



LIFTON COMMUNITY Academy: COMPUTING CURRICULUM

Our curriculum is the beating heart of our school and is rooted in John 10:10.

“I came that they might have life and live it to the full”

Within our Christian vision ‘*together we grow, together we flourish*’ our children will develop a love of learning and be totally immersed in different worlds, cultures and times preparing them for the next stage of their education.

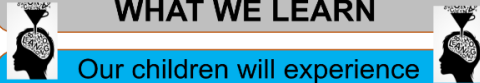
Developing learners’ moral compass
WHO WE ARE



Our children will develop a deep sense of self and others to contribute positively within the diverse community and world in which they live.

Developing learners’ learning

WHAT WE LEARN



Our children will experience a knowledge-rich curriculum, underpinned by oracy, language and reading.

Developing learning behaviours

HOW WE ACT WHEN WE LEARN

Our children will develop their learning behaviours and attributes so that they can embrace all opportunities and think critically.

Developing learners’ character

WHO WE ARE WHEN WE LEARN

Our children’s uniqueness will be nurtured so that they develop self-discipline and integrity to make good choices.

Computing

As users and programmers of communication and information technology, our children will develop their computational thinking, logical reasoning and digital literacy. They will use a variety of computer software to express themselves, to develop their ideas, to solve challenges, to design coding programs and systems and to create content.

Our emphasis on online safety for all pupils will equip our children with the knowledge and skills to keep themselves and others safe online and to use information technology in an informed and responsible way. Through our curriculum, our children will be enabled to thrive and participate actively in a continually evolving digital world.

Overview of substantive knowledge content

Year A: Lifton	EYFS	Year 1/2	Year 3/4	Year 5/6
Autumn 1	Recognising technology	Computing systems and networks – Technology around us	Computing systems and networks – Connecting computers	Computing systems and networks - Systems and searching
Autumn 2	Understanding the uses of a computer	Computing systems and networks – IT around us	Computing systems and networks – The Internet	Computing systems and networks - Communication and collaboration
Spring 1	Giving Commands	Creating media – Digital painting	Creating media - Stop-frame animation	Creating media - Video production
Spring 2	Make choices about buttons	Creating media – Digital photography	Creating media - Audio production	Creating media – Web page creation
Summer 1	Inputting commands	Creating media – Digital writing	Creating media – Desktop publishing	Creating media – Introduction to vector graphics
Summer 2	Safely turning devices on and off.	Creating media - Digital music	Creating media – Photo editing	Creating media – 3D Modelling
Year B: Lifton	EYFS	Year 1/2	Year 3/4	Year 5/6
Autumn 1	Recognising technology	Programming A – Moving a robot	Programming A - Sequencing sounds	Programming A – Selection in physical computing
Autumn 2	Programming A – Moving a robot	Programming A - Sequencing sounds	Programming A – Selection in physical computing	Programming A – Variables in Games
Spring 1	Giving Commands	Data and information – Grouping data	Data and information – Branching databases	Data and information – Flat-file databases
Spring 2	Make choices about buttons	Data and information – Pictograms	Data and information – Data logging	Data and information – Spreadsheets
Summer 1	Inputting commands	Programming B - Programming animations	Programming B - Events and actions in programs	Programming B – Selection in quizzes
Summer 2	Safely turning devices on and off.	Programming B - Programming quizzes	Programming B – Repetition in games	Programming B - Sensing movement

