Computing Progression Map: 2025-2026

St Thomas More Catholic Primary School

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**Children will learn to:** · Complete age appropriate games on the PC, I pad, IWB. · Recognise that the internet can be a way of finding out information	**Children will learn to:** · show an awareness of different forms of technology · Can use the internet with adult supervision to find and retrieve information of interest to them.	**Children will learn to:** · Create content such as a video recording, stories, and/or draw a picture on screen	**Children will learn to:** · Use Bee-bots and other forms of technology confidently	**Children will learn to:** · Know electricity can be useful in the home but also dangerous · Show how technology can help us, by using phones to call emergency services	**Children will learn to:** · Show a good awareness of how we can use technology in in our everyday lives · Begin to show some awareness of how the internet connects us to others and how we can keep safe when using games online

Year 1	**Technology around us** **Children will learn to:** · Choose a piece of technology to do a job · Identify the main parts of a computer · Use a keyboard to type their name on a computer · Turn on the computer and log on with an aid · Use a mouse in different ways – click, select and drag · Use the keyboard to	**Digital painting** **Children will learn to:** · Explain what different freehand tools do · Recognise that computers can be used to create a range of art · Recognise a tool can be adjusted · Choose appropriate paint tools to recreate a picture · Use freehand tools, changing the colour and brush size · Use shape and line tools for precision, changing the size, shape and colour · Use the undo button to correct mistakes · Use the fill tool to colour an enclosed area	**Moving a robot** **Children will learn to:** · Explain what a given command does · Predict the outcome of a sequence involving up to four commands · Match a command to an outcome · Understand that a program is a set of commands that a computer can run · Know that a series of instructions can be issued before they are enacted · Predict the outcome of a command on a device · Run a command on a floor robot	**Grouping data** **Children will learn to:** · Explain how objects have been grouped · Know that labels are used to identify a group with similar characteristics · Group the same objects in more than one way · Count how many objects are in group and identify which has more · Record how many objects are in a group · Group objects to answer a question · Compare objects to group them	**Digital writing** **Children will learn to:** · Know that a keyboard is used to enter text into a computer · Know that the appearance of text can be changed · Recognise some keys and use them to enter text on to a computer/device including some basic punctuation · Add spaces between most words using a space bar · Use the backspace key to delete text only as far as the section to be edited · Use the toolbar to find and use the bold, italic, and underline tool	**Programming animations** **Children will learn to:** · Explain what a sprite is · Compare different programming blocks · Know a series of commands can be joined together to form a program · Understand that a program is a set of commands a computer can run · Predict the outcome of a command · List commands that can be used on a device · Match a command to an outcome · Recognise how to run a command · Run different commands for different sprites · Choose a command for a given purpose
	edit text and delete letters · Demonstrate that they can use technology safely		· Choose a command for a given purpose · Choose a series of words that can be enacted as a program · Build a sequence of commands in steps from a given starting point · Combine commands in a program · Run a program on a device · Debug a program to correct errors	explaining what has been found		· Build a sequence of commands in steps · Use the start command to initialise a program · Debug a program

