

Computing Long term Plan

Year Group	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Y1	Technology around us	Make a Masterpiece Busy Things	Moving a Robot	Digital writing	Programming Sequence	Grouping data
Y2	Robot algorithms	Digital photography	Pictograms	Computing systems and networks	Making music	Sequence (blocks)
Y3	Desktop publishing	Computing Spotlight repetition	Branching database	Stop-frame animation	Repetition Scratch Unit	Connecting computers
Y4	Computing Spotlight Selection	Photo editing	Information text	Blogging	Selection Scratch Unit	Data Logging
Y5	Desktop publishing Adobe Post	Computing Spotlight Events	Desktop publishing	Flat-file databases	Events/selection Space Adventures	History of Computing
Y6	Computing Spotlight Variables	Video editing Adobe Video	Internet communication	Variables Scratch Unit	Webpage creation	Introduction to spreadsheets

IT	Computer Science	Data
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Year Group	Statements	
Y1	IT	<ul style="list-style-type: none"> • Can use a mouse, finger etc. to select, swipe & move items on the screen, assembling or matching objects. • Can make/draw marks/lines on a screen and explain which tools have been used. • Can use the paint tools to draw a picture. • Can use the shape and line tools effectively. • know that different paint tools do different jobs. • Can change the colour and brush sizes. • Can spot the differences between painting on a computer and on paper. • Can take a digital picture or video clip, or record a sound, as part of a task.
	D	<ul style="list-style-type: none"> • To identify objects with the same properties, count and sort them and to a pictogram. • To compare groups of objects within a pictogram. • To answer questions about groups of objects.
	CS	<ul style="list-style-type: none"> • Can give simple instructions to control a device, like a 'floor' robot, or on-screen object/sprite. • To design and run a simple program by combining four direction commands to make a sequence. • Can use trial and error to evaluate the program. • Can name some digital devices that need precise instructions (algorithms) to work/be controlled. • Understands some basic computing terms and concepts, such as ... algorithm, program, sequence, etc.
	DL	<ul style="list-style-type: none"> • Knows about the Internet and begins to understand some key, age-appropriate, safety 'rules'. • Can share some information with others, (such as via school platform or via a 'closed' blog). • Can find some straight-forward information from a 'safe', selected online resource.
Y2	IT	<ul style="list-style-type: none"> • Can use some software to create/assemble digital content for a clear purpose, (text, images, animation, graph, sound, etc.) • Know what devices can be used to take photographs. • Use a digital device to take a photograph. • Describe what makes a good photograph. • Decide how photographs can be improved. • Use simple tools to change an image. • Recognise that images can be changed. • Can make simple edits of their digital work (text, image, sound) using simple editing tools, to both correct or improve it. • Can navigate their way within some straight-forward digital content to find some specific information. • Can create and amend a (multimedia) resource for a clear purpose, starting to show a sense of the 'audience'. • Can create & store some data, and then find answers to straight-forward questions. • Can recognise and talk about some common uses of ICT in the world around them. • Can save and retrieve work (and print if appropriate to task).
	D	<ul style="list-style-type: none"> • To recognise that objects can be represented as pictures