	e-Safety	Programming	Handling Data	Multimedia	Technology in our Lives
Overview	<ul style="list-style-type: none"> I can ask an adult when I want to use the Internet. I can tell an adult when something worrying or unexpected happens while I am using the Internet. I can be kind to my friends. I can talk about the amount of time I spend using a computer / tablet / game device. I am careful with technology devices. 	<ul style="list-style-type: none"> I can make a floor robot move. I can use simple software to make something happen. I can make choices about the buttons and icons I press, touch or click on. 	<ul style="list-style-type: none"> I can tell you about different kinds of information such as pictures, video, text and sound. 	<ul style="list-style-type: none"> I can move objects on a screen. I can create shapes and text on a screen. I can use technology to show my learning. 	<ul style="list-style-type: none"> I can tell you about technology that is used at home and in school. I can operate simple equipment. I can use a safe part of the Internet to play and learn.
Foundation Stage	<ul style="list-style-type: none"> I can explain why I need to keep my password and personal information private. I can describe the things that happen online that I must tell an adult about. I can talk about why I should go online for a short amount of time. I can talk about why it is important to be kind and polite online and in real life. I know that not everyone is who they say they are on the Internet. 	<ul style="list-style-type: none"> I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions. I can tell you the order I need to do things to make something happen and talk about this as an algorithm. I can program a robot or software to do a particular task. I can look at my friend's program and tell you what will happen. I can use programming software to make objects move. I can watch a program execute and spot where it goes wrong so that I can debug it. 	<ul style="list-style-type: none"> I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder. I can make and save a chart or graph using the data I collect. I can talk about the data that is shown in my chart or graph. I am starting to understand a branching database. I can tell you what kind of information I could use to help me investigate a question. 	<ul style="list-style-type: none"> I can use technology to organise and present my ideas in different ways. I can use the keyboard on my device to add, delete and space text for others to read. I can tell you about an online tool that will help me to share my ideas with other people. I can save and open files on the device I use. 	<ul style="list-style-type: none"> I can tell you why I use technology in the classroom. I can tell you why I use technology in my home and community. I am starting to understand that other people have created the information I use. I can identify benefits of using technology including finding information, creating and communicating. I can talk about the differences between the Internet and things in the physical world.
KS1	<ul style="list-style-type: none"> I can explain why I need to keep my password and personal information private. I can describe the things that happen online that I must tell an adult about. I can talk about why I should go online for a short amount of time. I can talk about why it is important to be kind and polite online and in real life. I know that not everyone is who they say they are on the Internet. 	<ul style="list-style-type: none"> I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions. I can tell you the order I need to do things to make something happen and talk about this as an algorithm. I can program a robot or software to do a particular task. I can look at my friend's program and tell you what will happen. I can use programming software to make objects move. I can watch a program execute and spot where it goes wrong so that I can debug it. 	<ul style="list-style-type: none"> I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder. I can make and save a chart or graph using the data I collect. I can talk about the data that is shown in my chart or graph. I am starting to understand a branching database. I can tell you what kind of information I could use to help me investigate a question. 	<ul style="list-style-type: none"> I can use technology to organise and present my ideas in different ways. I can use the keyboard on my device to add, delete and space text for others to read. I can tell you about an online tool that will help me to share my ideas with other people. I can save and open files on the device I use. 	<ul style="list-style-type: none"> I can tell you why I use technology in the classroom. I can tell you why I use technology in my home and community. I am starting to understand that other people have created the information I use. I can identify benefits of using technology including finding information, creating and communicating. I can talk about the differences between the Internet and things in the physical world.

