Computing

St Joseph's Catholic Primary School, a Voluntary

Academy, Langwith Junction

Year 1 computing						
	By the end of Advent Term 1 children will:	**By the end of Advent Term 2 children will:**	**By the end of Lent Term 1 children will:**	**By the end of Lent Term 2 children will:**	**By the end of Pentecost Term 1 children will:**	**By the end of Pentecost Term 2 children will:**
	• Know that personal information should not be shared online • Know to tell a trusted adult immediately if anyone tries to meet them via the internet • Know how to access the WWW safely to search for information • Know what to do if they find something inappropriate online Know how to stay safe online	• Know some common uses of information technology in the home • Know some common uses of information technology beyond school • Know how to cerate digital artwork • Know some common uses of information technology beyond school	• Know that an algorithm is a set of step by step instructions to complete a task. • Know how to sequence simple directions. • Know how to predict the outcome of a sequence. • Know that algorithms need to be precise and need checking for errors. Know how to design an algorithm	• Know how to use a keyboard to type words and sentences. • Know how to save work and come back to it later. • Know how to drawing tools to create pictures • Know how to add sound and playback • Know how to use technology to create, organise, store, manipulate and retrieve digital content	• Know that programmable toys follow an algorithm. • Know that we can predict the behaviour of simple programs. • Know that programs need to follow precise instructions. • Know how to debug errors in programs. • To know how to create a map and plan a route for the Beebots to move around. •	• Know that data can be recorded in pictures • Know how to add and save data to a pictogram • Know how to retrieve and manipulate data • Know how to create a class pictogram to store data.

Vocabulary	Trusted adult, personal information, private, password, inappropriate,	Information technology, controls, electrical device,	Algorithm, step by step instructions, directions, particular order, programming	Keyboard, typing, backspace, delete, shift key, punctuation, capital letters, save, save as, drawing tools, camera app, record	Bee bot, algorithm, program, command, instruction, error, journey, predict, debug	Data, information, sorting, pictogram, digital content, storing data, saving data, folder

Year 2 Computing

	By the end of the Advent Term 1children will:	By the end of Advent Term 2 children will:	By the end of the Lent Term 1 children will:	By the end of Lent Term 2 children will	By the end of the Pentecost Term 1 children will:	By the end of Pentecost Term 2 children will
	• Know where to go for help if I am concerned • Know how to behave respectfully online. • Know how to create an online avatar that can hide your identity. • To know how to use safe search filters	• Know how information technology is beyond school • Know how to use digital mapping tools • Know how smart watches work • Know how information technology is used in cars. • Know how to use common uses of	• Know how to use 2Sequence software to play sounds. • Know how to record and upload sounds • Know how to edit and combine sounds • Know how to identify errors in algorithms and amend (debug) them.	• Know how to use 2Connect software. • know how to edit and improve work • Know how to copy pictures from the world wide web • Know how to plan ideas for a concept map. • Know how to use technology purposefully to create,	• Know how to rotate a character diagonally • Know how to rotate an onscreen robot diagonally • Know how to create a simple flow chart of commands • Know how to predict the outcome of a simple program.	• Know how to use advanced settings in 2Count software. • Know how to organise data. • Know how to save and upload pictures from the WWW • Know how to make pictograms that represents data collected using

	• Know how to stay safe online .	information technology beyond school	• Know how to use precise instructions to create a piece of music	organise, manipulate and retrieve digital content.	• Know how to debug a program • Know how to create and debug a sequence of instructions that include diagonal rotation	2Count software.
	Digital device, private, avatar, protect/hide my identity, online, respect	Information technology, smart device, software, store information, maps,	Step by step instructions, sequence, digital device, file, folder, debug, record, upload, edit, change, save, open	Caps lock, capital letters, delete, font, copy, paste, undo, redo, drop down menu, text, World wide web, save as	Program, instructions, task, sequence, debug, correct, quarter turn, diagonal, 90 degrees, 45 degrees, predict, onscreen robot, algorithm	Pictograph, data, insert, camera roll, internetdownload, upload, digital content, category, ascending, descending

Year 3 Computing

	By the end of the Advent Term 1 children will:	By the end of Advent Term 2 children will:	By the end of the Lent Term 1 children will:	By the end of Lent Term 2 children will:	By the end of the Pentecost Term 1 children will:	By the end of Pentecost Term 2 children will:
	• Know the SMART rules and how to follow them	• Know the difference between input devices	• Know a flowchart is a type of diagram that represents	• Know how to create a PowerPoint	• Know that blocks of code need to be	• Know how to read and interpret data in a range of

