</u></p> <p>To explain what makes a video effective - I can explain that video is a visual media format - I can identify features of videos - I can compare features in different videos - I know what to do if I see any content online that makes me feel uncomfortable</p> <p>To use a digital device to record video - I can identify and find features on a digital video recording device - I can experiment with</p>	<p><u>Data and information:</u> Flat-file database</p> <p><u>https://www.j2e.com/database/</u> <u>Chromebooks</u></p> <p>To use a form to record information - I can create a database using cards - I can explain how information can be recorded - I can order, sort, and group my data cards</p> <p>To compare paper and computer-based databases - I can explain what a field and a record is in a database - I can navigate a flat-file database to compare different views of information - I can choose which field to sort data by to answer a given question</p> <p>To outline how you can answer questions by grouping and then sorting data - I can explain that data can be grouped using chosen values - I can group information using a database - I can combine grouping and sorting to answer specific questions</p> <p>To explain that tools can be used to select specific data - I can choose which field and value are required to answer a given question</p>	<p><u>Creating Media:</u> Presentation skills</p> <p><u>PowerPoint</u></p> <p>To create a PowerPoint presentation - I can create slide templates and organise slides with hyperlinks.</p> <p>To use multiple tools and features successfully - I can add theme, transitions and animation to a presentation. - I can use action settings - I can insert audio and video.</p> <p>To present to my peers - I can discuss the information found within my slides. - I can evaluate slide layout and make improvements.</p>	<p><u>Programming:</u> Selection in physical computing</p> <p><u>Crumble software</u></p> <p>To control a simple circuit connected to a computer - I can create a simple circuit and connect it to a microcontroller - I can program a microcontroller to make an LED switch on - I can explain what an infinite loop does</p> <p>To write a program that includes count-controlled loops - I can connect more than one output component to a microcontroller - I can use a count-controlled loop to control outputs - I can design sequences that use count-controlled loops</p> <p>To explain that a loop can stop when a condition is met - I can explain that a condition is either true or false</p>	<p><u>Programming:</u> Selection in quizzes</p> <p><u>Scratch</u></p> <p>To explain how selection is used in computer programs - I can recall how conditions are used in selection - I can identify conditions in a program - I can modify a condition in a program</p> <p>To relate that a conditional statement connects a condition to an outcome - I can use selection in an infinite loop to check a condition - I can identify the condition and outcomes in an 'if... then... else...' statement - I can create a program that uses selection to produce different outcomes</p>
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	<p>side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share.</p> <p>Data and information: Flat-file database</p> <p>database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation.</p> <p>Creating Media: Presentation skills</p>		<ul style="list-style-type: none"> - I can explain the benefits of a given computer system - I can explain how to keep my personal information safe online <p>To identify how to use a search engine</p> <ul style="list-style-type: none"> - I can make use of a web search to find specific information - I can refine my web search - I can compare results from different search engines - I can recognise trustworthy websites <p>To describe how search engines select results</p> <ul style="list-style-type: none"> - I can explain why we need tools to find things online - I can recognise the role of web crawlers in creating an index 	<p>different camera angles</p> <ul style="list-style-type: none"> - I can make use of a microphone <p>To capture video using a range of techniques</p> <ul style="list-style-type: none"> - I can suggest filming techniques for a given purpose - I can capture video using a range of filming techniques - I can review how effective my video is <p>To create a storyboard</p> <ul style="list-style-type: none"> - I can outline the scenes of my video - I can decide which filming techniques I will use - I can create and save video content <p>To identify that video can be improved through reshooting and</p>	<ul style="list-style-type: none"> - I can outline how 'AND' and 'OR' can be used to refine data selection - I can choose multiple criteria to answer a given question <p>To explain that computer programs can be used to compare data visually</p> <ul style="list-style-type: none"> - I can select an appropriate chart to visually compare data - I can refine a chart by selecting a particular filter <p>I can explain the benefits of using a computer to create charts</p> <p>To use a real-world database to answer questions</p> <ul style="list-style-type: none"> - I can ask questions that will need more than one field to answer - I can refine a search in a real-world context - I can present my findings to a group 		<ul style="list-style-type: none"> - I can design a conditional loop - I can program a microcontroller to respond to an input <p>To explain that a loop can be used to repeatedly check whether a condition has been met</p> <ul style="list-style-type: none"> - I can explain that a condition being met can start an action - I can identify a condition and an action in my project - I can use selection (an 'if...then...' statement) to direct the flow of a program <p>To design a physical project that includes selection</p> <ul style="list-style-type: none"> - I can identify a real-world example of a condition starting an action - I can describe what my project will do - I can create a detailed drawing of my project <p>To create a program that controls a physical computing project</p>	<p>To explain how selection directs the flow of a program</p> <ul style="list-style-type: none"> - I can explain that program flow can branch according to a condition - I can design the flow of a program that contains 'if... then... else...' - I can show that a condition can direct program flow in one of two ways <p>To design a program that uses selection</p> <ul style="list-style-type: none"> - I can outline a given task - I can use a design format to outline my project - I can identify the outcome of user input in an algorithm <p>To create a program that uses selection</p> <ul style="list-style-type: none"> - I can implement my algorithm to create the first section of my program
