



St Mary's Catholic Junior School

Year 3

Computing Long Term Plan



Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Networks and the Internet	Programming Scratch	Emailing	Journey inside a computer	Creating Media: Video Trailers	Tops Trumps database
Online Safety (4 lessons)					

Curriculum Document		
Digital Literacy	Information Technology	Computer Science
<ul style="list-style-type: none"> Learning to be a responsible digital citizen; understanding their responsibilities to treat others respectfully and recognising when digital behaviour is unkind Learning about cyberbullying Learning that not all emails are genuine, recognising when an email might be fake and what to do about it Learning that not all information on the internet is factual Understanding who personal information should/ should not be shared with 	<p><u>Using software</u></p> <ul style="list-style-type: none"> Taking photographs and recording video to tell a story. Using software to edit and enhance their video adding music, sounds and text on screen with transitions. <p><u>Using email and the internet</u></p> <ul style="list-style-type: none"> Learning to log in and out of an email account Writing an email including a subject, 'to' and 'from' Sending an email with an attachment Replying to an email Identifying useful terms and phrases for search engines <p><u>Using data</u></p>	<p><u>Hardware</u></p> <ul style="list-style-type: none"> Understanding what the different components of a computer do and how they work together Drawing comparisons across different types of computers Learning what a server does <p><u>Networks and data representation</u></p> <ul style="list-style-type: none"> Learning what a network is and its purpose Identifying the key components within a network, including whether they are wired or wireless Recognising links between networks and the internet Learning how data is transferred <p><u>Computational thinking</u></p>

	<ul style="list-style-type: none">• Understanding the vocabulary associated with databases: field, record, data• Learning about the pros and cons of digital versus paper databases• Sorting and filtering databases to easily retrieve information• Creating and interpreting charts and graphs to understand data <p><u>Wider use of technology</u></p> <ul style="list-style-type: none">• Understanding the purpose of emails.• Learning what a search engine is• Recognising how social media platforms are used to interact	<ul style="list-style-type: none">• Using decomposition to explain the parts of a laptop computer• Using decomposition to explore the code behind an animation• Using repetition in programs• Understanding that computers follow instructions• Using an algorithm to explain the roles of different parts of a computer• Using logical reasoning to explain how simple algorithms work• Explaining the purpose of an algorithm• Forming algorithms independently <p><u>Programming</u></p> <ul style="list-style-type: none">• Using logical thinking to explore more complex software; predicting, testing and explaining what it does• Incorporating loops to make code more efficient• Remixing existing code• Using a more systematic approach to debugging code, justifying what is wrong and how it can be corrected
--	--	---

CURRICULUM ENTITLEMENT

	Key Computing Knowledge	Vocabulary		Assessment Criteria – ‘Can I...? statements’
Online Safety	<ul style="list-style-type: none"> To understand how the internet can be used to share beliefs, opinions and facts To understand the effects that some internet use can have on our feelings and emotional wellbeing To understand the ways personal information can be shared on the internet To understand the rules for social media platforms 	Accuracy Age restrictions Autocomplete Belief Block and report Content Device Digital devices Fact Internet Internet of things Opinion	Privacy settings Reliability Search engine Search functionality Smart devices Social media platforms	<ul style="list-style-type: none"> Can I confidently give examples of opinions, beliefs and facts? Can I recall some of the seven tips for dealing with upsetting online content? (slide 7 of the Presentation: When being online makes me upset). Can I show understanding that digital devices used can share personal information amongst each other? Can I show confidence in understanding some of the key features of social media platforms and the age restrictions that are required for popular social media platforms?
Networks and the Internet	<ul style="list-style-type: none"> To understand what a network is and understand our school network To understand how information moves around a network and begin to recognize real world networks To understand how the internet works and explain a website’s journey. To explore the role of routers. To understand the role of packets. 	Component Desktop Device Internet Laptop Network Network map Network switch Packet Photocopier Printer Router	Server Tablet WiFi Wired Wireless Wireless access points	<ul style="list-style-type: none"> Can I recognise that a network is two or more devices connected and showing this information in a poster that combines text and images? Can I recognise that files are saved on a server and that files travel through wireless and wire connections rather than travelling directly? Can I show understanding that networks connect to the internet via a router and explaining parts of the journey a website goes through to reach your computer? Can I explain that routers connect us to the internet and suggest what they have to do? Can I Explain that websites are split into small pieces to be sent via the internet and that packets are encoded with information to get to the right place?
Programming Scratch	<ul style="list-style-type: none"> To explore a programming application 	Algorithm Animation Application	Plan Predict Program	<ul style="list-style-type: none"> Can I explain what happened when I added certain blocks? Can I suggest how the colour differences could help me predict block actions?

