

## NC Objectives - KS1

- 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 have concerns about content or contact the internet or other online technologies.

	CONNECT Digital Literacy - Online Safety	COMMUNICATE IT- Digital Media - Create, Share, Respond	COMMUNICATE IT - Multimedia and Digital Writing	COLLECT IT- Data	COMMUNICATE IT - Communication & Collaboration	CODE Computer Science Coding
Year 1	<p><b>Technology Around Us</b></p> <ul style="list-style-type: none"> <li>• Explain technology as something which help us</li> <li>• Locate examples of technology in the classroom</li> <li>• Identify come computers around me</li> <li>• Name the main parts of a computer</li> <li>• Switch on and log into a computer</li> </ul>	<p><b>Exploring Sound</b></p> <ul style="list-style-type: none"> <li>• Log into a device at school</li> <li>• Log into online resources - Busy Things</li> <li>• Move the cursor with a swiping action (swiping finger)</li> <li>• Click and drag (clicking finger and swiping finger)</li> </ul> <p><b>Developing Basic Skills (Mouse &amp; Keyboard)</b></p> <ul style="list-style-type: none"> <li>• Move the cursor with swiping finger or (swiping finger) or moving the mouse</li> <li>• Click and drag (clicking finger and swiping finger o click and drag with mouse)</li> <li>• Locate and use the 'spacebar', 'shift', 'enter' and backspace on a 'keyboard'</li> </ul> <p><b>Painting</b></p> <ul style="list-style-type: none"> <li>• Log into online resources - Busy Things</li> <li>• Select the tool for tracing and colouring</li> <li>• Undo a mistake</li> <li>• Reset the canvas</li> <li>• Save my work</li> </ul> <p><b>Writing</b></p>		<p><b>Busy Things</b></p> <p><b>Making groups</b></p> <ul style="list-style-type: none"> <li>-Group similar objects</li> <li>-Group objects in more than one way</li> <li>-Count how many objects share a property</li> </ul> <p><b>Comparing groups</b></p> <ul style="list-style-type: none"> <li>-Choose how to group objects</li> <li>-Describe groups of objects</li> <li>-Record how many objects are in a group</li> </ul> <p><b>Answering questions</b></p> <ul style="list-style-type: none"> <li>-Decide how to group objects to answer a question</li> <li>-Compare groups of objects</li> <li>-Record and share what I have found</li> </ul> <p><b>Collect data about the class and build a 'shared pictogram'</b></p>	<p><b>Home Learning Platform Introduction</b></p> <p><b>To access and use a remote learning platform</b></p> <ul style="list-style-type: none"> <li>-Sign into a remote learning platform</li> <li>-Navigate a remote learning platform</li> <li>-Upload a piece of work to a remote learning platform</li> </ul> <p><b>To upload work and provide feedback</b></p> <ul style="list-style-type: none"> <li>-Sign into a remote learning platform</li> <li>-Upload a piece of work to a remote learning platform</li> </ul>	<p><b>Beebots – Moving a Floor Robot</b></p> <p><b>Introducing Algorithms</b></p> <ul style="list-style-type: none"> <li>-Say what an algorithm is</li> <li>-Write an algorithm</li> <li>-Use an algorithm</li> <li>-Spot errors and try to fix them</li> </ul> <p><b>Tinkering</b></p> <p><b>Exploring Floor Robots</b></p> <ul style="list-style-type: none"> <li>-Play with a control toy to see what happens.</li> <li>-Explore what happens when individual buttons are pressed on a robot or control toy.</li> <li>-Guess what will happen when I press certain buttons.</li> </ul>

		<ul style="list-style-type: none"> <li>• Locate and use the 'spacebar', 'shift', 'enter' and backspace on a 'keyboard'</li> <li>• Type words using the keyboard</li> <li>• Type phrases and short sentences</li> </ul> <p><b>Application of skills independently</b></p> <ul style="list-style-type: none"> <li>• Make careful choices when using a mouse and keyboard</li> <li>• Type phrases and short sentences</li> <li>• Save and retrieve my work</li> </ul> <p><b>Application of skills independently</b> Recommended Assessment Piece</p> <ul style="list-style-type: none"> <li>• Make careful choices when using a mouse and keyboard</li> <li>• Type phrases and short sentences</li> <li>• Save and retrieve my work</li> </ul> <p><b>Digital Photography</b></p> <ul style="list-style-type: none"> <li>• Log into J2launch-Camera</li> <li>• Take a digital photo</li> <li>• Change my picture using filters and effects</li> <li>• Save my picture</li> </ul> <p><b>Using digital pictures</b></p> <ul style="list-style-type: none"> <li>• Log into J2launch-JIT</li> <li>• Use JIT - Mix</li> <li>• Retrieve my photo files and upload them to JIT Mix</li> <li>• Save my work</li> </ul> <p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Log into J2launch-JIT Mix</li> <li>• Access my shared files on J2E and inset them to JIT Mix</li> <li>• Add a new page on JIT Mix</li> <li>• Label two different types of digital images</li> <li>• Save my work</li> </ul> <p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Log into J2launch-JIT Write</li> <li>• Select a template</li> <li>• Change the font and colour of my writing</li> <li>• Use a digital word bank</li> <li>• Save and blog my work.</li> </ul>	<p>-Compare presenting data online and on paper (if this work is linked to maths)</p> <p>-Create pictograms using Busy Things</p> <p>-Answer questions and talk about the data collected in class and the information on the screen pictogram.</p> <p><b>Exploring pictograms</b></p> <p>-Begin to create pictograms using Busy Things</p> <p>-Talk about the link between the data collected in class and the information on the screen pictogram.</p>	<p>-Provide self or peer assessment</p> <p><b>To complete an activity on a Remote Learning Platform</b></p> <p>-Sign into a remote learning platform</p> <p>-Find and complete an activity under the activities tab</p> <p>-Respond to my teacher's feedback using the voice note button</p>	<p>-Estimate how far the beebot/robot will move, or turn when I press buttons.</p> <p><b>Move Robot along a route (writing algorithms)</b></p> <p>-Read and write algorithms to move a robot along a route</p> <p>-Use command symbols to write my algorithm</p> <p>-Predict the outcome of a sequence commands</p> <p>-Enter the commands and test my prediction</p> <p><b>Beebot Programming Challenges</b></p> <p><b>(record an algorithm and program the bee-bot)</b></p> <p>-Record my algorithm</p> <p>-Program bee-bot</p> <p>-Test my algorithm</p> <p><b>Plan a simple program for my robot</b></p> <p>-Explain what my program should do</p> <p>-Choose the order of commands in a sequence</p> <p>-Debug my program</p>
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	CONNECT Digital Literacy - Online Safety	COMMUNICATE IT- Digital Media - Create, Share, Respond	COMMUNICATE IT - Multimedia and Digital Writing	COLLECT IT- Data	COMMUNICATE IT - Communication & Collaboration	CODE Computer Science Coding
Year 2	<p><b>Uses of Computers Using computers responsibly</b></p> <ul style="list-style-type: none"> <li>List different uses of information technology.</li> <li>Recognise how to use information technology responsibly.</li> <li>Say how those rules/guides can help me</li> </ul> <p><b>Lesson starters to consolidate ideas about computers and the way we use them.</b></p> <ul style="list-style-type: none"> <li>List different uses of information technology beyond school.</li> <li>Know that the internet is made of computers connected all around the world.</li> <li>I can mention some uses of the internet.</li> </ul>	<p><b>IT Creating Media Taking photographs? - To use a digital device to take photographs</b></p> <p><b>Recognise what devices can be used to take photographs</b></p> <ul style="list-style-type: none"> <li>Talk about how to take a photograph</li> <li>Explain what I did to capture a digital photo</li> <li>Landscape or portrait? - To make choices when taking a photograph</li> <li>Explain the process of taking a good photograph</li> <li>Take photos in both landscape and portrait format</li> <li>Explain why a photo looks better in portrait or landscape format</li> </ul> <p><b>What makes a good photograph? -To describe what takes a good photograph</b></p> <p><b>Identify what is wrong with a photograph</b></p> <ul style="list-style-type: none"> <li>Discuss how to take a good photograph</li> <li>Improve a photograph by retaking it</li> </ul> <p>To recognise that photos can be changed</p> <p><b>Apply a range of photography skills to capture a photo</b></p>	<p><b>Type a sentence</b></p> <ul style="list-style-type: none"> <li>Type keys on the home row</li> <li>Type complete sentences using JITwrite</li> <li>Use a word bank</li> <li>Select a writing template</li> <li>Select the font colour and size</li> <li>Save and retrieve my work</li> </ul> <p>Online Research</p> <p><b>I can find information on the Internet</b></p> <ul style="list-style-type: none"> <li>Click on a link to open a website (bookmark or shared link)</li> <li>Find my way around a website given by my teacher</li> <li>Use the back arrow and I can scroll up and down to navigate the webpage</li> <li>Answer questions using information on a webpage</li> </ul> <p><b>Typing a paragraph</b></p> <ul style="list-style-type: none"> <li>Type keys on the home row plus e and i</li> <li>Type complete sentences using JITwrite</li> <li>Use punctuation and capital letters (shift)</li> <li>Use a word bank</li> <li>Select a writing template</li> </ul>	<p><b>Count and compare objects using tally charts</b></p> <ul style="list-style-type: none"> <li>Record data in a tally chart</li> <li>Represent a tally count as a total</li> <li>Compare totals in a tally chart</li> </ul> <p><b>Create my pictogram using JITpictogram</b></p> <ul style="list-style-type: none"> <li>Enter data onto a computer</li> <li>Use a computer to view data in a different format</li> <li>Use pictograms to answer simple questions about objects</li> </ul> <p><b>Presenting information using pictograms</b></p> <ul style="list-style-type: none"> <li>Organise data in a tally chart</li> <li>Use a tally chart to create a pictogram</li> <li>Explain what the pictogram shows</li> </ul> <p><b>Making comparisons using different attributes (features)</b></p> <ul style="list-style-type: none"> <li>Tally objects using a common attribute</li> <li>Create a pictogram to arrange objects by an attribute</li> <li>Answer more than/less than, most/least questions about an attribute</li> </ul>	<p><b>Accessing My Busy Things</b></p> <ul style="list-style-type: none"> <li>Log into my Busy Things</li> <li>Access Busy Blasts</li> <li>Access my pinned activities</li> </ul> <p><b>Additional Skills:</b></p> <ul style="list-style-type: none"> <li>Log into a device at school using shortcuts</li> <li>Log into online resources using USO</li> </ul> <p><b>Saving and Retrieving work</b></p> <ul style="list-style-type: none"> <li>Log into my Busy Things</li> <li>Access my assignments</li> <li>Save and retrieve work from 'my files'</li> </ul> <p><b>Additional Skills:</b></p> <ul style="list-style-type: none"> <li>Log into a device at school using shortcuts</li> <li>Log into online resources using USO</li> <li>Responding to Feedback</li> <li>Provide and respond to feedback on my work</li> <li>View and respond to my feedback</li> <li>Log into a device at home with adult support</li> </ul>	<p><b>Writing Algorithms (unplugged)</b></p> <ul style="list-style-type: none"> <li>Explain what an algorithm is</li> <li>Write and follow an algorithm</li> <li>Debug my algorithm</li> </ul> <p><b>Sequencing algorithms</b></p> <ul style="list-style-type: none"> <li>Create an algorithm to make the rocket move</li> <li>Enter the commands to move the rocket</li> <li>Edit and create a clear algorithm (by editing as I go along)</li> </ul> <p><b>Coding the algorithm</b></p> <ul style="list-style-type: none"> <li>Create a simple algorithm using advanced code</li> <li>Predict the outcome of a simple sequence of instructions</li> <li>Test my algorithm by playing the code</li> <li>Edit and debug the algorithm</li> <li>Design a program</li> <li>Design an algorithm for my own program</li> <li>Use my algorithm to code my</li> </ul>