Year 2	**Information technology around us** **Children will learn to:** · Identify examples of computers · Describe some uses of computers · Identify that a computer is a part of IT · Identify examples of IT · Sort school IT by what it's used for · Identify that some IT can be used in more than one way · Find examples of information technology · Sort IT by where it is found · Talk about uses of information technology · Recognise common types of technology	**Digital photography** **Children will learn to:** · Explain some aspects of taking a good photograph · Know that a photo can be portrait or landscape · Take a photograph using a simple camera or device that has been set up in camera mode · Identify some of the reasons why a photograph may be good or bad · Experiment when taking photos with different light sources · Identify a photo that has been enhanced using tools when asked questions · use different tools to change how a photograph looks	**Robot algorithms** **Children will learn to:** · Understand a series of instructions · Understand different algorithms by changing the sequence of commands · Predict what a sequence of commands will do · Follow sequences of Instructions including moving forwards and backwards, and turning left and right. · Plan a series of instructions for someone else to follow · Plan a mat layout with several possible routes · Plan and execute a program to reach a goal and debug as needed	**Pictograms** **Children will learn to:** · record data in a tally chart · I can represent a tally count as a total · I can compare totals in a tally chart · I can enter data onto a computer · I can use a computer to view data in a different format · I can use pictograms to answer simple questions about objects · Organise data in a tally chart · Use a tally chart to create a pictogram · Explain what the pictogram shows · Tally objects using a common attribute · Create a pictogram to arrange objects by an attribute · Answer 'more than'/'less than' and 'most/least'	**Digital music** **Children will learn to:** · Reflect on a piece of music · Follow a rhythm pattern · Understand that a computer can generate different sounds · Understand that a computer can be used to make a sequence of notes · Understand how pattern and rhythm can be used to depict an animal · Create and follow a rhythm pattern using two different instruments · Use the computer to generate different sounds represented by images · Create a sequence of notes on the computer and start to refine them · Create a sequence of notes that use rhythm and tempo to link with a chosen animal, refining their work	**Programming quizzes Children will learn to:** · Know that a sequence can be started using a variety of event blocks · Know that a sequence has an outcome, and identify different programs that have the same outcome · Know the backgrounds can be changed through the programming blocks · Understand the role of the numbers on ScratchJr blocks · Write and run a simple program with a start block, and an end block which changes the background · Adapt a given design to create a program with multiple sprites and backgrounds which uses the blocks given in the example · Create and program a quiz with at least two backgrounds which switch based on an action · Identify errors in their program, and debug them

	· Demonstrate how IT devices work together · Say why we use IT · List different uses of information technology · Talk about different rules for using IT · Say how rules can help keep me safe · Identify the choices that I make when using IT · Use IT for different types of activities · Explain the need to use IT in different ways			questions about an attribute · Choose a suitable attribute to compare people · Collect the data I need · Create a pictogram and draw conclusions from it · Use a computer program to present information in different ways · Share what I have found out using a computer · Give simple examples of why information should not be shared		

Year 3	**Connecting computers** **Children will learn to:** · Explain that digital devices accept inputs · Explain that digital devices produce outputs · Follow a process · Explain what makes a secure password · Classify input and output devices · Describe a simple process · Design a digital device · Explain how I use digital devices for	**Stop-frame animation** **Children will learn to:** · Create a Storyboard that has a clear beginning, middle, and end · Movement is smooth · The animation follows the storyboard · Make some improvements · Add some additional media	**Sequencing sounds Children will learn to:** · Choose a name that describes the action of the sprite · Choose relevant backdrops and costumes · Create an algorithm for each sprite · Explain what sequence means and demonstrate it in an algorithm · Adapt their code for additional named sprites · Explain why the code is in that particular sequence	**Branching databases** **Children will learn to:** · Investigate questions with yes/no answers · Make up a yes/no question about a collection of objects · Create two groups of objects separated by one attribute · Select an attribute to separate objects into groups · Create a group of objects within an existing group · Arrange objects into a tree structure · Select objects to arrange in a branching database	**Desktop publishing** **Children will learn to:** · Describe how different challenges require different solutions · Give an example of when using text, images or emojis online could be misinterpret · Choose an appropriate layout for a given scenario · Use placeholders appropriately to divide the page (magazine) · Add text and images · Format some of the text	**Events and actions in programs** **Children will learn to:** · Explain the relationship between an event and an action · Choose which keys to use for actions and explain my choices · Identify a way to improve a program · Choose a character for my project · Choose a suitable size for a character in a maze · Program movement · Use a programming extension · Consider the real world when making design choices · Choose blocks to set up my program · Identify additional features (from a given set of blocks)

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	· different activities · Recognise similarities between using digital devices and using nondigital tools · Suggest differences between using digital devices and using nondigital tools · I can recognise different connections · I can explain how messages are passed through multiple connections · Discuss why we need a network switch · Recognise that a computer network is made up of a number of devices · Demonstrate how information can be passed between devices			· Group objects using my own yes/no questions · Test my branching database to see if it works · Create yes/no questions using given attributes · I can compare two branching database structures · Explain that questions need to be ordered carefully to split objects into similarly sized groups · Independently create questions to use in a branching database · Create questions that will enable objects to be uniquely identified · Create a physical version of a branching database create a branching database that reflects my plan · Work with a partner to test my		· Choose suitable keys to turn on additional features Build more sequences of commands to make my design work · Test a program against a given design · Match a piece of code to an outcome · Modify a program using a design · Make design choices and justify them · Implement my design

