

ST CHARLES' CATHOLIC PRIMARY SCHOOL



COMPUTING MEDIUM TERM PLANNING

	AUTUMN		SPRING		SUMMER	
Reception	Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. They recognize on and offline technology and how to use it safely with the help of trusted adults.		Look at what I can do! To learn that information can be used and created using technology. Talk about different kinds of information such as pictures, videos, text and sound. Use a mouse and touch screen to move objects on a screen. Create shapes and text on a screen.		I am a computer scientist! To learn cause and effect in computing. (I press this button – this is the result) Be able to give a floor robot instructions to make it move. Use simple software and explain what you are doing. Understand what happens when you click a button or touch an icon.	
	Vocal	bulary	Vocal	bulary	Vocabulary	
	Button, mouse, icon, keyboard, touch screen,			eyboard, touch screen,		keyboard, touch screen,
	tablet, pc, laptop, camera, radio, smartphone		tablet, pc, laptop, image, text, video, sound, listen,		tablet, pc, laptop, direction, arrows, input and	
			draw, colour		output.	
YEAR 1	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	Basic Skills Children understand	Producing Digital Media Children use technology	Unplugged Algorithms Give instructions to a	Programming with Robots	Data Handling Pictograms	Presenting Information
	why we have passwords (DL) and understand that we must keep passwords private. Children will use the keyboard or a word bank on a device to enter text into a program. They will understand some of the basic functions on a keyboard	to collect information, including photos, videos and sound. Use software with support, to create, store and edit digital content. Use the keyboard or a word bank on a device to enter text into a program. Save information in a specific place and retrieve it again.	friend and follow their instructions to move around a space. Begin to predict what will happen for a short sequence of instructions Understand what an algorithm is and be able to create a simple algorithm. Begin to use software or applications to	Give instructions to a friend and follow their instructions to move around a space. Describe what happens when buttons are pressed on a robot Press buttons in the correct order to make a robot follow a sequence. Begin to predict what will happen for a short	To use technology to collect information. Sort different kinds of information and present it to others. Add information into a pictogram and talk about their findings. To talk about the different ways in which data / information can be shown	Use software to create digital content Use the keyboard to input text Understand some of the basic functions of a keyboard (backspace, space etc)

	(Backspace, Capslock, Enter)		create movement and patterns on a screen.	sequence of instructions Understand what an algorithm is and be able to create a simple algorithm.		
	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
	Keyboard, keys, letters, Capslock, Shift, Enter, Backspace. Log In, Shut Down, Password. Security	Keyboard, keys, letters, Capslock, Shift, Enter, Backspace. Log In, Shut Down	algorithm, program, instruction, code	Beebot, forward, backwards, right, left, turn, program, algorithm, clear	Pictogram, graph, chart, tally, collect, count, data	image, photograph, import, text, font, colour, delete
YEAR 2	What is a Computer?	Unplugged Algorithms	Programming using Scratch Jr	Storing and Presenting Data	Modifying Text and Images	Presenting Information
	Children can explain why they use technology in the classroom, in their homes and in the community. They can identify the benefits of using technology, such as creating content and communicating efficiently. They can identify a computer by knowing that it has inputs, a processor and outputs and can identify parts of a computer including what an input and output is.	Use logical reasoning to predict and debug more complex programs. Can create and debug with improved confidence and efficiency. Begin to program using simple block code. Programme a robot or software to do a particular task. Be able to explain the order needed to do things to make something happen and to talk about it as an algorithm. Understand what an algorithm is and demonstrate	Be able to explain the order needed to do things to make something happen and to talk about it as an algorithm. Programme a robot or software to do a particular task. Look at a basic program and explain what will happen. Use programming software and applications to make objects move. Use logical reasoning to predict and debug more complex programs.	Identify the benefits of using technology, such as creating content and communicating efficiently. Create a graph or chart using data collected on a specific topic area. Talk about the data that is shown in their chart or graph. Use a variety of software to manipulate and present digital content in different ways with increasing independence.	Demonstrate the use of technology responsibly in terms of how we use it and the time we spend using it. Know how to report inappropriate content or contact online. Children can explain why they use technology in the classroom, in their homes and in the community. Use the keyboard on their device to add, delete, edit and format text.	Know how to report inappropriate content or contact online. Use a variety of software to manipulate and present digital content in different ways with increasing independence. Save and open files on the device they use from a specific file location.