		<ul style="list-style-type: none"> <li>Recognise which photos have been changed</li> <li>Identify which photos are real and which have been changed</li> </ul> <p><b>Assessment opportunity</b></p> <p><b>To create a film</b></p> <ul style="list-style-type: none"> <li>Start and stop a video</li> <li>Hold the camera precisely throughout</li> <li>the period of making a film</li> <li>Discuss what makes a good film</li> </ul>	<ul style="list-style-type: none"> <li>Select the font colour and size</li> <li>Save and retrieve my work</li> </ul> <p><b>Summary of a Story</b></p> <ul style="list-style-type: none"> <li>Type complete sentences using JIT - Mix</li> <li>Use punctuation and capital letters (shift)</li> <li>Use a word bank</li> <li>Select a writing template</li> <li>Select the font colour and size</li> <li>Save and retrieve my work</li> </ul> <p>Story writing</p> <ul style="list-style-type: none"> <li>Type a story using JIT - Mix</li> <li>Select an image to show alongside my writing (drawing or picture)</li> <li>Select a writing template</li> <li>Use punctuation and capital letters (shift)</li> <li>Use a word bank</li> <li>Select the font colour and size</li> <li>Save and retrieve my work</li> </ul>	<p>Present Information using Pictograms/charts</p> <p>Possible assessment piece</p> <ul style="list-style-type: none"> <li>Use a computer program to present information in different ways</li> <li>Share what I have found out using a computer</li> <li>Give simple examples of why information should not be shared</li> </ul>	<p><b>Additional Skills:</b></p> <ul style="list-style-type: none"> <li>Log into a device at school using shortcuts</li> <li>Log into online resources using USO</li> </ul>	<ul style="list-style-type: none"> <li>program using advanced mode</li> <li>Test and debug the program</li> </ul> <p><b>Share and review programs</b></p> <ul style="list-style-type: none"> <li>Share my work by publishing to J2Webby</li> <li>Access and play my classmates' programs</li> <li>Make a comment about what I like and what can be improved about their program</li> </ul>
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## NC Objectives - KS1

