Curriculum Intent and Progression Document Computing

St. Mary's Catholic Voluntary Academy, Grantham

2022-23

Subject Leader: Rachael Glendinning

<div align="center">

Mission Statement

Christ is at the centre of St. Mary's as we strive to nurture and care for all our community members by encouraging them to **Believe**, **Succeed** and **Soar** within God's love, to achieve the very best that they can, in all areas.

Our Vision

We are disciples who put our faith into action in all that we do.

We are role models who encourage others to shine and be the best version of themselves that they can be.

We are investigators who ask questions about the past, the present and the future.

We are artists who show our creativity and talents with flair and imagination.

We are storytellers who have a passion for reading and are able to communicate in many ways.

We are problem solvers who tackle tasks with an open mind and a positive approach.

We are team players who work together to achieve our goals.

We are explorers who learn new skills, embrace other cultures and value our locality and the wider world.

We **Believe**. We **Succeed**. We **Soar**.

Our Gospel Virtues

To achieve our full Christian potential, we all need to live out our Gospel Virtues: -

Love

A Christ-like love respects the talent of each person in our school.

Faith

Faith helps us to do God's will in this world.

Hope

Hope helps us to see a new life beyond our present one.

Peace

We know that if we love one another, peace will be all around us.

Mercy

We believe that mercy will be shown by the way we forgive others.

Community

We believe our community here unites us all as followers of Jesus.

Rachael Glendinning

St. Mary's Catholic Voluntary Academy, Grantham

2022-23

</div>

Curriculum Intent General Principles:

Below, the General Principles of our whole school curriculum intention are in black print, along with what this translates to as regards Computing in red:

The **General Principles** of our curriculum are that children:

- **Meet Jesus through all aspects of their work.** *Our intention is for children to encounter Jesus through computing. Computing can allow children to question and to experience God's awe and wonder and they will be encouraged to do this. It encourages collaboration, specifically using pair programming and peer instruction, and also structured group tasks. Working together stimulates classroom dialogue, articulation of concepts, and development of shared understanding.*

- **Experience the challenge and enjoyment of learning**. *Use formative questioning to uncover misconceptions and adapt teaching to address them as they occur. Awareness of common misconceptions alongside discussion, concept mapping, peer instruction, or simple quizzes can help identify areas of confusion. Provide activities with different levels of direction, scaffolding, and support that promote active learning, ranging from highly structured to more exploratory tasks. Adapting instruction to suit different objectives will help keep all pupils engaged and encourage greater independence.*

- **Learn within a coherent and progressive framework**. *Use supportive frameworks when planning lessons, such as PRIMM (Predict, Run, Investigate, Modify, Make) and Use-Modify-Create. These frameworks are based on research and ensure that differentiation can be built in at various stages of the lesson. Support pupils in the acquisition of knowledge, through the use of key concepts, terms, and vocabulary, providing opportunities to build a shared and consistent understanding. Glossaries, concept maps, and displays, along with regular recall and revision, can support this approach.*

- **See clear links between different aspects of their learning**. *Use project-based learning activities to provide pupils with the opportunity to apply and consolidate their knowledge and understanding. Design is an important, often overlooked aspect of computing. Pupils can consider how to develop an artefact for a particular user or function, and evaluate it against a set of criteria.*

- **Understand the purpose and value of their learning and see its relevance to their past, present and future**. *Teach new concepts by first unpacking complex terms and ideas, exploring these ideas in unplugged and familiar contexts, then repacking this new understanding into the original concept. This approach (semantic waves) can help pupils develop a secure understanding of complex concepts. Bring abstract concepts to life with real world, contextual examples and a focus on interdependencies with other curriculum subjects. This can be achieved through the use of unplugged activities, proposing analogies, storytelling around concepts, and finding examples of the concepts in pupils' lives.*