LKS2	<ul style="list-style-type: none"> • I choose a secure password when I am using a website. • I can talk about the ways I can protect myself and my friends from harm online. • I use the safety features of websites as well as reporting concerns to an adult. • I know that anything I post online can be seen by others. • I choose websites and games that are appropriate for my age. • I can help my friends make good choices about the time they spend online. • I can talk about why I need to ask a trusted adult before downloading files and games from the Internet. • I comment positively and respectfully online. 	<ul style="list-style-type: none"> • I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts. • I can use an efficient procedure to simplify a program. • I can use a sensor to detect a change which can select an action within my program. • I know that I need to keep testing my program while I am putting it together. • I can use a variety of tools to create a program. • I can recognise an error in a program and debug it. • I recognise that an algorithm will help me to sequence more complex programs. • I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology. 	<ul style="list-style-type: none"> • I can organise data in different ways. • I can collect data and identify where it could be inaccurate. • I can plan, create and search a database to answer questions. • I can choose the best way to present data to my friends. • I can use a data logger to record and share my readings with my friends. 	<ul style="list-style-type: none"> • I can use photos, video and sound to create an atmosphere when presenting to different audiences. • I am confident to explore new media to extend what I can achieve. • I can change the appearance of text to increase its effectiveness. • I can create, modify and present documents for a particular purpose. • I can use a keyboard confidently and make use of a spellchecker to write and review my work. • I can use an appropriate tool to share my work and collaborate online. • I can give constructive feedback to my friends to help them improve their work and refine my own work. 	<ul style="list-style-type: none"> • I can tell you whether a resource I am using is on the Internet, the school network or my own device. • I can identify key words to use when searching safely on the World Wide Web. • I think about the reliability of information I read on the World Wide Web. • I can tell you how to check who owns photos, text and clipart. • I can create a hyperlink to a resource on the World Wide Web.
UKS2	<ul style="list-style-type: none"> • I protect my password and other personal information. • I can explain the consequences of sharing too much about myself online. • I support my friends to protect themselves and make good choices online, including reporting concerns to an adult. • I can explain the consequences of spending too much time online or on a game. • I can explain the consequences to myself and others of not communicating kindly and respectfully. • I protect my computer or device from harm on the Internet. 	<ul style="list-style-type: none"> • I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. • I can explain and program each of the steps in my algorithm. • I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm. • I can recognise when I need to use a variable to achieve a required output. • I can use a variable and operators to stop a program. • I can use different inputs (including sensors) to control a 	<ul style="list-style-type: none"> • I can plan the process needed to investigate the world around me. • I can select the most effective tool to collect data for my investigation. • I can check the data I collect for accuracy and plausibility. • I can interpret the data I collect. • I can present the data I collect in an appropriate way. • I use the skills I have developed to interrogate a database. 	<ul style="list-style-type: none"> • I can talk about audience, atmosphere and structure when planning a particular outcome. • I can confidently identify the potential of unfamiliar technology to increase my creativity. • I can combine a range of media, recognising the contribution of each to achieve a particular outcome. • I can tell you why I select a particular online tool for a specific purpose. • I can be digitally discerning when evaluating the effectiveness of my own work and the work of others. 	<ul style="list-style-type: none"> • I can tell you the Internet services I need to use for different purposes. • I can describe how information is transported on the Internet. • I can select an appropriate tool to communicate and collaborate online. • I can talk about the way search results are selected and ranked. • I can check the reliability of a website. • I can tell you about copyright and acknowledge the sources of information that I find online.

		<p>device or onscreen action and predict what will happen.</p> <ul style="list-style-type: none">• I can use logical reasoning to detect and correct errors in a algorithms and programs.			
--	--	---	--	--	--

Computing

As users and programmers of communication and information technology, our children will develop their computational thinking, logical reasoning and digital literacy. They will use a variety of computer software to express themselves, to develop their ideas, to solve challenges, to design coding programs and systems and to create content.

Our emphasis on online safety for all pupils will equip our children with the knowledge and skills to keep themselves and others safe online and to use information technology in an informed and responsible way. Through our curriculum, our children will be enabled to thrive and participate actively in a continually evolving digital world.

Year A	Term	NC Objectives/Coverage	Suggested Vocabulary	Key Knowledge and Skills
EYFS	Autumn/ Spring/ Summer	Can I recognise technology? Can I understand the uses of a computer? Can I give commands? Can I make choices about buttons? Can I input commands? Can I safely turn devices on and off?	Computer iPad Buttons Keys Laptop Device	Command Input
Year 1/2	Autumn	Can I recognise technology around us? Computing systems and networks https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us	Technology Something that has been made with a specific purpose to help other people. Typing The process of using a keyboard to write words, letters or numbers on a screen. paintz.app	Can I explain what technology is? Can I use a mousepad? Can I use a keyboard? Cross curricular links PSHE: Staying safe while using technology. Art: Using a mousepad to create a drawing.
		Can I recognise IT around us? Computing systems and networks https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-it-around-us	IT can be explained as being a computer or something that has been made to work with computers. Examples could include: <ul style="list-style-type: none"> Computers: PCs, laptops, tablets 	Can I recognise examples of IT? Can I explain the benefits of IT? Can I talk about how to use IT safely?