- 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

Year 3	CONNECT Digital Literacy - Online Safety	COMMUNICATE IT- Digital Media - Create, Share, Respond	COMMUNICATE IT - Multimedia and Digital Writing	COLLECT IT- Data	COMMUNICATE IT - Communication & Collaboration	CODE Computer Science Coding
	<p><b>How does a digital device work?</b></p> <ul style="list-style-type: none"> <li>• I can explain that digital devices accept inputs</li> <li>• I can explain that digital devices produce outputs</li> <li>• I can follow a process</li> </ul> <p>What parts make up a digital device?</p> <ul style="list-style-type: none"> <li>• I can classify input and output devices</li> <li>• I can model a simple process</li> <li>• I can design a digital device</li> </ul> <p>How are computers connected?</p> <ul style="list-style-type: none"> <li>• I can recognise that a computer network is made up of a number of devices</li> <li>• I can demonstrate how information can be passed between devices</li> <li>• I can explain the role of a switch, server, and wireless access point in a network</li> </ul> <p>What does our school network look like?</p> <ul style="list-style-type: none"> <li>• I can identify how devices in a network are connected with one another</li> </ul>	<p>How can I identify stop motion animation and modify my own?</p> <ul style="list-style-type: none"> <li>• I can use the mouse to move objects slightly</li> <li>• I can discuss examples of stop motion animation in the real world</li> <li>• I can predict what an animation will look like</li> <li>• I can explain why little changes are needed for each frame</li> <li>• I modify an effective stop-frame animation</li> <li>• I can explain that animation is a sequence of drawings or photographs</li> </ul> <p>What makes a good animation and how can I create my own?</p> <ul style="list-style-type: none"> <li>• I can explain that animation is a sequence of drawings or photographs</li> <li>• I can relate animated movement with a sequence of images</li> <li>• I can work consistently and carefully</li> </ul>	<p>To access and use Google Classroom</p> <ul style="list-style-type: none"> <li>• I can join a class on Google Classroom</li> <li>• I can navigate the stream area of Google Classroom</li> <li>• I can access announcements and resources through the stream area of Google Classroom</li> </ul> <p>To access and complete assignments</p> <ul style="list-style-type: none"> <li>• I can sign into a Google Classroom</li> <li>• I can navigate to assignments in Google Classroom</li> <li>• I can access my work within my Google Drive</li> <li>• I can 'turn in' my work when I am finished</li> </ul> <p>Providing Self-assessment and feedback</p> <ul style="list-style-type: none"> <li>• I can sign into a remote learning platform</li> <li>• I can respond to my teacher's feedback (could use verbal if mote is added)</li> </ul>	<p>Using a branching Database</p> <ul style="list-style-type: none"> <li>• I can answer yes/no questions</li> <li>• I can use a branching database to identify objects</li> <li>• I can explain how a branching database works</li> </ul> <p>Construct a simple branching database</p> <ul style="list-style-type: none"> <li>• I can select an attribute to separate objects into groups</li> <li>• I can create a group of objects within an existing group</li> <li>• I can arrange objects into a tree structure</li> </ul> <p>To construct a simple branching database</p> <ul style="list-style-type: none"> <li>• To select objects by attribute and make comparisons</li> <li>• To recognise that objects can be described by attributes</li> <li>• To ask 'yes' and 'no' questions</li> </ul>	<p>Learn my Creation tools J2e5</p> <ul style="list-style-type: none"> <li>• I can use multimedia presentation software</li> <li>• I can type and format text</li> <li>• I can insert and format images</li> </ul> <p><u>Challenge</u> – I can insert and format lines and shapes</p> <p>Create a Poster/ Webpage in J2e5</p> <ul style="list-style-type: none"> <li>• I can use multimedia presentation software</li> <li>• I can type and format text</li> <li>• I can insert and format images</li> <li>• I can insert and format shapes</li> <li>• Challenge - I can add animations to text and shapes</li> </ul> <p>Blog your poster</p> <ul style="list-style-type: none"> <li>• I can explain what a blog is</li> </ul>	<p>Sequencing with Angry Birds</p> <ul style="list-style-type: none"> <li>• I can translate movements into sequence algorithms</li> <li>• I can drag and drop blocks of code</li> <li>• I can run my program to test it</li> <li>• I can debug the program by adding or removing blocks</li> </ul> <p>Programming with Angry Birds - Includes repetition</p> <ul style="list-style-type: none"> <li>• I can translate movements into a sequence algorithm</li> <li>• I can run my program to test and debug it</li> </ul> <p>Programming with Harvester</p> <ul style="list-style-type: none"> <li>• I can translate movements into a sequence algorithm</li> </ul>

	<ul style="list-style-type: none"> <li>• I can identify networked devices around me</li> <li>• I can identify the benefits of computer networks</li> </ul>	<ul style="list-style-type: none"> <li>• I can review and improve an animation</li> <li>• I can evaluate the impact of adding other media to an animation</li> </ul> <p>How can I use onion skinning to create my own animation?</p> <ul style="list-style-type: none"> <li>• I can plan an animation</li> <li>• I can use onion skinning to help me make small changes between frames</li> <li>• I can work consistently and carefully</li> <li>• I can review a sequence of frames to check my work</li> <li>• I can evaluate the quality of my animation</li> </ul> <p>How can I use onion skinning to create my own animation? I can plan an animation</p> <ul style="list-style-type: none"> <li>• I can explain ways to make my animation better</li> <li>• I can use onion skinning to help me make small changes between frames</li> </ul>	<ul style="list-style-type: none"> <li>• I can provide self or peer assessment</li> </ul> <p>Digital Writing – Google Docs Title and sentences</p> <ul style="list-style-type: none"> <li>• I can type a title and sentences.</li> <li>• I can change the font/size/colour</li> <li>• I can delete and use undo/redo when I make mistakes</li> <li>• I can move the cursor (click/arrows) to edit my writing.</li> </ul> <p>Fact file</p> <ul style="list-style-type: none"> <li>• I can change the style of my writing (headings, subheadings, normal)</li> <li>• I can insert an image using google web search</li> <li>• I can select, resize and format the image to suit my needs</li> <li>• I can delete and use undo/redo when I make mistakes</li> </ul> <p>Using bullet points or numbered lists to write a recipe</p> <ul style="list-style-type: none"> <li>• I can copy and paste an image from the internet</li> <li>• I can use basic GSuite shortcuts (Ctrl+C, Ctrl+V)</li> <li>• I can select, resize and format the image to suit my needs</li> <li>• I can make a list using numbers or bullet points</li> <li>• I can delete and use undo/redo when I make mistakes</li> </ul>	<ul style="list-style-type: none"> <li>• To create a branching database</li> </ul> <p>To construct a branching database</p> <p><b>Assessment Piece</b></p> <ul style="list-style-type: none"> <li>• To select objects by attribute and make comparisons</li> <li>• To recognise that people can be described by attributes</li> <li>• To ask 'yes' and 'no' questions</li> <li>• To create a branching database</li> <li>• To use the internet to search for images</li> <li>• To use tools to change a background image</li> </ul> <p>To construct a branching database</p> <p><b>Assessment Piece</b></p> <ul style="list-style-type: none"> <li>• To select objects by attribute and make comparisons</li> <li>• To recognise that people can be described by attributes</li> <li>• To ask 'yes' and 'no' questions</li> <li>• To create a branching database</li> <li>• To use the internet to search for images</li> <li>• To use tools to change a background image</li> </ul>	<ul style="list-style-type: none"> <li>• I can find examples of school blogs</li> <li>• I can explain some risks of blogging</li> </ul> <p>Making comments</p> <ul style="list-style-type: none"> <li>• I can access the school blog</li> <li>• I can find and open the posts</li> <li>• I can post a comment</li> <li>• I can follow the Golden Rules to make my comment useful and relevant</li> </ul>	<ul style="list-style-type: none"> <li>• I am beginning to identify patterns of repetition in my algorithm</li> <li>• I can run my program to test and debug it</li> </ul> <p>Programming with Harvester with Repetition</p> <ul style="list-style-type: none"> <li>• I can solve coding puzzles using repetition</li> <li>• I can run my program to test and debug it</li> </ul> <p>More coding challenges</p> <ul style="list-style-type: none"> <li>• I can solve coding challenges</li> <li>• I can test and debug my program</li> </ul> <p>Tinkering on Scratch</p> <ul style="list-style-type: none"> <li>• I can log into Scratch</li> <li>• I can open a project on Scratch</li> <li>• I can learn the basic features of scratch</li> <li>• I can tinker with an input to change the output</li> </ul> <p>Introduce sequences and writing a monologue</p> <ul style="list-style-type: none"> <li>• I can predict what will happen when I run through the algorithm</li> <li>• I can use the algorithm to help me</li> <li>• I can use the blocks of code to build my program</li> <li>• I can test my program by running the code</li> <li>• I can debug my program by testing and</li> </ul> <p>Modify a coded algorithm</p>
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			<p>Create your document (create a report/story/ recipe/poster linked to another curriculum area)</p> <ul style="list-style-type: none"> <li>• I can write text and use basic text formatting tools</li> <li>• I can insert images and use basic image formatting tools</li> <li>• I can use GSuite shortcuts to copy and paste</li> <li>• I can delete and use undo/redo when I make mistakes</li> </ul> <p>Create your document - continued</p> <p>(create a report/story/ recipe/poster linked to another curriculum area)</p> <ul style="list-style-type: none"> <li>• I can write text and use basic text formatting tools</li> <li>• I can insert images and use basic image formatting tools</li> <li>• I can use GSuite shortcuts to copy and paste</li> <li>• I can delete and use undo/redo when I make mistakes</li> </ul>			<ul style="list-style-type: none"> <li>• can identify some input devices</li> <li>• I can identify input blocks in my program</li> <li>• I can predict what each block of code means in the sequence</li> <li>• I can test my prediction by running the code</li> <li>• I can test my prediction by modifying it and then running the code</li> <li>• I can explain how I modified the code</li> </ul> <p>Plan and design monologue</p> <ul style="list-style-type: none"> <li>• I can recognise some output devices</li> <li>• I can identify output blocks in my program</li> <li>• I can plan my monologue scene</li> <li>• I can write my algorithm for a monologue scene</li> </ul> <p>Code a monologue animation</p> <ul style="list-style-type: none"> <li>• I can use my algorithm to plan my monologue scene</li> <li>• I can use use input and output blocks to code my program</li> <li>• I can test and debug my program</li> </ul>
Year 4	CONNECT Digital Literacy - Online Safety	COMMUNICATE IT- Digital Media - Create, Share, Respond	COMMUNICATE IT - Multimedia and Digital Writing	COLLECT IT- Data	COMMUNICATE IT - Communication & Collaboration	CODE Computer Science Coding