		<ul style="list-style-type: none"> • To create a pictogram • To explain that we can present information using a computer
	CS	<ul style="list-style-type: none"> • Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object. • To describe a series of instructions as a sequence • To explain what happens when we change the order of instructions • To use logical reasoning to predict the outcome of a program (series of commands) • To design an algorithm • To create and debug a program that they have created. • Demonstrates logical 'trial and error' when using a computer simulation or game, and predicts the consequences of decisions/choices made. <ul style="list-style-type: none"> • Understands some basic computing terms and concepts, such as: (school) network, algorithm, program, debug, editing, website, etc.
	DL	<ul style="list-style-type: none"> • Can talk about key online safety 'rules' and knows where to go/report if a problem. • Can create and share some information online, (such as in school platform, 'closed' email systems or blogs), understanding needs to be respectful and safe. • Can find some straight-forward information from (selected) website resource(s) and knows not all websites are positive and safe.
Y3	IT	<ul style="list-style-type: none"> • Can use some software to create/assemble digital content for a clear purpose, (could be text, images, animation, graph, sound, etc.) • Can make straightforward edits of their digital work (text, image, sound etc) using simple editing tools, to both correct and improve it. • Recognise how text and images convey information. • Recognise that text and layout can be edited. • Be able to add content to a desktop publishing publication. • Consider how different layouts can suit different purposes. • Explain that animation is a sequence of drawings or photographs. • Create animated movement with a sequence of images. • Be able to design/plan an animation and be able to review and improve an animation. • Can navigate their way within some straight-forward digital content to find some specific information. • Can create & store some data, (simple data file), and then find answers to straight-forward questions. • Can recognise and talk about some common uses of ICT in the world around them. • Can save and retrieve work from electronic folders (and print if appropriate to task).
	D	<ul style="list-style-type: none"> • To create questions with yes/no answers • To create a branching database • To identify objects using a branching database • To explain why it is helpful for a database to be well structured
	CS	<ul style="list-style-type: none"> • Demonstrates logical 'trial and error' when using a computer simulation, 'model' or game, and predicts some consequences of decisions/choices made. • Can design an accurate set of simple instructions (code), to program (control) an on-screen object using trial and error to refine (de-bug). • To identify that accuracy in programming is important • To create a program in a block-based language • To explain what 'reparation' means • To modify a count-controlled loop to produce a given outcome • To decompose a program into parts

		<ul style="list-style-type: none"> ● To create a program that uses count-controlled loops to produce a given outcome ● Can also talk about how the sequence of events in some simple instructions (algorithms) or code is 'working'. ● Can talk about some digital devices beyond school, that need precise instructions (algorithms) to work/be programmed (controlled). ● Knows some relevant computing terms such as computer network, Internet, algorithm, program, World Wide Web, website, etc.
	DL	<ul style="list-style-type: none"> ● Can talk about key online safety 'rules' and knows where to go/report if a problem. ● Can create and share some information online (such as in school platform, email/blog), understanding needs to be respectful and safe. ● Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'.
Y4	IT	<ul style="list-style-type: none"> ● Can use software to create and combine content (be it text, pictures/images, graphs, animation, podcast etc..) for a meaningful purpose(s). ● Can also edit and amend their digital work (text, image, sound etc..) using simple editing tools, to both correct and improve it. ● Explain that digital images can be changed. ● Be able to change the composition of an image. ● Describe how images can be changed for different use/audiences. ● Make good choices when selecting different tools. ● Recognise that not all images are real. ● Be able to evaluate how changes can improve an image ● Can navigate their way within the range of (selected) online content, to find specific information. ● Can include some information/content from an online resource within a 'presentation'. ● Can save and retrieve work from electronic folders (and print if appropriate to task).
	D	<ul style="list-style-type: none"> ● To explain that data gathered over time can be used to answer questions ● To use a digital device to collect data automatically ● Can use a data file to find answers to straight-forward questions, (such as through data logging or a survey or a prepared database or a simple spreadsheet, etc). ● To explain that a data logger collects 'data points' from sensors over time. ● To use data collected over a long duration to find information. ● To identify the data needed to answer questions and use collected data to answer questions.
	CS	<ul style="list-style-type: none"> ● Demonstrates logical choices and prediction when using a computer simulation, 'model' or game and can make simple edits to solve a problem. ● Can produce an accurate sequence of instructions, that include the use of repeat, to control on-screen objects, and refine (de-bug) and improve/make changes. ● To design a physical project that includes selection. ● To create a controllable system that includes selection. ● Can talk about different types of input options e.g. motion /touch, microphone, data logging sensor; and output options e.g. switch, speakers, screen, etc. ● Developing and using a wider computing 'vocabulary' relevant to work, such as de-bug, Apps, data logging, search engine, spam, Wiki, etc.
	DL	<ul style="list-style-type: none"> ● Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go/report if a problem. ● Can create and share some information online (such as school platform, email/blog), demonstrating the need to be respectful and safe. ● Can find straight-forward information from (selected) website resource(s) and knows sites can contain true or false facts or opinion.