	• Know different ways I can report concerns or get help if I am concerned. • Know how to behave respectfully and responsibly online. • Know that information put online leaves a trail and can be seen and shared by others as a digital footprint. • Know how to make a secure password • Know the importance of keeping passwords	• Know that a computer network is when more than 1 computer is linked to others and is sharing information. • Know that Wi-Fi allows networks to connect without the need for wires. • Know that each website has a unique address • Know that QR codes store URL's and other information. • Know what computer networks do and how they provide multiple services • Know how to search for information on	an algorithm and applies rules • Know that problems can be solved by breaking them down into smaller parts • Know how to create flow chart diagrams to represent algorithms for everyday actions. • Know that programs require focusing on important information and ignoring irrelevant detail • Know how to use the repeat command • Know how to use simple selection	document inserting text • Know how to edit text. • Know how to insert images • Know how to add and remove effects to slides • Know how to select and use software to create content to present information.	told when to run. • Know how to use the timer command to delay blocks of code or repeat blocks of code at regular intervals. • Know how to use the repeat command for a set amount of time or forever • Know how to work with various forms of input and output. • Know how to design a sequence of instructions including directional instructions and how to	tables, charts and graphs • Know how to add data, title and labels • Know how to format data within tables, charts and graphs • Know how to collect data and select suitable ways to present it

	private and logging off when you have finished with an online service. • Know how to use technology safely, respectfully and responsibly.	the web in different ways • Know what computer networks do and how they provide multiple services	using YES and NO commands • Know how to design, write and debug programs and how to use sequence, selection and repetition.		check for errors	
	Digital footprint, online trail, search history, SMART rules, secure password, logging in and out, fake identity	Input and output device, computer network, Wifi, URL, QR code,	Flowchart, algorithm, rules, logic, decomposition, abstraction, repeat command, repeat forever command, over write	Word document, insert, resize, drop down menu, copy, paste, cut, spell check, page orientation , portrait, landscape, text effects, Power Point, slides, transitions, animations, drag text box, download and upload images, resize, reposition, rotate, crop	Block of code, decomposition, abstraction, timer command, repeat command, repeat until command, debug, errors, input and output	Data, pie chart, bar graph, title, labels, format data, fill tool, Word document, insert table, drag and drop, rows, columns, width, height, ascending, descending, A-Z, Z-A

Year 4 Computing

	By the end of the Advent Term 1 children will:	By the end pf Advent Term 2 children will	By the end of the Lent Term 1 children will:	By the end of Lent Term 2 children will	By the end of the Pentecost Term 1 children will:	By the end of Pentecost term 2 children will
	• Know I should think before sending/posting online. • Know that cyberbullying is not acceptable and how it can be dealt with • Know how to seek help if I am worried online, using a wider range of support • Know how to send and receive email safely • Know that social networking sites allow interaction with others online and that they have in built features • Know how to recognise	• Know how to use more complex search criteria or accurate search term to refine a search. • Know that not all websites are accurate • Know that plagiarism is stealing other's work and passing it off as your own • Know how to give credit to owners of work. • Know how to summarise information found and present this in own words to avoid plagiarism.	• Know that a turtle is a simple on-screen robot. • Know how to direct a turtle using quantity values and degrees. • Know how to make an accurate prediction and explain why I believe something will happen. • Now how to use a repeat command • Know how to create simple procedures within a program	• Know how stop frame animation works • Know how to use a range of digital drawing tools. • Know how to add text and sounds to frames • Know how to produce and edit multi-media digital artwork. • Know how to plan, produce and edit multimedia digital artwork • Know how to select, use and combine a variety of	• Know how to give an on-screen robot specific instructions • Know how to make an accurate prediction and explain why I believe something will happen • Know how to create a variable within a program • Know how to create a variable that uses outputs • Know how to design a sequence of instructions including	• Know what a branching database is • Know how to create paper based branching databases using Yes and No questions • Know how to create a digital database • Know how to add images and sound to a digital branching database • Know how to collect and present data in a digital branching database.

	acceptable/ unacceptable behaviour and know a range of ways to report concerns about content and contact	• Know how to use search technologies effectively and be discerning in evaluating digital content.	• Know how to design, write and debug programs that accomplish specific goals and include sequence and repetition	software on a range of digital devices and information	variables and how to check for errors (debug)	
	Posting online, social networking sites, built in features, electronic mail (email) cyberbullying, screenshotting evidence, block, report	Refining search terms, key words, plagiarism, stealing, giving credit, citation, summarise, own words	Logo, programming, on screen robot, robot, procedure, prediction, degrees, Turtle	Stop frame animation, frames, onion skin, copy, duplicate, change slightly, digital drawing tools, print screen, screenshot,	Variable, change, on screen robot, predict	Branching database, sorting, grouping data, Yes/No, final answers, paint menu, clipart, sound, drop down menu

Year 5 Computing

	By the end of the Advent Term 1 children will:	**By the end of Advent Term 2 children will:**	**By the end of Lent Term 1 children will:**	**By the end of Lent Term 2 children will:**	**By the end of Pentecost Term 1 children will:**	**By the end of Pentecost Term 2 children will**
	• Know how to use a variety of tools to report concerns about content and contact	• Know how search results are selected and ranked.	• Know how to use technology to control an external device	• Know a range of filming techniques • Know how to create video	• Know how to use the IF command to run a block of code	• Know what a database is • Know how to search and sort