	<p>To describe how networks physically connect to other networks:</p> <ul style="list-style-type: none"> <li>• I can describe the internet as a network of networks</li> <li>• I can demonstrate how information is shared across the internet</li> <li>• I can discuss why a network needs protecting</li> </ul> <p>To recognise how networked devices make up the internet:</p> <ul style="list-style-type: none"> <li>• I can describe the different networked devices and how they connect</li> <li>• I can explain how the internet allows us to view the World Wide Web</li> <li>• I can recognise that the World Wide Web is the part of the internet that</li> </ul> <p>To outline how websites can be shared via the World Wide Web</p> <ul style="list-style-type: none"> <li>• I can explain the types of media that can be shared on the World Wide Web (WWW)</li> <li>• I can describe where websites are stored when uploaded to the WWW</li> </ul> <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:</p> <ul style="list-style-type: none"> <li>• I can create media which can be found on websites</li> <li>• I can recognise that I can add content to the WWW</li> </ul>	<p>To identify that sound can be digitally recorded:</p> <ul style="list-style-type: none"> <li>• I can identify digital devices that can record sound and play it back</li> <li>• I can identify the inputs and outputs required to play audio or record sound</li> <li>• I can recognise the range of sounds that can be recorded</li> </ul> <p>To use a digital device to record sound:</p> <ul style="list-style-type: none"> <li>• I can use a device to record audio and playback sound</li> <li>• I can suggest how to improve my recording</li> <li>• I can discuss what other people include when recording sound for a podcast</li> </ul> <p>Creating and storing digital recordings as a file.</p> <ul style="list-style-type: none"> <li>• I can plan and write the content for a podcast</li> <li>• I can discuss why it is useful to be able to save digital recordings</li> <li>• I can save a digital recording as a file</li> </ul> <p>Editing digital recordings</p> <ul style="list-style-type: none"> <li>• I can open a digital recording from a file</li> <li>• I can discuss ways in which audio recordings can be altered</li> <li>• I can edit sections of of an audio recording</li> </ul> <p>To show that different types of audio can be combined and played together:</p>	<p>Themes and Slide Layout + Word Art</p> <ul style="list-style-type: none"> <li>• I can change the background theme on Google Slides</li> <li>• I can choose an appropriate background theme to suit my work</li> <li>• I can create a new slides</li> <li>• I can choose different layouts for my slide</li> <li>• I can reflect why different layouts may be beneficial for my work</li> <li>• I can identify titles and text boxes on slides</li> <li>• I can insert word art to create a title</li> </ul> <p>To insert, edit and format images within Google Slides.</p> <ul style="list-style-type: none"> <li>• I can upload an image from my computer</li> <li>• I can upload an image from Google Drive</li> <li>• I can insert and image using a URL web link</li> <li>• I can insert an image using web search</li> <li>• I can insert a non-copyrighted image using the explore button</li> </ul> <ul style="list-style-type: none"> <li>• I can manipulate the shape and size of an image</li> <li>• I can crop an image</li> <li>• I can mask an image</li> </ul> <p>Animating images and creating slide transitions</p>	<p>To explain that data gathered over time can be used to answer questions</p> <ul style="list-style-type: none"> <li>• I can choose a data set to answer a given question</li> <li>• I can suggest questions that can be answered using a given data set</li> <li>• I can identify data that can be gathered over time</li> </ul> <p>To use a digital device to collect data automatically</p> <ul style="list-style-type: none"> <li>• I can explain that sensors are input devices</li> <li>• I can use data from a sensor to answer a given question</li> <li>• I can identify that data from sensors can be recorded</li> </ul> <p>To explain that a data logger collects 'data points' from sensors over time</p> <ul style="list-style-type: none"> <li>• I can identify a suitable place to collect data</li> <li>• I can identify the intervals used to collect data</li> <li>• I can talk about the data that I have captured</li> </ul> <p>To use data collected over a long duration to find information</p> <ul style="list-style-type: none"> <li>• I can import a data set</li> <li>• I can use a computer to view data in different ways</li> <li>• I can use a computer program to sort data</li> </ul> <p>To identify the data needed to answer questions</p>	<p>To review an existing website and consider its structure</p> <ul style="list-style-type: none"> <li>• I can explore a website</li> <li>• I can discuss the different types of media used on websites</li> <li>• I can recognise the key features of a website</li> <li>• I know that websites are written in HTML</li> </ul> <p>To plan the features of a web page</p> <ul style="list-style-type: none"> <li>• I can recognise the common features of a web page</li> <li>• I can recognise the site name, logo, cover, banner and header on Google Sites</li> <li>• I can design my own Google Site (unplugged)</li> <li>• I can suggest media to include on my page</li> </ul> <p>Who does this belong to?</p> <ul style="list-style-type: none"> <li>• To know that if someone owns a thing, it belongs to them.</li> <li>• To understand that we need permission to use someone else's things.</li> <li>• To say how other people will feel if we use their belongings.</li> </ul> <p>Creating my own Website on Google Sites</p> <ul style="list-style-type: none"> <li>• I can add content to my own web page</li> </ul>	<p>Knock Knock Parsons</p> <ul style="list-style-type: none"> <li>• I know the difference between code and algorithm</li> <li>• I can use given blocks to code my program</li> <li>• I can create alternating speech sequences</li> <li>• I can test and debug my program</li> </ul> <p>Knock Knock Joke</p> <ul style="list-style-type: none"> <li>• Can plan an algorithm for a dialogue</li> <li>• I can use my algorithm to code</li> <li>• I can test and debug my program</li> </ul> <p>Story dialogue</p> <ul style="list-style-type: none"> <li>• I can plan an algorithm dialogue between 2 characters</li> <li>• I can plan stage changes and sound effects</li> <li>• I can begin to code my algorithm</li> </ul> <p>Finish with stage and sound</p> <ul style="list-style-type: none"> <li>• I can plan and create an animated conversation between 2 characters</li> <li>• I can add stage and sound effects</li> <li>• I can test and debug my program</li> </ul>
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	<ul style="list-style-type: none"> <li>I can explain that new content can be created online</li> </ul>	<ul style="list-style-type: none"> <li>I can discuss sounds that other people combine</li> <li>I can choose suitable sounds to include in a podcast</li> <li>I can use editing tools to arrange sections of audio</li> </ul> <p>Evaluating Podcasts</p> <ul style="list-style-type: none"> <li>I can explain that digital recordings need to be exported to share them</li> <li>I can discuss the features of a digital recording I like</li> <li>I can suggest improvements to a digital recording</li> </ul>	<ul style="list-style-type: none"> <li>I can create a transition between slides</li> <li>I can choose the most suitable transition for my presentation</li> <li>I can animate and change animations of objects within my slides</li> <li>I can change the command (input) for an animation within my slides</li> <li>I can change the speed of my animations and transitions</li> <li>I can remove an animation or transition</li> <li>I can produce a fit for purpose including animations and transitions.</li> </ul> <p>Exploring ways of presenting Google slides</p> <ul style="list-style-type: none"> <li>I can present my work to my peers</li> <li>I can explore the different presenting features in Google Slides</li> <li>I can use Presenter Notes to support my presentation</li> <li>I know what presenting from the beginning means</li> <li>I know what makes a good presentation</li> </ul>	<ul style="list-style-type: none"> <li>I can propose a question that can be answered using logged data</li> <li>I can plan how to collect data using a data logger</li> <li>I can use a data logger to collect data</li> </ul> <p>To use collected data to answer questions</p> <ul style="list-style-type: none"> <li>I can interpret data that has been collected using a data logger</li> <li>I can draw conclusions from the data that I have collected</li> <li>I can explain the benefits of using a data logger</li> </ul>	<ul style="list-style-type: none"> <li>I can preview what my web page looks like</li> <li>I can evaluate what my web page looks like on different devices and suggest/make edits.</li> </ul> <p>To outline the need for a navigation path</p> <ul style="list-style-type: none"> <li>I can explain what a navigation path is</li> <li>I can describe why navigation paths are useful</li> <li>I can make multiple web pages and link them using hyperlinks</li> </ul> <p>To recognise the implications of linking to content owned by other people</p> <ul style="list-style-type: none"> <li>I can explain the implication of linking to content owned by others</li> <li>I can create hyperlinks to link to other people's work</li> <li>I can evaluate the user experience of a website</li> </ul>	
Year 5	CONNECT Digital Literacy - Online Safety	COMMUNICATE IT- Digital Media - Create, Share, Respond	COMMUNICATE IT - Multimedia and Digital Writing	COLLECT IT- Data	COMMUNICATE IT - Communication & Collaboration	CODE Computer Science Coding
	How are our lives interlinked with technology?	What is video? How can I create video effectively?	To recognise and use drawing tools within Google Drawings	Creating a paper-based database	Vector Drawing: To identify that drawing tools can be used to	Everyday variables  Predict