- **Explore the breadth and depth of the national curriculum.** *The intention is that the learning goes beyond that of the National Curriculum and that areas of learning are more clearly defined. Use physical computing and making activities that offer tactile and sensory experiences to enhance learning. Combining electronics and programming with arts and crafts (especially through exploratory projects) provides pupils with a creative, engaging context to explore and apply computing concepts.*

Rachael Glendinning
St. Mary's Catholic Voluntary Academy, Grantham
2022-23

Curriculum Intent: Computing (2022-23)

EYFS COMPUTING					
PRIOR KNOWLEDGE WILL BE DETERMINED BEFORE NEW CONTENT IS TAUGHT					
ONLINE SAFETY IS A LIFE SKILL AND WILL ALWAYS BE REFORCED AND REITERATED THROUGHOUT THE YEAR					
ADVENT 1 Children will…	ADVENT 2 Children will…	LENT 1 Children will…	LENT 2 Children will…	PENTECOST 1 Children will…	PENTECOST 2 Children will…
COMPUTING SYSTEMS AND NETWORKS – -Know how what a keyboard is and how to locate relevant keys -Know how to log in and out -Know how a mouse works and develop control -Know how to control a mouse – clicking -Know how to control a mouse – clicking and dragging		PROGRAMMING A – All about instructions -Know how to follow instructions. -Know how to give simple instructions -Know how order of instructions is important (getting dressed) -Know how to debug when things go wrong -Know how to make predictions (what is an algorithm)	DATA HANDLING – Introduction to data handling -Know how to sort and categorise objects -Know how to sort based on categories -Know how to respond to yes/no questions as an introduction to branching databases. -Know how to complete a branching database through physical sorting and categorising -Know how to interpret a basic pictogram	COMPUTING SYSTEMS AND NETWORKS – Exploring hardware -Know how to use different hardware -Know how to identify where technology is used in places. -Know how to operate a basic camera -Know how to take photographs of the world around them -Know how to take a selfie.	PROGRAMMING B – Programming Bee-Bots -Know how to use directional arrows -Know how to program a robot. -Know how to give simple commands -Know how to follow an algorithm (as part of an unplugged game) -Know how to give instructions and to debug (with adult support)
VOCABULARY					
Computer, computer tower, monitor, keyboard, mouse, letters, numbers, uppercase, lowercase, type, log in, log out, computer safety, password, secure, private, protect, security, personal, lock, left-click, right-click, arrow, cursor, paint, stamp, drag, move, drop, on, off		Instructions, blindfold, step over, walk around, turn, left, right, to the side, straight on, stand still, stop, duck, under, bend down, walk, hop, tiptoe, shuffle, skip, run, describe, two part instruction, adjective,	Sort, categorise, category, group, describe, texture, colour, pattern, size, weight, height, length, more, less, count, in total, altogether, share, divide, equal, bigger than, smaller than,	Mouse, buttons, keyboard, keys, monitor, computer tower, speaker, click, push, pull, twist, under, on top of, behind, open, shut, larger, smaller, dial, memory, technology, power,	Forward, back, backwards, right, left Arrow, direction, turn straight on, directions, route, algorithm, instructions, circle, program, sequence, debug

		algorithm, order, sequence, predict, prediction, next, last, first, second, third	thicker than, thinner than, pictogram, graph, column, row, square, data, collect, record, count, most popular, least popular	electricity. Batteries, on, off, camera, iPad, tablet, lens, point, shoot, capture, picture, image, gallery, record, photograph, photographer, still, blurred, blurry, crisp, clear, selfie	

Year 1
COMPUTING
PRIOR KNOWLEDGE WILL BE DETERMINED BEFORE NEW CONTENT IS TAUGHT
ONLINE SAFETY IS A LIFE SKILL AND WILL ALWAYS BE REFORCED AND REITERATED THROUGHOUT THE YEAR