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	<p><u>Programming:</u> Selection in physical computing</p> <p><u>microcontroller, USB, components,</u> connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer</p> <p><u>Programming:</u> Selection in quizzes</p>		<ul style="list-style-type: none"> - I can relate a search term to the search engine's index <p>To explain how search results are ranked</p> <ul style="list-style-type: none"> - I can order a list by rank - I can explain that a search engine follows rules to rank results - I can give examples of criteria used by search engines to rank results <p>To recognise why the order of results is important, and to whom</p> <ul style="list-style-type: none"> - I can describe some of the ways that search results can be influenced - I can recognise some of the limitations of search engines 	<p>editing</p> <ul style="list-style-type: none"> - I can store, retrieve, and export my recording to a computer - I can explain how to improve a video by reshooting and editing - I can select the correct tools to make edits to my video <p>To consider the impact of the choices made when making and sharing a video</p> <ul style="list-style-type: none"> - I can make edits to my video and improve the final outcome - I can recognise that my choices when making a video will impact the quality of the final outcome - I can evaluate my video and share my opinions 			<ul style="list-style-type: none"> - I can write an algorithm that describes what my model will do - I can use selection to produce an intended outcome - I can test and debug my project 	<ul style="list-style-type: none"> - I can test my program - I can share my program with others <p>To evaluate my program</p> <ul style="list-style-type: none"> - I can identify ways the program could be improved - I can identify the setup code I need in my program - I can extend my program further
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	Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator		- I can explain how search engines make money					
Year 6	<p><u>Computing Systems and Networks:</u> Communication and collaboration</p> <p>communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration,</p>	Jen-Hsun "Jensen" Huang	<p><u>Computing Systems and Networks:</u> Communication and collaboration</p> <p><u>Google Slides</u></p> <p>To explain the importance of internet addresses</p> <ul style="list-style-type: none"> - I can recognise that data is transferred using agreed methods - I can explain that internet devices have addresses - I can describe how computers use 	<p><u>Creating Media:</u> Web page creation</p> <p><u>Google Sites</u> <u>Google Workspace for Education</u></p> <p>To review an existing website and consider its structure</p> <ul style="list-style-type: none"> - I can explore a website - I can discuss the different types of media used on websites 	<p><u>Programming:</u> Variables in games</p> <p><u>Scratch website</u></p> <p>To define a 'variable' as something that is changeable</p> <ul style="list-style-type: none"> - I can identify examples of information that is variable - I can explain that the way a variable changes can be defined - I can identify that variables can hold numbers or letters <p>To explain why a variable is used in a program</p>	<p><u>Data and information:</u> Introduction to spreadsheets</p> <p><u>Microsoft Excel</u> <u>Surface Pros</u></p> <p>To create a data set in a spreadsheet</p> <ul style="list-style-type: none"> - I can collect data - I can suggest how to structure my data - I can enter data into a spreadsheet 	<p><u>Creating Media:</u> 3D modelling</p> <p><u>TinkerCAD</u></p> <p>To recognise that you can work in three dimensions on a computer</p> <ul style="list-style-type: none"> - I can add 3D shapes to a project - I can view 3D shapes from different perspectives - I can move 3D shapes relative to one another 	<p><u>Programming:</u> Sensing movement</p> <p><u>micro:bits</u></p> <p>To create a program to run on a controllable device</p> <ul style="list-style-type: none"> - I can apply my knowledge of programming to a new environment - I can test my program on an emulator

<p>internet, public, private, oneway, two-way, one-to-one, one-to-many.</p> <p>Creating Media: Web page creation</p> <p>website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed.</p> <p>Programming:</p>	<p>addresses to access websites</p> <p>To recognise how data is transferred across the internet - I can identify and explain the main parts of a data packet - I can explain that data is transferred over networks in packets - I can explain that all data transferred over the internet is in packets</p> <p>To explain how sharing information online can help people to work together - I can recognise how to access shared files stored online - I can send information over the internet in different ways - I can explain that the internet allows</p>	<p>- I know that websites are written in HTML</p> <p>To plan the features of a web page - I can recognise the common features of a web page - I can suggest media to include on my page - I can draw a web page layout that suits my purpose</p> <p>To consider the ownership and use of images (copyright) - I can say why I should use copyright-free images - I can find copyright-free images - I can describe what is meant by the term 'fair use' - I know how to use technology respectfully and responsibly when online</p>	<p>- I can identify a program variable as a placeholder in memory for a single value - I can explain that a variable has a name and a value - I can recognise that the value of a variable can be changed</p> <p>To choose how to improve a game by using variables - I can decide where in a program to change a variable - I can make use of an event in a program to set a variable - I can recognise that the value of a variable can be used by a program</p> <p>To design a project that builds on a given example - I can choose the artwork for my project - I can create algorithms for my project - I can explain my design choices</p> <p>To use my design to create a project - I can create