<ul style="list-style-type: none"> <li>To understand the historical place in terms of time of the advent of computers on mainstream society.</li> <li>To understand the implications of different technological advances on society of the time and see their relevance today.</li> <li>To record a typical day in diary form with reference to impact of technology on activities undertaken.</li> </ul> <p>How to build a computer (To understand the component parts of a computer and how they work )</p> <ul style="list-style-type: none"> <li>To be able to identify the different parts of a computer and their functions.</li> <li>To be able to put a computer together from component parts.</li> <li>To understand and decide what type of computer is required for a specific function</li> </ul> <p>How do computers play a role in code breaking? (To understand the drive behind the development of computing during the war)</p> <ul style="list-style-type: none"> <li>To be able to understand the impact of technological advances on the world at the time</li> <li>To be able to use simple codes and ciphers</li> <li>To use the internet for research</li> </ul> <p>Smaller &amp; Faster</p>	<p>I can identify and name digital devices that can record video and sound</p> <ul style="list-style-type: none"> <li>I can choose the most suitable digital device for recording my project</li> <li>I can locate and identify the working features of a digital device that can record video</li> </ul> <p>I can select a suitable device and software to capture my video</p> <ul style="list-style-type: none"> <li>I can demonstrate suitable methods of using a digital device to capture my video</li> <li>I can demonstrate the safe use and handling of devices</li> </ul> <p>Additional Skills:</p> <ul style="list-style-type: none"> <li>I can list some of the features of an effective video</li> <li>I can record a video that demonstrates some of the features of an effective video</li> <li>I can explain why lighting and angle are important in creating an effective video</li> </ul> <p>Planning a Video I can explain that a video can include both visual and audio media</p> <ul style="list-style-type: none"> <li>I can explain the benefits of adding audio to a video</li> <li>I can plan a video project using a storyboard</li> </ul> <p><b>Soft Skills:</b></p>	<p>I can recognise that vector drawings are made using shapes</p> <ul style="list-style-type: none"> <li>I can identify the main drawing tools</li> <li>I can discuss how a vector drawing is different from paper-based drawings</li> </ul> <p>Creating a Vector Drawing I can identify the shapes used to make a vector drawing</p> <ul style="list-style-type: none"> <li>I can explain that each element added to a vector drawing is an object</li> <li>I can move, resize, and rotate objects I have duplicated</li> </ul> <p>Additional Skills (extension):</p> <ul style="list-style-type: none"> <li>I can use the zoom tool to help me add detail to my drawings</li> <li>I can explain how alignment grids and resize handles can be used to improve consistency</li> <li>I can modify objects to create different effects</li> </ul> <p>Using layers and objects</p> <ul style="list-style-type: none"> <li>I can identify that each added object creates a new layer in the drawing</li> <li>I can identify which objects are in the front layer or in the back layer of a drawing</li> <li>I can change the order of layers in a vector drawing</li> </ul>	<ul style="list-style-type: none"> <li>I can create multiple questions about the same field</li> <li>I can explain how information can be recorded</li> </ul> <p>I can order, sort, and group my data cards</p> <p>Computer databases I can navigate a flat-file database to compare different views of information</p> <ul style="list-style-type: none"> <li>I can explain what a 'field' and a 'record' is in a database</li> <li>I can choose which field to sort data by to answer a given question</li> </ul> <p>Using a database</p> <ul style="list-style-type: none"> <li>I can explain how information can be grouped</li> <li>I can group information to answer questions</li> <li>I can combine grouping and sorting to answer more specific questions</li> </ul> <p>Using search tools</p> <ul style="list-style-type: none"> <li>I can choose which field and value are required to answer a given question</li> <li>I can outline how 'AND' and 'OR' can be used to refine data selection</li> <li>I can choose multiple criteria to answer a given question</li> </ul>	<p>produce different outcomes</p> <p>To create a vector drawing by combining shapes</p> <p>To use tools to achieve a desired effect</p> <p>To recognise that vector drawings consist of layers</p> <p>To group objects to make them easier to work with</p> <p>To evaluate my vector drawing</p> <p>3D Modelling: To use a computer to create and manipulate three-dimensional (3D) digital objects</p> <p>To compare working digitally with 2D and 3D graphics</p> <p>To construct a digital 3D model of a physical object</p> <p>To identify that physical objects can be broken down into a collection of 3D shapes</p> <p>To design a digital model by combining 3D objects</p> <p>To develop and improve a digital 3D model</p> <p>To use a form to record information</p> <p>To compare paper and computer-based databases</p> <p>To apply my knowledge of a database to ask and answer real-world questions</p> <p>To explain that tools can be used to select data to answer questions</p> <p>To apply my knowledge of a database to ask and</p>	<p>Run</p> <ul style="list-style-type: none"> <li>I can identify variables in everyday situations</li> <li>I can write and role play algorithms which use everyday variables</li> <li>I can read sections of code</li> <li>I can predict what the code will do</li> <li>I can test my prediction by running the code</li> </ul> <p>Modify and Make challenges</p> <ul style="list-style-type: none"> <li>I can make predictions about the code</li> <li>I can test my predictions by running the code</li> <li>I can make changes to the code to achieve specific results</li> </ul> <p>Plan</p> <ul style="list-style-type: none"> <li>I can think of an idea for a game</li> <li>I can draw a plan and write algorithms for sections of the code</li> </ul> <p>Code my game</p> <ul style="list-style-type: none"> <li>I can use my plan and algorithm to code my game</li> <li>I can test and debug my program as I code</li> </ul> <p>Finish coding – Evaluate</p> <ul style="list-style-type: none"> <li>I can use my plan and algorithm to code my game</li> </ul>
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	<ul style="list-style-type: none"> <li>• To be able to understand what the advent of the transistor meant for computing</li> <li>• To understand the significance of the ARM processor in terms of mobility</li> <li>• To understand the units of measurement in processor speed, memory size and storage How has the internet revolutionised the lives we live?</li> <li>• To understand some of the issues facing society through the increased use of social networking.</li> <li>• To be aware of the dangers faced when using social networking and how to minimise them</li> </ul>	<ul style="list-style-type: none"> <li>• I can select a suitable device and software to capture my video</li> <li>• I can demonstrate suitable methods of using a digital device to capture my video</li> <li>• I can demonstrate the safe use and handling of devices</li> </ul> <p>Using a device to capture media I can list some of the features of an effective video</p> <ul style="list-style-type: none"> <li>• I can record a video that demonstrates some of the features of an effective video</li> <li>• I can explain why lighting and angle are important in creating an effective video</li> </ul> <p>Importing and editing video</p> <p>-Video Editing using software</p> <ul style="list-style-type: none"> <li>• I can store, retrieve, and export my recording to a computer</li> <li>• I can explain how to improve a video by reshooting and editing</li> <li>• I can select the correct tools to make edits to my video</li> <li>• I can manipulate video using the split and trim tools</li> <li>• I can use an audio voiceover, theme music or sound effects in my project</li> <li>• I can use effects and transitions in my project</li> </ul>	<p>Application of skills + showcasing of work</p> <ul style="list-style-type: none"> <li>• I create alternatives to vector drawings</li> <li>• I can suggest improvements to a vector drawing</li> <li>• I can apply what I have learned about vector drawings</li> <li>• I can present my work to my peers</li> </ul>	<p>Comparing data visually</p> <ul style="list-style-type: none"> <li>• I can select an appropriate chart to visually compare data</li> <li>• I can refine a chart by selecting a particular filter</li> <li>• I can explain the benefits of using a computer to create graphs</li> </ul> <p>Databases in real life</p> <ul style="list-style-type: none"> <li>• I can ask questions that will need more than one field to answer</li> <li>• I can refine a search in a real-world context</li> <li>• I can present my findings to a group</li> </ul>	<p>answer real-world questions To apply my knowledge of a database to ask and answer real-world questions To identify questions which can be answered using data To explain that objects can be described using data To explain that formula can be used to produce calculated data To apply formulas to data, including duplicating To create a spreadsheet to plan an event To choose suitable ways to present data To identify 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 To recognise that vector drawings consist of layers To group objects to make them easier to work with To evaluate my vector drawing</p> <p>Film Editing: To recognise video as moving pictures, which can include audio To identify digital devices that can record video To capture video using a digital device To recognise the features of an effective video</p>	<ul style="list-style-type: none"> <li>• I can test and debug my program as I code</li> <li>• I can evaluate a program according to specific criteria</li> </ul>
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		<ul style="list-style-type: none"> <li>• I can use text overlay in my video</li> </ul> <p>Video Presentation &amp; Evaluation</p> <p>I can make edits to my video and improve the final outcome</p> <ul style="list-style-type: none"> <li>• I can recognise that my choices when making a video will impact on the quality of the final outcome</li> <li>• I can recognise a .mp4 or .mov file</li> <li>• I know video can be exported in different formats</li> <li>• I know videos can be viewed in different resolution</li> <li>• I can evaluate my video and share my opinions</li> </ul>			<p>To identify that video can be improved through reshooting and editing</p> <p>To consider the impact of the choices made when making and sharing a video</p> <p>To identify that sound can be digitally recorded</p> <p>To use a digital device to record sound</p> <p>To explain that a digital recording is stored as a file</p> <p>To explain that audio can be changed through editing</p> <p>To show that different types of audio can be combined and played together</p> <p>To evaluate editing choices made</p> <p>To recognise how text and images convey information</p> <p>To recognise that text and layout can be edited</p> <p>To choose appropriate page settings</p> <p>To add content to a desktop publishing publication</p> <p>To consider how different layouts can suit different purposes</p> <p>To consider the benefits of desktop publishing</p> <p>To review an existing website and consider its structure</p> <p>To plan the features of a web page</p> <p>To consider the ownership and use of images (copyright)</p>	
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					<p>To recognise the need to preview pages</p> <p>To outline the need for a navigation path</p> <p>To recognise the implications of linking to content owned by other people</p>	
Year 6	CONNECT Digital Literacy - Online Safety	COMMUNICATE IT- Digital Media - Create, Share, Respond	COMMUNICATE IT - Multimedia and Digital Writing	COLLECT IT- Data	COMMUNICATE IT - Communication & Collaboration	CODE Computer Science Coding
	<p>Searching the web</p> <p>To identify how to use a search engine</p> <ul style="list-style-type: none"> <li>• I can complete a web search to find specific information</li> <li>• I can refine my search</li> <li>• I can compare results from different search engines</li> </ul> <p>Selecting search results</p> <p>To describe how search engines select results</p> <ul style="list-style-type: none"> <li>• I can explain why we need tools to find things online</li> <li>• I can recognise the role of web crawlers in creating an index</li> <li>• I can relate a search term to the search engine's index</li> </ul> <p>How search results are ranked</p>	<p>What is 3D modelling?</p> <p>To use a computer to create and manipulate three-dimensional (3D) digital objects</p> <ul style="list-style-type: none"> <li>• I can discuss the similarities and differences between 2D and 3D shapes</li> <li>• I can explain why we might represent 3D objects on a computer</li> <li>• I can select, move, and delete a digital 3D shape</li> </ul> <p>Making changes</p> <p>To compare working digitally with 2D and 3D graphics</p> <ul style="list-style-type: none"> <li>• I can identify how graphical objects can be modified</li> <li>• I can resize a 3D object</li> <li>• I can change the colour of a 3D object</li> </ul>		<p>What is a spreadsheet?</p> <p>To identify questions which can be answered using data</p> <ul style="list-style-type: none"> <li>• I can explain the relevance of data headings</li> <li>• I can answer questions from an existing data set</li> <li>• I can ask simple relevant questions which can be answered using data</li> </ul> <p>Modifying spreadsheets</p> <p>To explain that objects can be described using data</p> <ul style="list-style-type: none"> <li>• I can explain what an item of data is</li> <li>• I can apply an appropriate number format to a cell</li> <li>• I can build a data set in a spreadsheet application</li> </ul> <p>What's the formula?</p> <p>To explain that formulas can be used to produce calculated data</p>	<p>Plan &amp; Design</p> <p>Vector Drawing:</p> <p>To identify that drawing tools can be used to produce different outcomes</p> <p>To create a vector drawing by combining shapes</p> <p>To use tools to achieve a desired effect</p> <p>To recognise that vector drawings consist of layers</p> <p>To group objects to make them easier to work with</p> <p>To evaluate my vector drawing</p> <p>3D Modelling:</p> <p>To use a computer to create and manipulate three-dimensional (3D) digital objects</p> <p>To compare working digitally with 2D and 3D graphics</p> <p>To construct a digital 3D model of a physical object</p> <p>To identify that physical objects can be broken down into a collection of 3D shapes</p>	<p>Everyday variables</p> <p>Predict</p> <p>Run</p> <ul style="list-style-type: none"> <li>• I can identify variables in everyday situations</li> <li>• I can write and role play algorithms which use everyday variables</li> <li>• I can read sections of code</li> <li>• I can predict what the code will do</li> <li>• I can test my prediction by running the code</li> </ul> <p>Modify Challenges</p> <ul style="list-style-type: none"> <li>• I can make predictions about the code</li> <li>• I can test my predictions by running the code</li> <li>• I can make changes to the code to achieve specific results</li> </ul> <p>Make Challenges</p> <ul style="list-style-type: none"> <li>• I can think of an idea for a game</li> </ul>