	<ul style="list-style-type: none"> To use repetition (a loop) in a program To program an animation To program a story To program a game 	Code Coding application Coding blocks Debug Decompose Game Interface Loop	Programming application Remixing code Repetition Review Sprite Storytelling Tinkering	<ul style="list-style-type: none"> Can I explain what a loop is and what its role in a program is? Can I include a loop in my program and explain what it's doing? Can I suggest which blocks are used and to create what effect? Can I Suggest possible additions to an existing program? Can I Choose blocks to create specific effects? Can I Suggest what blocks/features have been used? Can I recognize where something on screen is controlled by code? Can I use a systematic approach to finding bugs? Can I Explain what an algorithm is? Can I Understand the purpose of an algorithm? Can I Use a class algorithm when creating a program?
Emailing	<ul style="list-style-type: none"> To understand what email is used for and to send an email To edit email content and add an attachment To understand the importance of being kind online and what this looks like To understand that cyberbullying involves being unkind online To understand that not all emails are genuine 	Adding an attachment Advice Attachment BCC Body language CC Composing an email Computer Content Copyright Cyberbullying Decision tree Digital citizen Document Domain Download Email Email account	Log in Log out Mark it as spam Negative language Online Personal information Positive language Reply Responsible digital citizen Scammer Sending an email Settings Sign in Spam email Subject bar Theme	<ul style="list-style-type: none"> Can I log in and log out of email and sending a simple email which includes a subject plus 'To' and 'From' in the body text? Can I Edit an email, typing the correct email address and adding at least one attachment before sending it? Can I Write an email with instructions written using positive language? Can I Create a flowchart showing how to deal with cyberbullying? Can I send an email which describes some of the best ways to avoid being tricked by fake emails?

		Email address Password Emoji Emotions Fake Flowchart Font Genuine Hacker Icons Image Inbox Information Install Link	Tone of voice Username Video Virus WiFi	
Journey inside a computer	<ul style="list-style-type: none"> To recognise basic inputs and outputs To decompose a laptop To understand the purpose of computer parts To understand the purpose of computer parts To decompose a tablet computer 	Algorithm Assemble Batteries Camera Components Computer CPU Data Decompose Desktop computer Disassemble GPU Hard drive Infinite loop Input Keyboard	Laptop Memory Microphone Monitor Mouse Output Photocopier Program QR code RAM ROM Speaker Storage Tablet Technology Touchscreen	<ul style="list-style-type: none"> Can I Suggest what inputs and outputs are and recognise that the computer sends and receives instructions? Can I explain that parts work together to make the laptop work and suggesting the role of some of the parts? Can I suggest the purpose of parts of a computer and explaining what an algorithm is? Can I suggest what memory is for inside a computer and use a QR code? Can I recognise some computer parts relating to functions and making some laptop and tablet comparisons?

<p>Creating Media: Video Trailers</p>	<ul style="list-style-type: none"> • To plan a book trailer • To take photos or videos to tell a story • To edit a video • To add text and transitions to a video • To evaluate video editing 	<p>App Cross blur Cross zoom Crossfade Desktop Digital device Dip to black Directional wipe Edit Evaluate Film Film editing software Filming Graphics Import Key events Key Scenes</p>	<p>Laptop Music Photo(s) Plan Record Sound Sound effect(s) Storyboard Storyline Tablet Technology Text Time code Trailer Transition Video Video editing Voiceover(s)</p>	<ul style="list-style-type: none"> • Can I create a storyboard to plan their book trailer and describe the purpose of a trailer? • Can I use digital devices to record video or take photos, framing shots carefully to create the desired effects? • Can I import videos and photos into film editing software, recording sounds and adding these to their videos? • Can I add text to my trailer, as well as incorporating different transitions between shots or images? • Can I identify and articulate what makes a successful book trailer and suggest ideas on how to share book recommendations with others?
<p>Tops Trumps database</p>	<ul style="list-style-type: none"> • To understand the terminology around databases • To compare paper and computerised databases • To sort, filter and interpret data • To represent data in different ways • To sort data for a purpose 	<p>Category Charts Computer Cons Data Database Excel Fields Filter Graphs</p>	<p>Information Interpret Online PDF Plan Pros Questionnaire Records Representation Sort Spreadsheet</p>	<ul style="list-style-type: none"> • Can I explain what is meant by field, record and data and playing the Comparison cards game by accurately comparing numbers and scanning for relevant information? • Can I identify examples of paper and computerised databases from a list of statements? • Can I input values into a spreadsheet, sort, filter and interpret that data and create questions that can be answered by the data? • Can I create a graph on Microsoft Excel, naming different types of chart and explaining the purpose of visual representations of data? • Can I explain what databases are used for as well as sorting and filtering data for a specific purpose?