the artwork for my project - I can choose a name that identifies the role of a variable - I can test the code that I have written</p> <p>To evaluate my project</p>	<p>To build a data set in a spreadsheet - I can explain what an item of data is - I can choose an appropriate format for a cell - I can apply an appropriate format to a cell</p> <p>To explain that formulas can be used to produce calculated data - I can explain which data types can be used in calculations - I can construct a formula in a spreadsheet - I can identify that changing inputs changes outputs</p> <p>To apply formulas to data - I can calculate data using</p>	<p>To identify that digital 3D objects can be modified - I can resize an object in three dimensions - I can lift/lower 3D objects - I can recolour a 3D object</p> <p>To recognise that objects can be combined in a 3D model - I can rotate objects in three dimensions - I can duplicate 3D objects - I can group 3D objects</p> <p>To create a 3D model for a given purpose - I can accurately size 3D objects - I can show that placeholders can create holes in 3D objects - I can combine a number of 3D objects</p> <p>To plan my own 3D model - I can analyse a 3D model - I can choose objects to use in a 3D model - I can combine objects in a design</p>	<p>- I can transfer my program to a controllable device</p> <p>To explain that selection can control the flow of a program - I can identify examples of conditions in the real world - I can use a variable in an if, then, else statement to select the flow of a program - I can determine the flow of a program using selection</p> <p>To update a variable with a user input - I can use a condition to change a variable - I can experiment with different physical inputs - I can explain that checking a variable doesn't change its value</p>
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	<p>Variables in games</p> <p>variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare.</p> <p>Data and information: Introduction to spreadsheets</p> <p>data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, spreadsheet, input, output, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate,</p>		<p>different media to be shared</p> <p>To evaluate different ways of working together online</p> <ul style="list-style-type: none"> - I can identify different ways of working together online - I can recognise that working together on the internet can be public or private - I can explain how the internet enables effective collaboration <p>To recognise how we communicate using technology</p> <ul style="list-style-type: none"> - I can explain the different ways in which people communicate - I can identify that there are a variety of ways to communicate over the internet - I can choose methods of 	<p>To recognise the need to preview pages</p> <ul style="list-style-type: none"> - I can add content to my own web page - I can preview what my web page looks like - I can evaluate what my web page looks like on different devices and suggest/make edits. <p>To outline the need for a navigation path</p> <ul style="list-style-type: none"> - I can explain what a navigation path is - I can describe why navigation paths are useful - I can make multiple web pages and link them using hyperlinks <p>To recognise the implications of linking to content owned by other people</p> <ul style="list-style-type: none"> - I can explain the implication of 	<ul style="list-style-type: none"> - I can identify ways that my game could be improved - I can use variables to extend my game - I can share my game with others 	<p>different operations</p> <ul style="list-style-type: none"> - I can create a formula which includes a range of cells - I can apply a formula to multiple cells by duplicating it <p>To create a spreadsheet to plan an event</p> <ul style="list-style-type: none"> - I can use a spreadsheet to answer questions - I can explain why data should be organised - I can apply a formula to calculate the data I need to answer questions <p>To choose suitable ways to present data</p> <ul style="list-style-type: none"> - I can produce a chart - I can use a chart to show the answer to a question 	<p>To create my own digital 3D model</p> <ul style="list-style-type: none"> - I can construct a 3D model based on a design - I can explain how my 3D model could be improved - I can modify my 3D model to improve it 	<p>To use an conditional statement to compare a variable to a value</p> <ul style="list-style-type: none"> - I can use an operand (e.g. <=>) in an if, then statement - I can explain the importance of the order of conditions in else, if statements - I can modify a program to achieve a different outcome <p>To design a project that uses inputs and outputs on a controllable device</p> <ul style="list-style-type: none"> - I can decide what variables to include in a project - I can design the algorithm for my project - I can design the program flow for my project <p>To develop a program to use inputs and outputs on a controllable device</p>
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	<p>results, sum, comparison, software, tools.</p> <p><u>Creating Media:</u> 3D modelling</p> <p>TinkerCAD, 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify.</p> <p><u>Programming:</u> Sensing movement</p> <p>Micro:bit, MakeCode, input, process,</p>		<p>communication to suit particular purposes</p> <p>To evaluate different methods of online communication</p> <ul style="list-style-type: none"> - I can compare different methods of communicating on the internet - I can decide when I should and should not share information online - I can explain that communication on the internet may not be private - I can explain how to report inappropriate content online 	<p>linking to content owned by others</p> <ul style="list-style-type: none"> - I can create hyperlinks to link to other people's work - I can evaluate the user experience of a website 		<ul style="list-style-type: none"> - I can suggest when to use a table or chart 		<ul style="list-style-type: none"> - I can create a program based on my design - I can test my program against my design - I can use a range of approaches to find and fix bugs



	output, flashing, USB, trace, selection, condition, if then else, variable, random, sensing, accelerometer, value, compass, direction, navigation, design, task, algorithm, step counter, plan, create, code, test, debug.							
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