	<p>To explain how search results are ranked</p> <ul style="list-style-type: none"> <li>• I can explain that search results are ordered</li> <li>• I can explain that a search engine follows rules to rank relevant pages</li> <li>• I can suggest some of the criteria that a search engine checks to decide on the order of results</li> </ul> <p>How are searches influenced?</p> <p>To recognise why the order of results is important, and to whom</p> <ul style="list-style-type: none"> <li>• I can describe some of the ways that search results can be influenced</li> <li>• I can recognise some of the limitations of search engines</li> <li>• I can explain how search engines make money</li> </ul> <p>How we communicate</p> <p>To recognise how we communicate using technology</p> <ul style="list-style-type: none"> <li>• I can explain the different ways in which people communicate</li> <li>• I can identify that there are a variety of ways of communicating over the internet</li> </ul>	<p>Rotation and position</p> <p>To construct a digital 3D model of a physical object</p> <ul style="list-style-type: none"> <li>• I can rotate a 3D object</li> <li>• I can position 3D objects in relation to each other</li> <li>• I can select and duplicate multiple 3D objects</li> </ul> <p>Making holes</p> <p>To identify that physical objects can be broken down into a collection of 3D shapes</p> <ul style="list-style-type: none"> <li>• I can identify the 3D shapes needed to create a model of a real-world object</li> <li>• I can create digital 3D objects of an appropriate size</li> <li>• I can group a digital 3D shape and a placeholder to create a hole in an object</li> </ul> <p>Planning my own 3D model</p> <p>To design a digital model by combining 3D objects</p> <ul style="list-style-type: none"> <li>• I can plan my 3D model</li> <li>• I can choose which 3D objects I need to construct my model</li> <li>• I can modify multiple 3D objects</li> </ul>		<ul style="list-style-type: none"> <li>• I can explain the relevance of a cell's data type</li> <li>• I can construct a formula in a spreadsheet</li> <li>• I can identify that changing inputs changes outputs</li> </ul> <p>Calculate and duplicate</p> <p>To apply formulas to data, including duplicating</p> <ul style="list-style-type: none"> <li>• I can recognise that data can be calculated using different operations</li> <li>• I can create a formula which includes a range of cells</li> <li>• I can apply a formula to multiple cells by duplicating it</li> </ul> <p>Event planning</p> <p>To create a spreadsheet to plan an event</p> <ul style="list-style-type: none"> <li>• I can use a spreadsheet to answer questions</li> <li>• I can explain why data should be organised</li> <li>• I can apply a formula to calculate the data I need to answer questions</li> </ul> <p>Presenting data</p> <p>To choose suitable ways to present data</p> <ul style="list-style-type: none"> <li>• I can produce a graph</li> <li>• I can use a graph to show the answer to questions</li> </ul>	<p>To design a digital model by combining 3D objects</p> <p>To develop and improve a digital 3D model</p> <p>Costing</p> <p>To use a form to record information</p> <p>To compare paper and computer-based databases</p> <p>To apply my knowledge of a database to ask and answer real-world questions</p> <p>To explain that tools can be used to select data to answer questions</p> <p>To apply my knowledge of a database to ask and answer real-world questions</p> <p>To apply my knowledge of a database to ask and answer real-world questions</p> <p>To identify questions which can be answered using data</p> <p>To explain that objects can be described using data</p> <p>To explain that formula can be used to produce calculated data</p> <p>To apply formulas to data, including duplicating</p> <p>To create a spreadsheet to plan an event</p> <p>To choose suitable ways to present data</p> <p>Promotion – Vector</p> <p>To identify that drawing tools can be used to produce different outcomes</p> <p>Drawing/Logo design</p>	<ul style="list-style-type: none"> <li>• I can draw a plan and write algorithms for sections of the code</li> <li>• I can use my plan and algorithm to code my game</li> <li>• I can test and debug my program as I code</li> <li>• I can code my game</li> <li>• I can use my plan and algorithm to code my game</li> <li>• I can test and debug my program as I code</li> </ul>
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	<ul style="list-style-type: none"> <li>• I can choose methods of communication to suit particular purposes</li> </ul> <p>Communicating responsibly</p> <p>To evaluate different methods of online communication</p> <ul style="list-style-type: none"> <li>• I can compare different methods of communicating on the internet</li> <li>• I can decide when I should and should not share</li> <li>• I can explain that communication on the internet may not be private</li> </ul>	<p>Making my own 3D model</p> <p>To develop and improve a digital 3D model</p> <ul style="list-style-type: none"> <li>• I can decide how my model can be improved</li> <li>• I can modify my model to improve it</li> <li>• I can evaluate my model against a given criterion</li> </ul>		<ul style="list-style-type: none"> <li>• I can suggest when to use a table or graph</li> </ul>	<p>To create a vector drawing by combining shapes</p> <p>To use tools to achieve a desired effect</p> <p>To recognise that vector drawings consist of layers</p> <p>To group objects to make them easier to work with</p> <p>To evaluate my vector drawing</p> <p>Promotion - Film Making - Creating an advert</p> <p>Film Editing:</p> <p>To recognise video as moving pictures, which can include audio</p> <p>To identify digital devices that can record video</p> <p>To capture video using a digital device</p> <p>To recognise the features of an effective video</p> <p>To identify that video can be improved through reshooting and editing</p> <p>To consider the impact of the choices made when making and sharing a video</p> <p>Promotion - Audio Editing - Creating a Jingle</p> <p>To identify that sound can be digitally recorded</p> <p>To use a digital device to record sound</p> <p>To explain that a digital recording is stored as a file</p> <p>To explain that audio can be changed through editing</p> <p>To show that different types of audio can be combined and played together</p>	
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					<p>To evaluate editing choices made Presentation - Google Slides &amp; Powerpoint To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a desktop publishing publication To consider how different layouts can suit different purposes To consider the benefits of desktop publishing</p>	