ADVENT 1 Children will…	ADVENT 2 Children will…	LENT 1 Children will…	LENT 2 Children will…	PENTECOST 1 Children will…	PENTECOST 2 Children will…
COMPUTING SYSTEMS AND NETWORKS – Technology around us LI Know how to identify technology L2 Know how to identify a computer and its main parts L3 Know how to use a mouse in different ways L4 Know how to use a computer keyboard to type on a computer L5 Know how to use a keyboard to edit text L6 Know how to create rules for using technology responsibly	CREATING MEDIA – Digital painting L1 Know how to describe what different freehand tools do L2 Know how to use the shape tool and the line tools L3 Know how to make careful choices when painting a digital picture L4 Know why I chose the tools I used L5 Know how to use a computer on my own to paint a picture L6 Know how to compare painting a picture on a computer and on paper	PROGRAMMING A – Moving a robot L1 Know how to explain what a given command will do L2 Know how to act out a given word L3 Know how to combine forwards and backwards commands to make a sequence L4 Know how to combine four direction commands to make sequences L5 Know how to plan a simple program L6 Know how to find more than one solution to a problem	DATA AND INFORMATION – Grouping data L1 Know how to label objects L2 Know how to identify that objects can be counted L3 Know how to describe objects in different ways L4 Know how to count objects with the same properties L5 Know how to compare groups of objects L6 Know how to answer questions about groups of objects	CREATING MEDIA – Digital writing L1 Know how to use a computer to write L2 Know how to add and remove text on a computer L3 Know how to identify that the look of text can be changed on a computer L4 Know how to make careful choices when changing text L5 Know how to explain why I used the tools that I chose L6 Know how to compare typing on a	PROGRAMMING B – Programming animations L1 Know how to choose a command for a given purpose L2 Know how to show that a series of commands can be joined together L3 Know how to identify the effect of changing a value L4 Know how to explain that each sprite has its own instructions L5 Know how to design the parts of a project

Rachael Glendinning
St. Mary's Catholic Voluntary Academy, Grantham
2022-23

				computer to writing on paper	L6 Know how to use my algorithm to create a program
VOCABULARY					
Technology, computer, mouse, trackpad, keyboard, screen, double-click, typing	paint program, tool, paintbrush, erase, fill, undo, Piet Mondrian, primary colours, shape tools, line tool, fill tool, undo tool, Henri Matisse, Wassily Kandinsky, tools, feelings, colour, brush style, Georges Seurat, pointillism, brush size, pictures, painting, computers, like, prefer, dislike	Forwards, backwards, turn, clear, go, commands, instructions, directions, forwards, backwards, left, right, turn, plan, algorithm, program, route, plan, program	Object, label, group, search, image, property, label, colour, size, shape, data set, more, less, most, fewest, data set, the same	Word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing	ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, joining, command, **Start** block, run, program, programming area, background, delete, reset, algorithm, predict, effect, change, value, block, instructions, sprite, Sprite, background, appropriate, programming blocks, programs

Year 2 COMPUTING					
PRIOR KNOWLEDGE WILL BE DETERMINED BEFORE NEW CONTENT IS TAUGHT					
ONLINE SAFETY IS A LIFE SKILL AND WILL ALWAYS BE REFORCED AND REITERATED THROUGHOUT THE YEAR					
ADVENT 1 Children will…	ADVENT 2 Children will…	LENT 1 Children will…	LENT 2 Children will…	PENTECOST 1 Children will…	PENTECOST 2 Children will…
COMPUTING SYSTEMS AND NETWORKS – *Information Technology around us* L1 Know how to recognise the uses and features of information technology	CREATING MEDIA – Digital photography L1 Know how to use a digital device to take a photograph L2 Know how to make choices when taking a photograph	PROGRAMMING A – Robot algorithms L1 Know how to describe a series of instructions as a sequence L2 Know how to explain what happens when we	DATA AND INFORMATION – Pictograms L1 Know how to recognise that we can count and compare objects using tally charts	CREATING MEDIA – Making music L1 Know how to say how music can make us feel L2 Know how to identify that there are patterns in music	PROGRAMMING B – Programming quizzes L1 Know how to explain that a sequence of commands has a start L2 Know how to explain that a sequence of commands has an outcome