		<ul style="list-style-type: none"> Devices made to work with computers: scanners, barcode scanners, printers., smart speakers <p>There is a short video about barcodes here: www.waspbarcode.com/buzz/barcode.</p>	<p>Cross curricular links</p> <p>History: Links to changes through time (transport).</p>
Spring	<p>Can I use digital painting?</p> <p>Creating media</p> <p>https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-painting</p>	<p>paintz.app</p> <p>Piet Mondrian and Henri Matisse for rectilinear colourful art.</p>	<p>Can I use the shape and line tool?</p> <p>Can I change colour and brush size?</p> <p>Can I make explain the choices I have made?</p> <p>Cross curricular links</p> <p>Science: Animals Art: Digital versions of Max Ernst work</p>
	<p>Can I use digital photography?</p> <p>Creating media</p> <p>https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-photography</p>	<p>Elements of photography include composition, framing, lighting, and blur.</p> <p>https://pixlr.com/x/</p> <p>There is also a pixlr app for iPads</p>	<p>Can I use a digit device to take a photo?</p> <p>Can I describe what makes a good photo and make choices accordingly?</p> <p>Can I change and edit photos?</p> <p>Cross curricular links</p> <p>DT: Taking photos of their healthy eating creations. Science: Taking photos of the human body.</p>
Summer	<p>Can I use digital word processing?</p> <p>Creating media</p> <p>https://teachcomputing.org/curriculum/key-stage-1/creating-media-digital-writing</p>	<p>Bold</p> <p><i>Italic</i></p> <p><u>Underline</u></p> <p>Font</p> <p>Click and drag to select text Double-click to select text</p>	<p>Can I add and remove text on a computer?</p> <p>Can I change the look of text on a computer?</p> <p>Can I double click and click and drag to select text?</p> <p>Cross curricular links</p> <p>English: Publish their favourite sentence they've been</p>

			This unit will use google docs	writing. Science: Create labels for a plant.
		Can I create digital music? Creating media https://teachcomputing.org/curriculum/key-stage-1/creating-media-making-music	Chrome Music Lab - Song Maker (chromeexperiments.com)	Can I create a musical pattern on a computer? Can I connect images with sounds? Can I change pitch on a computer? Cross curricular links Music: Exploring sound to create a music PSHE: Changing and growing, music changes
3/4	Autumn	Can I recognise how computers are connected? Computing systems and networks https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-connecting-computers	Digital and non-digital devices The key difference between them is that a digital device is capable of some processing, ie it has functions beyond being either on or off.	Can I explain how a digital device works? Can I explain how digital devices help us? Can I show how computers are connected? Cross curricular links PSHE: Respecting ourselves and others, fostering healthy connections.
		Computing systems and networks – The Internet https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-the-internet	The YouTube video titled ' A Packet's Tale ' provides an overview of networks and the internet. That the World Wide Web is part of the internet is explained in this video: www.bbc.co.uk/newsround/47523993	Can I explain how the internet works? Can I understand how information is shared on the internet and who owns it? Can I recognise unreliable content? Cross curricular links PSHE: Safe relationships.
	Spring	Creating media - Stop-frame animation	Animations A series of still images stitched together to create a motion video. Animations can be created using on-screen or off-screen	Can I create a sequence of pictures? Can I create a flip-book style animation?

	https://teachcomputing.org/curriculum/key-stage-2/creating-media-animation	(flipbooks) images. iMotion app on ipads	Can I evaluate my animation and make small changes? Cross curricular links Science: Stop frame animation about volcanoes and earthquakes.
	Creating media - Audio production https://teachcomputing.org/curriculum/key-stage-2/creating-media-audio-editing	Audacity software on a laptop	Can I record and edit audio? Can I recognise the different parts of recording a podcast? Can I combine sounds to enhance audio on a podcast? Cross curricular links History: Podcast about the Romans. Science: Podcast about Forces and Magnets.
Summer	Creating media – Desktop publishing https://teachcomputing.org/curriculum/key-stage-2/creating-media-desktop-publishing	Bold <i>Italic</i> <u>Underline</u> Font Size Click and drag to select text Double-click to select text	Can I recognise how images and text convey information? Can I change text and layout? Can I add and edit content with intentional purpose? Cross curricular links Science: Animal magazine cover Geography: Countries of the world magazine
	Creating media – Photo editing https://teachcomputing.org/curriculum/key-stage-2/creating-media-photo-editing	Rotate To turn Crop To remove the edges of a photo Edit To change a picture through cropping, rotating, colour, shading, density of an image.	Can I rotate, crop and edit photos? Can I use cloning to edit photos? Can I merge more than one photo? Cross curricular links