Knowledge, Skills and Understanding breakdown for Computing

**Year 1**

Algorithms and Programs	Data Retrieving and Organising	Communicating
<ul style="list-style-type: none"> <li>● Can they create a simple series of instructions – left and right?</li> <li>● Can they record their routes?</li> <li>● Do they understand forwards, backwards, up and down?</li> <li>● Can they put two instructions together to control a programmable toy?</li> <li>● Can they begin to plan and test a Bee-bot journey?</li> </ul>	<ul style="list-style-type: none"> <li>● Can they capture images with a camera?</li> <li>● Can they print out a photograph from a camera with help?</li> <li>● Can they record a sound and play it back?</li> <li>● Can they enter information into a template to make a graph?</li> <li>● Can they talk about the results shown on a graph?</li> </ul>	<ul style="list-style-type: none"> <li>● Do they recognise what an email address looks like?</li> <li>● Have they joined in sending a class email?</li> <li>● Can they use the @ key and type an email address?</li> <li>● Can they word process ideas using a keyboard?</li> <li>● Can they use the spacebar, back space, enter, shift and arrow keys?</li> <li>● Can they print out a page from the internet?</li> </ul>
<b>Challenging</b>		
<ul style="list-style-type: none"> <li>● Can they record pupils' voices as voice over?</li> <li>● Can they use a teacher prepared photo story to create a slideshow of photos?</li> </ul>		

Knowledge, Skills and Understanding breakdown for Computing

**Year 2**

Algorithms and Programs	Data Retrieving and Organising	Communicating
<ul style="list-style-type: none"> <li>● Can they predict the outcomes of a set of instructions?</li> <li>● Can they use right angle turns?</li> <li>● Do they use the repeat commands?</li> <li>● Can they test and amend a set of instructions?</li> <li>● Can they write a simple program and test it?</li> <li>● Can they predict what the outcome of a simple program will be?</li> </ul>	<ul style="list-style-type: none"> <li>● Can they find information on a website?</li> <li>● Can they click links in a website?</li> <li>● Can they print a web page to use as a resource?</li> <li>● Can they experiment with text, pictures and animation to make a simple slide show?</li> <li>● Can they use the shape tools to draw?</li> </ul>	<ul style="list-style-type: none"> <li>● Can they send and reply to messages sent by a safe email partner (within school)?</li> <li>● Can they word process a piece of text?</li> <li>● Can they insert / delete a word using the mouse and arrow keys?</li> <li>● Can they highlight text to change its format (B, <u>u</u>, I)?</li> </ul>
<b>Challenging</b>		
<ul style="list-style-type: none"> <li>● Can they create a presentation in a small group and record the narration?</li> </ul>		

- Can they record sounds into software and playback?
- Can they insert pre-recorded sounds into a presentation?
- Can they capture still and moving images?