• Know that poor online choices could have a negative impact in the future on a digital footprint. • Know how to attach files to emails • Know that some email can be harmful and you should only open email from a known source. • Know that malware can be harmful to your device or try to trick you and get personal information • Know how to use technology safely, respectfully and responsibly and identify a range of ways to report concerns about	• Know how to improve a web page ranking. • Know what copyright is. • Know how and why to cite websites as reference for work produced. • Know that some fake news is created deliberately and some websites are biased • Know how to use search technologies effectively: appreciate how results are selected and ranked and be discerning in evaluating digital content.	• Know how to use more complex measures of turns. • Know that in programming, 'repetition' is called 'a loop' • Know that subroutines are a sequence of code that perform a specific task within a main program. • Know how to control outputs on an external device • Know how to design, write and debug a program that uses sequence, selection and repetition to control a device.	using iMovie software • Know how to add sound to film • Know how to edit a film • Know how to plan a film, using storyboards and scripts. • Know how to select, use and combine a variety of software to present information	• Know how to use the IF/Else command to run different blocks of code. • Know how to design, write and debug a program that uses sequence and selection,	records in a digital database • Know how to create 'records' in a digital database • Know how to create 'fields' in a digital database • Know how to collect and present data in a digital database

	content and contact					
	Emails, attach file, malware, identity fraud, phishing, virus, spam, poor digital footprint, reputation, CEOP, Childline, report, flag	Search query, search results, search engine, web page ranking, copyright, modify searches, fake news, Find tool, citation	Subroutine, loop, repetition, external device, sequence, procedure, outputs,	Camera angle, shot, zoom in/out, transitions, voice over, narration, trimming, themes, story board, script	Selection, sequence, block of code, 2 way selection, If/else command, decomposition, logical thinking,	Database, fields, records, filter, sort, questions, drop down menu, arrange,

Year 6 Computing

	By the end of Advent Term 1 children will:	By the end of Advent Term 2 children will:	By the end of Lent Term 1 children will:	By the end of Lent Term 2 children will:	By the end of Pentecost Term 1 children will:	By the end of Pentecost term 2 children will:
	• Know about appropriate and inappropriate use of online services • Know how to minimise risks online using privacy settings • Know a range of ways to	• Know the importance of significant people in the history of computer networks. • Know the significant events in internet history that have offered	• Know that code can be organised into Tabs • Know how to design a solution by breaking a problem up • Know how to design programs that use input	• Know the features of a multimedia presentation • Know how to add video and sound to a PowerPoint • Know how to add hyperlinks to a presentation	• Know how to use technology (user interface) can control an external device • Know how to use flow diagrams to control variables and	• Know that spreadsheets store data and are made up of rows, columns and cells. • Know how to add text and numbers into spreadsheet cells. • Know how to format text

	report concerns about content and contact • Know that there are laws to protect data stored online. • Know how cookies are used to gather consent • Know how to use technology safely, respectfully and responsibly. • Know a range of ways to report concerns about content and contact	communication and collaboration • Know that some websites are made by users for users • Know that there are 2 main types of network that allow computers to share resources and communicate with each other. • Know that firewalls are software used to protect your network. • Know how computer networks can provide multiple services and the opportunities they offer for communication	and output commands • Know how to use selection in programs • Know how to work with variables to keep track of the things that can change. • Know that the same outcome can be achieved using a different selection of instructions/ commands • Know how to design, write and debug a program that uses sequence, selection variables and various forms of	• Know how to add non-linear hyperlinks to a presentation • Know how to select, use and combine a variety of software to present information	repetition in programs • Know how to use selection in programs. • Know how to use sub routines in programs for physical systems • Know how to design, write and debug programs to control physical systems	within a spreadsheet. • Know how to insert simple formulae into spreadsheet cells. • Know how to use simple shortcut functions in spreadsheets to calculate (SUM, AVERAGE). • Know how to use software to collect, analyse, evaluate and present data and information

		and collaboration	input and output.			
	Privacy settings, limit access, GDPR, set of laws, privacy protection, cookies, consent, live streams, NSPCC, ZIPIT	Computer networks, communication, collaboration, wiki, blog, vlog, music streaming, social; media, video conferencing, zoom, Local area network (Lan) Wider area network (LAN) firewalls	Code, Tabs, interactive, decomposition, selection, variables, logical reasoning, input and output commands	Multimedia, video, audio, hyperlinks, triggered, linear, non linear	Interface, Graphical user interface GUI, physical systems, flow diagram, external device, logical reasoning, errors, algorithm, selection, abstraction,	Spreadsheet, calculations, cells, row, SUM, AVERAGE, brackets, format, formulae