	Vocabulary Computer, Input, Output, Invention,	vocabulary Sequence, Code, Blocks, Sprites, Repeat, Bug, Debugging	Can create and debug with improved confidence and efficiency. Begin to program using simple block code. Vocabulary Sequence, Code, Blocks, Sprites, Repeat, Bug, Debugging	Vocabulary Records, Fields, Value, Data, Database, Graphs, Charts, Sort,	Save and open files on the device they use from a specific file location. Vocabulary Text, Bold, Italic, Keyboard,	Vocabulary Audience, Font, Online, Audience
YEAR 3	Understand the difference between data and information. Be able to effectively use a spell checker. Children consider their responsibilities and actions to others online. Understand how to use a search engine responsibly and safely. Save and retrieve work online, on the school network and their own device.	Understand how an algorithm is implemented using a sequence of precise instructions. Can predict the outcome of a sequence of precise instructions. Repeatedly test a program and recognise when they need to debug it. Detect a problem in an algorithm, which could result in a different outcome to the one intended. Understand what inputs and outputs are, how they can be used. Provide examples of how to use inputs and outputs and outputs effectively. Designs, writes, executes and debugs	Creating Code with Kodu Understand how an algorithm is implemented using a sequence of precise instructions. Can predict the outcome of a sequence of precise instructions. Repeatedly test a program and recognise when they need to debug it. Detect a problem in an algorithm, which could result in a different outcome to the one intended. Designs, writes, executes and debugs programs of increasing complexity that accomplish a specific goal.	Children consider that all of the media they see could have been altered. Save and retrieve work online, on the school network and their own device. Think about whether they can use images that they find online in their own work.	To identify components within a PC/ Laptop and what each component does. To understand the basic fundamentals of how a computer works.	Content Combine a mixture of text, graphics and sound to share ideas and learning. Use appropriate keyboard commands to amend text. Be able to effectively use a spell checker. Evaluate their work and improve its effectiveness. Use an appropriate tool to share their work online.

		programs of increasing	Use logical reasoning to			
		complexity that	predict and debug more			
		accomplish a specific	complex programs.			
		goal.				
		Use logical reasoning to				
		predict and debug more				
		complex programs				
		including inputs and				
	Vocabulary	outputs. Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
	Email, malicious,	Sequence, selection,	Kodu, computational,	Camera, image, filter,	Laptop, desktops, hard	social media, graphic
	phishing, social media,	repetition, input,	algorithm,	crop, pixel, portfolio,	drive, fan, heat sink,	design, publishing,
	networks, internet,	output, algorithm,	programming,	theme, consent.	keyboard,	username, password,
	world wide web,	programming,	debugging, sequence,	theme, consent.	motherboard,	marketing, template,
	webcam, keyboard	debugging,	sprite, artificial		microprocessor,	elements, text, effect,
	in escalli, keysoura	computational	intelligence, NPC (non-		memory, disc drive,	filter, adjust, crop.
		thinking, costumes,	player character),		network, router, hub,	inter, adjust, crop.
		tinker.	pathway.		switch, Wifi.	
YEAR 4	Branching databases	Repetition and Forever	Coding with Scratch	Creating a Video	Networks and Online	Spreadsheets
	3	Loops			Services	-
	Demonstrate the	Design simple	Has an understanding	Use photos, video and	Understand the	Use a keyboard
	different ways data can	algorithms using loops	of how sequencing,	sound to create an	difference between the	confidently and make
	be organised.	and repeats, whilst	using inputs and	atmosphere when	Internet and online	use of a spellchecker to
	Demonstrate the	detecting and	repetition in programs	presenting to different	services such as the	write and review their
	different ways data can	correcting errors is	has specific effects on	audiences.	World Wide Web,	work.
	be converted into	debugging.	the output, works with	Be confident to explore	instant messaging and	Use an appropriate tool
	information.	Write and execute an	'loops' and understands	new media to extend	email.	to share their work and
	Make a branching	efficient program, using	their effect.	what they can achieve.	Tell you whether a	collaborate online.
	database.	loops such as forever,	Recognise that an	Change the	resource they are using	Be able to evaluate
	Collect data and	repeat & repeat until	algorithm will help to	appearance of text to	is from the World Wide	other people's work
	identify where it could	commands.	sequence more	increase its	Web, the school	and give them
	be inaccurate.	Decompose a problem	complex programs.	effectiveness	network or their own	constructive feedback
	Plan, create and search	into smaller parts with	Use logical reasoning to	depending on the	work.	to help them improve
	a database.	some verbal reasoning.	predict and debug more	audience or mood.	Show an awareness of a	their work.
	Select the best way to		complex programs	Create, modify and	range of Internet	Be confident to explore
	present data to a		including loops and	present documents for	services such as the	new media to extend
	specific audience	1	repeats.	a particular purpose	World Wide Web, email	what they can achieve.
	specific audience. Log data using a device.		repeats.	and audience.	and instant messaging.	what they can demeve.