			<p>Cloning Duplicates or removes part of a photo.</p> <p>Digital cameras and paint.net</p>	<p>Science: Taking and editing photos of plants.</p>
5/6	Autumn	<p>Computing systems and networks - Systems and searching</p> <p>https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-sharing-information</p>	<p>Computing search engines:</p> <p>Bing Google DuckDuckGo Ecosia Swisscows</p>	<p>Can I explain the input, process and output stages of a digital system?</p> <p>Can I find specific information online?</p> <p>Can I explain how searching online can be influenced and limited?</p> <p>Cross curricular links</p> <p>English: Searching for information on habitats and their inhabitants.</p>
		<p>Computing systems and networks - Communication and collaboration</p> <p>https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-communication</p>	<p>Internet Protocol (IP) addresses Domain Name Server (DNS) Data packets The main parts of a packet are header and data payload.</p> <p>Unit uses google slides and scratch</p>	<p>Can I explain how data is transferred?</p> <p>Can I investigate how to work collaboratively online?</p> <p>Can I choose methods of communication to fit purpose?</p> <p>Can I recognise the challenges of online communication?</p> <p>Cross curricular links</p> <p>PSHE: Safe relationships online</p>
	Spring	<p>Creating media - Video production</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing</p>	<p>Video The recording, reproducing, or broadcasting of moving visual images.</p> <p>Storyboard A planning tool.</p>	<p>Can I use a digital device to record video?</p> <p>Can I adapt filming techniques?</p> <p>Can I improve a film with reshoots and edits?</p>

		Use the iMovie app on an ipad.	<p>Cross curricular links</p> <p>RE: Make a video about Islam Geography: A video about comparing countries</p>
	<p>Creating media – Web page creation</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-web-page-creation</p>	Uses Google Sites to design a website.	<p>Can I recognise key features of a web page?</p> <p>Can I add content to a web page?</p> <p>Can I use hyperlinks to link pages?</p> <p>Can I articulate content ownership?</p> <p>Cross curricular links</p> <p>Science: Website about WW2 RE: Website about Judaism</p>
Summer	<p>Creating media – Introduction to vector graphics</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing</p>	<p>Tools. These include shape and line drawing tools, fill, undo and redo, select, and delete. In the unit, learners also need to move, resize, and rotate shapes, including the use of size and alignment guides.</p> <p>Uses Google Slides to create a vector drawing</p>	<p>Can I create vector drawings with shape and line tools?</p> <p>Can I modify objects using alignment grids and resize handles?</p> <p>Can I implement layering to create an image?</p> <p>Can I use group and ungroup to develop a vector drawing?</p> <p>Cross curricular links</p> <p>Art: Create a vector image inspired by Picasso's cubism</p>
	<p>Creating media – 3D Modelling</p> <p>https://teachcomputing.org/curriculum/key-stage-2/creating-media-3d-modelling</p>	<p>https://www.tinkercad.com</p> <p>3D Modelling concepts: Working with and viewing shapes in three dimensions Adding, resizing, and moving (including lifting and lowering) 3D shapes Rotating 3D shapes Combining 3D shapes</p>	<p>Can I move, rotate and resize 3D objects?</p> <p>Can I analyse the composite parts of a 3D model?</p> <p>Can I design and construct a 3D model?</p> <p>Cross curricular links</p> <p>Maths: Shape</p>

		Grouping and ungrouping objects	
--	--	---------------------------------	--

Computing

As users and programmers of communication and information technology, our children will develop their computational thinking, logical reasoning and digital literacy. They will use a variety of computer software to express themselves, to develop their ideas, to solve challenges, to design coding programs and systems and to create content.

Our emphasis on online safety for all pupils will equip our children with the knowledge and skills to keep themselves and others safe online and to use information technology in an informed and responsible way. Through our curriculum, our children will be enabled to thrive and participate actively in a continually evolving digital world.