	· Explain the role of a switch, server, and wireless access point in a network · Identify how devices in a network are connected together Identify networked devices around me · Identify the benefits of computer networks			identification tool · Suggest real-world uses for branching databases		

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Year 4	**The internet** **Children will learn to:**	**Audio production** **Children will learn to:**	**Repetition in shapes** **Children will learn to:**	**Data logging** **Children will learn to:**	**Photo editing** **Children will learn to:**	**Repetition in games** **Children will learn to:**
	· Describe the internet as a network of networks · Demonstrate how information is shared across the internet · Discuss why a network needs protecting · Describe networked devices and how they connect · Explain that the internet is used to provide many services · Recognise that the World Wide Web contains websites and web pages · Explain the types of media that can be shared on the WWW · Describe where websites are stored when uploaded to the WWW · Describe how to access websites on the WWW · Explain what media can be	· Identify the input and output devices used to record and play sound · Computer to record audio · Explain that the person who records the sound can say who is allowed to use it · I can re-record my voice to improve my recording · Inspect the soundwave view to know where to trim my recording · Discuss what sounds can be added to a podcast · Explain how sounds can be combined to make a podcast more engaging · Save my project so the different parts remain editable · Plan appropriate content for a podcast · Record content following my plan · Review the quality of my recordings · Improve my voice recording · Open my project to continue working on it · Arrange multiple sounds to create the effect I want · Explain the difference between saving a project and exporting an audio file	· Program a computer by typing command · Explain the effect of changing a value of a command · Create a code snippet for a given purpose · I can use a template to draw what I want my program to do · Write an algorithm to produce a given outcome · Test my algorithm in a text-based language · Identify repetition in everyday tasks · Identify patterns in a sequence · Use a count-controlled loop to produce a given outcome · Identify the effect of changing the number of times a task is repeated · Predict the outcome of a program containing a count-controlled loop · Choose which values to change in a loop · Identify 'chunks' of actions in the real world · Use a procedure in a program · Explain that a computer can repeatedly call a procedure · Design a program that includes count controlled loops	· Choose a data set to answer a given question · Suggest questions that can be answered using a given data set · Identify data that can be gathered over time · Explain what data can be collected using sensors · Use data from a sensor to answer a given question · Identify that data from sensors can be recorded · Recognise that a data logger collects data at given points · Identify the intervals used to collect data · Talk about the data that I have captured · View data at different levels of detail · Sort data to find information · Explain that there are different ways to view data · Propose a question that can be answered using logged data	· Improve an image by rotating it · Explain why I might crop an image · Use photo editing software to crop an image · Understand that editing images can be unethical · Explain that different colour effects make you think and feel different things · Experiment with different colour effects · Explain why I chose certain colour effects · Add to the composition of an image by cloning · Identify how a photo edit can be improved · Remove parts of an image using cloning · Experiment with tools to select and copy part of an image · Use a range of tools to copy between images · Explain why photos might be edited · Describe the image I want to create · Choose suitable images for my project · Create a project that is a combination of other images · Review images against a given criteria · Use feedback to guide making changes	· List an everyday task as a set of instructions including repetition · Predict the outcome of a snippet of code · Modify a snippet of code to create a given outcome · Modify loops to produce a given outcome · Choose when to use a count-controlled and an infinite loop · Recognise that some programming languages enable more than one process to be run at once · Choose which action will be repeated for each object · Explain what the outcome of the repeated action should be · Evaluate the effectiveness of the repeated sequences used in my program · Identify which parts of a loop can be changed · Explain the effect of my changes · Re-use existing code snippets on new sprites · Evaluate the use of repetition in a project · Select key parts of a given project to use in my own design · Develop my own design explaining what my project will do · Refine the algorithm in my design

	found on websites · Recognise that I can add content to the WWW · Explain that internet services can be used to create content online · Explain that websites and their content are created by people · Suggest who owns the content on websites · Explain that there are rules to protect content · Explain that not everything on the World Wide Web is true · Explain why some information I find online may not be honest, accurate, or legal · Explain why I need to think carefully before I share or reshare content	· Listen to an audio recording to identify its strengths · Suggest improvements to an audio recording · Choose appropriate edits to improve my podcast	· Make use of my design to write a program · Develop my program by debugging it	· Plan how to collect data using a data logger · Use a data logger to collect data · Interpret data that has been collected using a data logger · Draw conclusions from the data that I have collected · Explain the benefits of using a data logger	· Combine text and my image to complete the project	· Build a program that follows my design · Evaluate the steps I followed when building my project