Y5	IT	<ul style="list-style-type: none"> • Can use the software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. • Can combine resources from different sources into a digital presentation, showing a clear sense of intended purpose and 'audience'. • Capture video using a digital device. • Recognise the features of an effective video. • Identify that video can be improved through reshooting and editing. • Consider the impact of the choices made when making and sharing a video. • Can find specific and valid information using sensible keywords/search terms, from online web content, as fits the task. • Can save and retrieve work from various electronic folders on the network (and controlled online environments where relevant).
	D	<ul style="list-style-type: none"> • To use a form to record information • To compare paper and computer-based databases • To outline how grouping and then sorting data allows us to answer questions • To explain that tools can be used to select specific data • To apply my knowledge of a database to ask and answer real-world questions
	CS	<ul style="list-style-type: none"> • Can 'test', amend/edit a simple computer 'game' or model or simulation to solve a problem. • Can produce an accurate program to control on-screen objects, and refine (de-bug) and improve/make changes to the code. • Can create a program that includes smaller parts (subprocedures), sequence, selection, and repetition and/or variables. • To explain how selection is used in computer programs • To relate that a conditional statement connects a condition to an outcome • To explain how selection directs the flow of a program • To design/create a program which uses selection • Can deconstruct and evaluate, and create computer programs (or games) and make them more challenging and/or 'elegant' / efficient. • Can use different types of input options and output options such as through sensing and control 'kits' and/or software, to solve a problem. • Developing and using a wider computing 'vocabulary' in the context of a task, such as a search engine, URL, variable, validate, digital footprint, spam, Wiki, etc.
	DL	<ul style="list-style-type: none"> • Can talk about key online safety 'rules', knows what may be unacceptable behaviour, and knows where to go/report if a problem. • Can demonstrate 'web-savvy' awareness, from a range of given scenarios, including commercial, contact and content 'risks' and issues. • Can communicate and collaborate online (such as in school platforms or blog/Wiki /forum), demonstrating respectful and safe behaviours. • Understands some simple steps to 'validate' information found on the Web, such as clarity of search term, URL, links to and from, etc.
Y6	IT	<ul style="list-style-type: none"> • Can use the software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. • To review an existing website and consider its structure. • To design/plan the features of a web page for a purpose. • To consider the ownership and use of images (copyright) • To recognise the need to preview pages and demo pages. • To recognise the implications of linking to content owned by other people. • Can combine resources from different sources into a digital presentation, evaluate it, and show clearly intended purpose and 'audience'. • Can save and retrieve work from various electronic folders on the network (and controlled online environments where relevant).
	D	<ul style="list-style-type: none"> • Can (collect), analyse, evaluate and draw conclusions from data, such as through a survey, database or spreadsheet, etc. • To identify questions which can be answered using data. • To explain that formula can be used to produce calculated data. • To apply formulas to data, including duplicating.

		<ul style="list-style-type: none"> ● To create a spreadsheet to plan an event. ● To choose suitable ways to present data.
	CS	<ul style="list-style-type: none"> ● Can create an accurate program and refine (de-bug) and improve/make changes to the code. ● To define a 'variable' as something that is changeable ● To explain why a variable is used in a program ● To choose how to improve a game by using variables ● To design a project that builds on a given example ● Can write and debug programs that include smaller parts (subprocedures), sequence, selection, and repetition and/or variables, using previous programming skills, to accomplish specific goals. ● Can create and deconstruct and evaluate programs (or games) and make them more challenging and/or 'elegant' / efficient. ● Developing and using a wider computing 'vocabulary' in the context of a task, such as a search engine, URL, variable, validate, digital footprint, spam, Wiki, etc.
	DL	<ul style="list-style-type: none"> ● Can demonstrate web-savvy awareness, from a range of given scenarios, including commercial, contact and content 'risks' and issues. ● Can discuss a range of safety and security (privacy) issues and knows the range of ways to report concerns or inappropriate behaviour. ● Can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours. ● Can check the results of their WWW searches i.e. how useful, relevant, reasonable, valid and accurate the information is.