Year B	Term	Overarching Question	Vocabulary, Websites Software, Hardware	Key Questions Cross-curricular links
EYFS	Autumn/ Spring/ Summer	Can I recognise technology? Can I understand the uses of a computer? Can I give commands? Can I make choices about buttons? Can I input commands? Can I safely turn devices on and off?	Computer iPad Buttons Keys Laptop Device	Command Input
Year 1/2	Autumn	Can I move a robot? Programming		<i>Cross curricular links</i>
		Can I use algorithms? Programming		<i>Cross curricular links</i>
	Spring	Can I group data? Data and information https://teachcomputing.org/curriculum/key-stage-1/data-and-information-grouping-data	Object Anything that can be labelled with properties. Property A part of an object that can be labelled.	Can I label objects? Can I describe objects using its properties? Can I compare the properties of objects? <i>Cross curricular links</i> Science: Labelling and sorting animals alongside food

			<p>chains. Sorting by predator/prey, consumer/producer.</p> <p>Geography: Labelling maps and grouping sections of maps by their symbols and features.</p>
	<p>Can I use pictograms?</p> <p>Data and information</p> <p>https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms</p>	<p>Attributes A part of an object that can be labelled.</p> <p>Equal to</p> <p>More than</p> <p>Less than</p> <p>JIT5 (j2e.com)</p>	<p>Can I count and compare?</p> <p>Can I create a pictogram?</p> <p>Can I compare numbers using a pictogram?</p> <p>Cross curricular links</p> <p>Maths: Interpret, construct and answer questions using pictograms.</p> <p>Forest school: Invertebrate hunt results shown as pictogram.</p> <p>RHE: Recognising differences in people.</p>
Summer	<p>Can I program animations?</p> <p>Programming</p> <p>https://teachcomputing.org/curriculum/key-stage-1/programming-b-introduction-to-animation</p>	<p>Task – what is needed</p> <p>Design – what it should do</p> <p>Code – how it is done</p> <p>Running the code – what it does</p> <p>https://scratch.mit.edu/projects/editor/?tutorial=getStarted</p> <p>Scratch Junior on the Ipads</p>	<p>Can I join blocks?</p> <p>Can I make changes and explain what happens?</p> <p>Can I use multiple sprites?</p> <p>Cross curricular links</p> <p>RHE: An “exercise” animation with sprites “racing”</p>
	<p>Can I program quizzes?</p> <p>Programming</p> <p>https://teachcomputing.org/curriculum/key-stage-1/programming-b-an-introduction-to-quizzes</p>	<p>Task – what is needed</p> <p>Design – what it should do</p> <p>Code – how it is done</p> <p>Running the code – what it does</p> <p>https://scratch.mit.edu/projects/editor/?tutorial=getStarted</p> <p>Scratch Junior on the Ipads</p>	<p>Can I match outcomes to programs?</p> <p>Can I use and change a design?</p> <p>Can I create a program?</p> <p>Cross curricular links</p> <p>Science: Quiz about the seasons and plants.</p>

				History: Sir Francis Drake Quiz.
Year 3/4	Autumn	Can I sequence sounds? Programming		Cross curricular links
		Can I use repetition in shapes? Programming		Cross curricular links
	Spring	Can I use branching databases? Data and information https://teachcomputing.org/curriculum/key-stage-2/data-and-information-branching-databases	https://www.i2e.com/jit5#branch Binary Tree A branching diagram using questions with yes/no answers. Attributes An attribute includes its name and a value. A red ball: 'Colour' is the attribute name, and 'red' is the attribute value. Property Introduced in Year 1, 'property' and 'attribute' are interchangeable	Can I create questions with yes/no answers Can I create a branching database? Can I consider the structure of a branching database? Cross curricular links Science: Animals and their habitats contains lessons on Branching diagrams. Do online. Geography: Parts of a river branching diagram as final out
		Can I log data? Data and information https://teachcomputing.org/curriculum/key-stage-2/data-and-information-data-logging	Data loggers from TTS come with an app. Data Logger A digital device that can collect data over time and store it. Sensor A type of input designed to allow computers to capture data from the physical environment.	Can I collect data? Can I analyse data? Can I ask questions before investigating? Cross Curricular links Science: Animals including Humans – Looking at conditions in different habitats.
	Summer	Can I use events and actions in programs? Programming	Task – what is needed Design – what it should do Code – how it is done Running the code – what it does	Can I move a sprite? Can I draw lines?