					Recognise what is	
					acceptable and	
					unacceptable behaviour	
					when using technology	
					and online services.	
					Children understand	
					how effective a strong	
					password is and what a	
					strong password looks	
					like	
	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
	Branching database,	Repeat, forever, loop,	Sequence, variable,	Video, Special effects,	WAN, LAN, network,	Spreadsheet, rows,
	database, organise,	code, debug, algorithm,	algorithm, code, repeat,	CGI, Green screen,	router, wifi, wireless,	columns, algebra,
	transition, slides, log.	sequence, selection.	loop, input, output,	Audio, Image, Text.	Local, cable,	formula, pixel, binary.
			device.		connection, binary,	
					modem, switch, server.	
YEAR 5	Create and Search a	If and Else Statements	Creating Music Using	Stop Motion Animation	World Wide Web and	3D Modelling
	Database		Code		Internet	
		Design, write and		Select, use and		Use different online
	Use a spreadsheet and	execute an efficient	Use logical reasoning to	combine the	Be aware of their digital	tools for different
	database to collect,	program, including	predict and debug more	appropriate technology	footprint.	purposes.
	record and evaluate	selection (IFTHEN)	complex programs	tools to create effects	Know difference	Be able to use a variety
	data	command.	including selection.	in media.	between Internet and	of familiar and
		Use logical reasoning to		Select an appropriate	the Worldwide Web.	unfamiliar software by
		predict and debug more		online or offline tool to	Know what a network is	using a pre-existing
		complex programs		create and share ideas	and be able to identify	skill set
		including selection.		Understand the	parts of a network	Select, use and
		Decomposes more		dangers of building	within their school.	combine the
		open-ended problems		online relationships.	To understand what an	appropriate technology
		into smaller parts,			IP address is.	tools to create effects
		provides some				in media.
		reasoning for their				
		choices.				
	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
	Database, information,	Algorithm, sprite, loops,	Samples, composition,	Animation, Frame,	Network, wireless	CAD (Computer aided
	record, field, retrieval,	variables, events,	rhythm	Pivot Stick Figure	access points, server,	design), Template,
	record, field, fetfieval,	variables, events,	IIIyullii	Animator, Image, Stop	router, wired device,	Select, Draw, Push
				/ initiator, iniage, stop	Touter, when device,	Jeiect, Diaw, Fusii

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	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary	Vocabulary
	Cell, Column, Row,	Algorithm, abstraction,	Algorithm, abstraction,	Timeline, crop, split,	Server, Router, Data,	HTML, Tags, Elements,
	Formulae, Graph, Chart	decomposition, logic,	decomposition, logic,	layer	Switch, Modem, Client	Body, Head, Line
	Spreadsheet,	sequence, variable,	sequence, variable,	·	Devices, Wireless	breaks, Paragraph,
	Cell Reference, Grid,	input, output, debug,	input, output, debug,		Devices	Links, Images
	Tab, Workbook, Merge,	operators, loops,	operators, loops			
	Auto Sum	conditionals				