Year 5	**Systems and searching** **Children will learn to:** · Explain that systems are built using a number of parts · Describe the input, process,	**Video production** **Children will learn to:** · Explain that video is a visual media format · Identify features of videos · Compare features in different videos	**Selection in physical computing** **Children will learn to:** · Create a simple circuit and connect it to a microcontroller · Program a microcontroller to make an LED switch on	**Flat-file databases** **Children will learn to:** · Create a database using cards · Explain how information can be recorded	**Vector graphics** **Children will learn to:** · Recognise that vector drawings are made using shapes · Experiment with the shape and line tools · Discuss how vector drawings are different	**Selection in quizzes Children will learn to:** · Recall how conditions are used in selection · Identify conditions in a program · Modify a condition in a program

	and output of a digital system · Explain that computer systems communicate with other devices · Identify tasks that are managed by computer systems · Identify the human elements of a computer system · Explain the benefits of a given computer system · Explain how to keep my personal information safe online · Make use of a web search to find specific information Refine my web search · Compare results from different search engines · Recognise trustworthy websites · Explain why we need	· Know what to do if I see any content online that makes me feel uncomfortable · Identify and find features on a digital video recording device · Experiment with different camera angles · Make use of a microphone · Suggest filming techniques for a given purpose · Capture video using a range of filming techniques · Review how effective my video is · Outline the scenes of my video · Decide which filming techniques I will use · Create and save video content · Store, retrieve, and export my recording to a computer · Explain how to improve a video by reshooting and editing · Select the correct tools to make edits to my video · Make edits to my video and improve the final outcome · Recognise that my choices when making a video will impact the	· Explain what an infinite loop does · Connect more than one output component to a microcontroller · Use a count-controlled loop to control outputs · Design sequences that use count-controlled loops · Explain that a condition is either true or false · Design a conditional loop · Program a microcontroller to respond to an input · Explain that a condition being met can start an action · Identify a condition and an action in my project · Selection (an 'if…then…' statement) to direct the flow of a program · Identify a real-world example of a condition starting an action · Describe what my project will do · Create a detailed drawing of my project · Write an algorithm that describes what my model will do	· Order, sort, and group my data cards · Explain what a field and a record is in a database · Navigate a flat-file database to compare different views of information · Choose which field to sort data by to answer a given question · Explain that data can be grouped using chosen values · Group information using a database · Combine grouping and sorting to answer specific questions · Choose which field and value are required to answer a given question · Outline how 'AND' and 'OR' can be used to refine data selection · Choose multiple criteria to answer a given question Select an appropriate	from paper-based drawings · Identify the shapes used to make a vector drawing · Explain that each element added to a vector drawing is an object · Move, resize, and rotate objects I have duplicated Use the zoom tool to help me add detail to my drawings · Explain how alignment grids and resize handles can be used to improve consistency · Modify objects to create a new image · Identify that each added object creates a new layer in the drawing · Change the order of layers in a vector drawing · Use layering to create an image copy part of a drawing by duplicating several objects · Recognise when I need to group and ungroup objects · Reuse a group of objects to further develop my vector drawing · Create a vector drawing for a specific purpose Reflect on the skills I have used and why	· Selection in an infinite loop to check a condition Identify the condition and outcomes in an 'if… then… else…' statement · Create a program that uses selection to produce different outcomes · Explain that program flow can branch according to a condition design the flow of a program that contains 'if… then… else…' · Show that a condition can direct program flow in one of two ways · Use a design format to outline their project · Identify the outcome of user input in an algorithm · Implement their algorithm to create the first section of their program · Test their program · Share their program with others · Identify ways the program could be improved Identify the setup code needed in their program

	tools to find things online · Recognise the role of web crawlers in creating an index · Relate a search term to the search engine's index · Order a list by rank · Explain that a search engine follows rules to rank results · Give examples of criteria used by search engines to rank results · Describe some of the ways that search results can be influenced · Recognise some of the limitations of search engines · Explain how search engines make money	quality of the final outcome · Evaluate my video and share my opinions	· Use selection to produce an intended outcome · Test and debug my project	chart to visually compare data · Refine a chart by selecting a particular filter · Explain the benefits of using a computer to create charts · Ask questions that will need more than one field to answer · Refine a search in a real-world context · Present my findings to a group	I have used them Compare vector drawings to freehand paint drawings	