		https://teachcomputing.org/curriculum/key-stage-2/programming-b-events-and-actions	Debugging – Correcting errors in a program Program – A series of instructions. Scratch online: https://scratch.mit.edu/projects/editor/?tutorial=getStarted	Can I plan movement and debug errors? Cross curricular links Geography – Using maps and atlases to design a maze.
		Can I use repetition in games? Programming	Task – what is needed Design – what it should do Code – how it is done Running the code – what it does Debugging – Correcting errors in a program Program – A series of instructions. Scratch online: https://scratch.mit.edu/projects/editor/?tutorial=getStarted	Can I create loops? Can I modify a game? Can I design and create game? Cross curricular links Maths: Hit the button style game – hit the two times table numbers. History: Stone age hit the mammoth game
Year 5/6	Autumn	Can I use selection in physical programming? Programming		Cross curricular links
		Can I use variables in games? Programming		Cross curricular links
	Spring	Can I use flat-file databases? Data and information https://teachcomputing.org/curriculum/key-stage-2/data-and-information-flat-file-databases	https://docs.google.com/spreadsheets Database A collection of organised data that is stored on a computer. Data can be letters, words, numbers, dates, images, sounds,	Can I create a paper database? Can I create a computer database? Can I group and sort using a database?

		<p>etc.</p> <p>Grouping and Sorting Organising data based on different fields</p> <p>Records Sets of data on a particular object. Records are formed from one or more 'fields' of data.</p> <p>Attributes An attribute includes its 'name' and a 'value'.</p>	<p>Cross curricular links</p> <p>Science: A database like top trumps for the animals, a database for bones in the human body.</p> <p>Geography: A database for human and physical features of Torbay, Greece, Egypt and Brazil.</p>
	<p>Can I use spreadsheets?</p> <p>Data and information</p> <p>https://teachcomputing.org/curriculum/key-stage-2/data-and-information-spreadsheets</p>	<p>https://docs.google.com/spreadsheets</p> <p>Data Can be words, numbers, dates, images, sounds, etc.</p>	<p>Can I modify a spreadsheet?</p> <p>Can I write formulas?</p> <p>Can I produce a chart?</p> <p>Cross curricular links</p> <p>Science: Earth, Space, Planets Data</p> <p>RHE: Planning a healthy meal ingredients / cost</p>
Summer	<p>Can I use selection in quizzes?</p> <p>Programming</p> <p>https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes</p>	<p>Task – what is needed Design – what it should do Code – how it is done Running the code – what it does</p> <p>Scratch online: https://scratch.mit.edu/projects/editor/?tutorial=getStarted</p> <p>Conditions 'Conditions' are statements that need to be met for a set of actions to be carried out. Selection When designing programs, there are often points where a decision must be made.</p>	<p>Can I explore conditions?</p> <p>Can I select outcomes?</p> <p>Can I ask questions?</p> <p>Cross curricular links</p> <p>Science: Electricity quiz</p> <p>Geography: Quiz on Locations around the world</p> <p>Maths and English: Quizzes on times tables or word classes etc.</p>
	<p>Can I sense movement in a program?</p> <p>Programming</p>	<p>Task – what is needed Design – what it should do</p>	<p>Can I identify inputs and outputs?</p>

		<p>https://teachcomputing.org/curriculum/key-stage-2/programming-b-repetition-in-games</p>	<p>Code – how it is done Running the code – what it does</p> <p>Will use a micro:bit</p> <p>Sensor A type of input designed to allow computers to capture data from the physical environment.</p> <p>Output An indicator that actions due to an input stimulus.</p>	<p>Can I develop programs for an input?</p> <p>Can I develop programs for an output?</p> <p><i>Cross curricular links</i></p> <p>Geography: Navigation making a compass</p> <p>RHE: Making a step counter to encourage fitness.</p>
--	--	--	---	--