**Knowledge, Skills and Understanding breakdown for Computing  
Year 3**

Algorithms and Programs	Data Retrieving and Organising	Communicating
<ul style="list-style-type: none"> <li>● Can they experiment with variables to control models?</li> <li>● Can they use 90 degree and 45 degree turns?</li> <li>● Can they give an on-screen robot directional instructions?</li> <li>● Can they draw a square, rectangle and other regular shapes on screen, using commands?</li> <li>● Can they write more complex programs?</li> </ul>	<ul style="list-style-type: none"> <li>● Can they review images on a camera and delete unwanted images?</li> <li>● Have they experienced downloading images from a camera into files on the computer?</li> <li>● Can they use photo editing software to crop photos and add effects?</li> <li>● Can they manipulate sound when using simple recording story boarding?</li> </ul>	<ul style="list-style-type: none"> <li>● Can they use the email address book?</li> <li>● Can they open and send an attachment?</li> </ul>
Using the internet	Databases	Presentation
<ul style="list-style-type: none"> <li>● Can find relevant information by browsing a menu?</li> <li>● Can they search for an image and copy and paste it into a document?</li> <li>● Can they use 'save picture as' to save an image to the computer?</li> <li>● Can they copy and paste text into a document?</li> <li>● Do they begin to use note-making skills to decide what text to copy?</li> </ul>	<ul style="list-style-type: none"> <li>● Can they input data into a prepared database?</li> <li>● Can they sort and search a database to answer simple questions?</li> <li>● Can they use a branching database?</li> </ul>	<ul style="list-style-type: none"> <li>● Can they create a presentation that moves from slide to slide and is aimed at a specific audience?</li> <li>● Can they combine text, images and sounds and show awareness of audience?</li> <li>● Do they know how to manipulate text, underline text, centre text, change font and size and save text to a folder?</li> </ul>
Challenging		
<ul style="list-style-type: none"> <li>● Can they search by keyword using a child friendly search engine?</li> <li>● Can they bookmark a page into your favourites?</li> <li>● Can they contribute to a class blog?</li> <li>● Can they use repeat command in logo to create a pattern?</li> </ul>		

**Knowledge, Skills and Understanding breakdown for Computing**

**Year 4**

Algorithms and Programs	Data Retrieving and Organising	Communicating
<ul style="list-style-type: none"> <li>• Can they use repeat instructions to draw regular shapes on screen, using commands?</li> <li>• Can they experiment with variables to control models?</li> <li>• Can they make turns specifying degrees?</li> <li>• Can they give an on-screen robot specific directional instructions that takes them from x to y?</li> <li>• Can they make accurate predictions about the outcome of a program they have written?</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Can they capture images using webcams, screen capture, scanning, visualiser and internet?</li> <li>• Can they choose images and download into a file?</li> <li>• Can they download images from the camera into files on the computer?</li> <li>• Can they copy graphics from a range of sources and paste into a desktop publishing program?</li> </ul>	<ul style="list-style-type: none"> <li>• Do they appreciate the benefits of ICT to send messages and to communicate?</li> <li>• Can they use the automatic spell check to edit spellings?</li> </ul>
Using the Internet	Databases	Presentation
<ul style="list-style-type: none"> <li>• Can they use a search engine to find a specific website?</li> <li>• Can they use note-taking skills to decide which text to copy and paste into a document?</li> <li>• Can they use tabbed browsing to open two or more web pages at the same time?</li> <li>• Can they open a link to a new window?</li> <li>• Can they open a document (pdf) and view it?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they input data into a prepared database?</li> <li>• Can they sort and search a database to answer simple questions?</li> <li>• Do they recognise what a spread sheet is?</li> <li>• Can they use the terms cells, rows and columns?</li> <li>• Can they enter data, highlight it and make bar charts?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they create a lengthy presentation that moves from slide to slide and is aimed at a specific audience?</li> <li>• Can they insert sound recordings into a multimedia presentation?</li> <li>• Do they know how to manipulate text, underline text, centre text, change font and size and save text to a folder?</li> </ul>
<b>Year 4 (Challenging)</b>		
<ul style="list-style-type: none"> <li>• Can they use photo editing software to crop photographs and add effects?</li> <li>• Can they copy and paste the graph/ bar chart and use it in a WP document?</li> <li>• Can they use animation in their presentation?</li> </ul>		

**Knowledge, Skills and Understanding breakdown for Computing**

**Year 5**

Algorithms and Programs	Data Retrieving and Organising	Communicating
<ul style="list-style-type: none"> <li>• Can they combine sequences of instructions and procedures to turn devices on or off?</li> <li>• Do they understand input and output?</li> <li>• Can they use an ICT program to control an external device that is electrical and/or mechanical?</li> <li>• Can they use ICT to measure sound or light or temperature using sensors?</li> <li>• Can they explore 'What is' questions by playing adventure or quest games?</li> <li>• Can they write programs that have sequences and repetitions?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they listen to streaming audio such as online radio?</li> <li>• Can they download and listen to podcasts?</li> <li>• Can they produce and upload a podcast?</li> <li>• Can they manipulate sounds using Audacity?</li> <li>• Can they select music from open sources and incorporate it into multimedia presentations?</li> <li>• Can they work on simple film editing?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they use instant messaging to communicate with class members?</li> <li>• Can they conduct a video chat with someone elsewhere in the school or in another school?</li> <li>• Can they use the word count tool to check the length of a document?</li> <li>• Can they use bullets and numbering tools?</li> </ul>
Using the Internet	Databases	Presentation
<ul style="list-style-type: none"> <li>• Can they use a search engine using keyword searches?</li> <li>• Can they compare the results of different searches?</li> <li>• Can they decide which sections are appropriate to copy and paste from at least two web pages?</li> <li>• Can they save stored information following simple lines of enquiry?</li> <li>• Can they download a document and save it to the computer?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they create a formula in a spreadsheet and then check for accuracy and plausibility?</li> <li>• Can they search databases for information using symbols such as = &gt; or &lt;?</li> <li>• Can they create databases planning the fields, rows and columns?</li> <li>• Can they create graphs and tables to be copied and pasted into other documents?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they use a range of presentation application?</li> <li>• Do they consider audience when editing a simple film?</li> <li>• Do they know how to prepare and then present a simple film?</li> <li>• Can they use ICT to record sounds and capture both still and video images?</li> <li>• Can they make a home page for a website that contains links to other pages?</li> <li>• Can they capture sounds, images and video?</li> </ul>
Year 5 (Challenging)		
<ul style="list-style-type: none"> <li>• Can they make a multimedia presentation that contains: sound; animation; video and buttons to navigate?</li> <li>• Can they save an image document as a gif or I peg. file format using the 'save as' command?</li> <li>• Can they make an information poster using graphics skills to good effect?</li> </ul>		

**Knowledge, Skills and Understanding breakdown for Computing**

**Year 6**

Algorithms and Programs	Data Retrieving and Organising	Communicating
<ul style="list-style-type: none"> <li>• Can they explain how an algorithm works?</li> <li>• Can they detect errors in a program and correct them?</li> <li>• Can they use an ICT program to control a number of events for an external device?</li> <li>• Can they use ICT to measure sound, light or temperature using sensors and interpret the data?</li> <li>• Can they explore 'what if' questions by planning different scenarios for controlled devices?</li> <li>• Can they use input from sensors to trigger events?</li> <li>• Can they check and refine a series of instructions?</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Can they explore the menu options and experiment with images (colour effects, Options, snap to grid, grid settings etc.)?</li> <li>• Can they add special effects to alter the appearance of a graphic?</li> <li>• Can they 'save as' gif or I peg. Wherever possible to make the file size smaller (for emailing or downloading)?</li> <li>• Can they make an information poster using their graphics skills to good effect?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they confidently choose the correct page set up option when creating a document?</li> <li>• Can they confidently use text formatting tools, including heading and body text?</li> <li>• Can they use the 'hanging indent' tool to help format work where appropriate (e.g. a play script)?</li> </ul>
Using the Internet	Databases	Presentation
<ul style="list-style-type: none"> <li>• Can they contribute to discussions online?</li> <li>• Can they use a search engine using keyword searches?</li> <li>• Can they use complex searches using such as '+', 'OR', 'Find the phrase in inverted commas'?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they collect live data using data logging equipment?</li> <li>• Can they identify data error, pattern and sequences?</li> <li>• Can they use the formulae bar to explore mathematical scenarios?</li> <li>• Can they create their own database and present information from it?</li> </ul>	<ul style="list-style-type: none"> <li>• Can they present a film for a specific audience and then adapt some film for a different audience?</li> <li>• Can they create a sophisticated multimedia presentation?</li> </ul>
<b>Year 6 (Challenging)</b>		
<ul style="list-style-type: none"> <li>• Can they incorporate graphics where appropriate, using the most effective text wrapping formats?</li> <li>• Can they conduct a video chat with more than one person at a time?</li> <li>• Can they compare the information provided on two tabbed websites looking for bias and perspective?</li> </ul>		