Year 6	**Communication and collaboration** **Children will learn to:** · Recognise that data is transferred using agreed methods · Explain that internet devices have addresses · Describe how computers use addresses to access websites · Identify and explain the main parts of a data packet · Explain that data is transferred over	**Webpage creation** **Children will learn to:** · Explore a website · discuss the different types of media used on websites · Know that websites are written in HTML · Recognise the common features of a web page · Suggest media to include on a page · Draw a web page layout that suits a purpose · Understand why we should use copyright-free images · Find copyright-free images · Describe what is meant by the term 'fair use'	**Variables in games** **Children will learn to:** · Identify examples of information that is variable · Explain that the way a variable changes can be defined · Identify that variables can hold numbers or letters · Identify a program variable as a placeholder in memory for a single value · Explain that a variable has a name and a value · Recognise that the value of a variable can be changed	**Intro to spreadsheets** **Children will learn to:** · Collect data · Suggest how to structure their data · Enter data into a spreadsheet · Explain what an item of data is · Choose an appropriate format for a cell · Apply an appropriate format to a cell · Explain which data types can be used in calculations · Construct a formula in a spreadsheet	**3D modelling** **Children will learn to:** · Add 3D shapes to a project · View 3D shapes from different perspectives · Move 3D shapes relative to one another · Resize an object in three dimensions · Lift/lower 3D objects · Recolour a 3D object · Rotate objects in three dimensions · Duplicate 3D objects · Group 3D objects · Accurately size 3D objects · Show that placeholders can create holes in 3D objects	**Sensing movement** **Children will learn to:** · Apply their knowledge of programming to a new environment · Test their program on an emulator · Transfer their program to a controllable device · Identify examples of conditions in the real world · Use a variable in an if, then, else statement to select the flow of a program · Determine the flow of a program using selection · Use a condition to change a variable · Experiment with different physical inputs

networks in packets · Explain that all data transferred over the internet is in packets · Recognise how to access shared files stored online · Send information over the internet in different ways · Explain that the internet allows different media to be shared · Identify different ways of working together online · Recognise that working together on the internet can be public or private · Explain how the internet enables effective collaboration · Explain the different ways in which people communicate · Identify that there are a variety of ways to communicate over the internet	· Know how to use technology respectfully and responsibly when online · Add content to their own web page · Preview what their web page looks like · Evaluate what my web page looks like on different devices and suggest/make edits. · Explain what a navigation path is · Describe why navigation paths are useful Make multiple web pages and link them using hyperlinks · Explain the implication of linking to content owned by others · Create hyperlinks to link to other people's work · Evaluate the user experience of a website	· Decide where in a program to change a variable · Make use of an event in a program to set a variable · Recognise that the value of a variable can be used by a program · Create algorithms for their project · Explain their design choices · Create the artwork for a project · Choose a name that identifies the role of a variable · Test the code that they have written · Identify ways that a game could be improved · Usables to extend a game	· Identify that changing inputs changes outputs · Calculate data using different operations · Create a formula which includes a range of cells · Apply a formula to multiple cells by duplicating it · Use a spreadsheet to answer questions · Explain why data should be organised · Apply a formula to calculate the data needed to answer questions · Produce a chart Use a chart to show the answer to a question · Suggest when to use a table or chart	· Combine a number of 3D objects · Analyse a 3D model Choose objects to use in a 3D model · Combine objects in a design · Construct a 3D model based on a design · Explain how their 3D model could be improved · Modify their 3D model to improve it	· Explain that checking a variable doesn't change its value · Use an operand (e.g. <>=) in an if, then statement Explain the importance of the order of conditions in else, if statements · Modify a program to achieve a different outcome · Decide what variables to include in a project · Design the algorithm for their project · Design the program flow for their project · Create a program based on their own design and test it · Use a range of approaches to find and fix bugs

	· Choose methods of communication to suit particular purposes Compare different methods of					