L2 Know how to identify the uses of information technology in the school L3 Know how to identify information technology beyond school L4 Know how information technology helps us L5 Know how to use information technology safely L6 Know how to use information technology safely	L3 Know what makes a good photograph L4 Know how photographs can be improved L5 Know how to use tools to change an image L6 Know how photos can be changed	change the order of instructions L3 Know how to use logical reasoning to predict the outcome of a program L4 Know how to explain that programming projects can have code and artwork L5 Know how to design an algorithm L6 Know how to create and debug a program that I have written	L2 Know how to recognise that objects can be represented as pictures L3 Know how to create a pictogram L4 Know how to select objects by attribute and make comparisons L5 Know how to recognise that people can be described by attributes L6 Know how to explain that we can present information using a computer	L3 Know how to experiment with sound using a computer L4 Know how to use a computer to create a musical pattern L5 Know how to create music for a purpose L6 Know how to review and refine our computer work	L3 Know how to create a program using a given design L4 Know how to change a given design L5 Know how to create a program using my own design L6 Know how to decide how my project can be improved
VOCABULARY					
Information technology (IT), computer, barcode, scanner/scan	Device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, Light sources, flash, focus, background, editing, filter, format, framing, lighting, focus, filter	Instruction, sequence, clear, unambiguous, algorithm, program, sequence, order, algorithm, instructions, prediction, artwork, design, route, mat, algorithm, debugging, program, decomposition	More than, less than, most, least, organise, data, object, tally chart, votes, total, pictogram, enter, data, compare, count, explain, more, less, most, least, more common, least common, attribute, group, same, different, object, more than/less than, most/least, conclusion, sharing, data	Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions, pattern, rhythm, pulse, Neptune, pitch, tempo, rhythm, notes, notes, instrument, create, emotion, pulse/beat, open, edit rhythm, notes, create, emotion,	Sequence, command, program, run, start, outcome, predict, blocks, Sprite, algorithm, blocks, design, sequence, predict, actions, project, modify, change, algorithm, build, match, compare, debug, program, features, evaluate

Year 3
COMPUTING
PRIOR KNOWLEDGE WILL BE DETERMINED BEFORE NEW CONTENT IS TAUGHT

Rachael Glendinning
St. Mary's Catholic Voluntary Academy, Grantham
2022-23

ONLINE SAFETY IS A LIFE SKILL AND WILL ALWAYS BE REFORCED AND REITERATED THROUGHOUT THE YEAR					
ADVENT 1 Children will…	ADVENT 2 Children will…	LENT 1 Children will…	LENT 2 Children will…	PENTECOST 1 Children will…	PENTECOST 2 Children will…
COMPUTING SYSTEMS AND NETWORKS – Connecting Computers L1 Know how digital devices function L2 Know how to identify input and output devices L3 Know how digital devices can change the way we work L4 Know how a computer network can be used to share information L5 Know how digital devices can be connected L6 Know how to recognise the physical components of a network	CREATING MEDIA – Stop-frame animation L1 Know how to explain that animation is a sequence of drawings or photographs L2 Know how to relate animated movement with a sequence of images L3 Know how to plan an animation L4 Know how to identify the need to work consistently and carefully L5 Know how to review and improve an animation L6 Know how to evaluate the impact of adding other media to an animation	PROGRAMMING A – Sequencing sounds L1 Know how to explore a new programming environment L2 Know how to identify that commands have an outcome L3 Know how to explain that a program has a start L4 Know how to recognise that a sequence of commands can have an order L5 Know how to change the appearance of my project L6 Know how to create a project from a task description	DATA AND INFORMATION – Branching databases L1 Know how to create questions with yes/no answers L2 Know how to identify the attributes needed to collect data about an object L3 Know how to create a branching database L4 Know how to explain why it is helpful for a database to be well structured L5 Know how to plan the structure of a branching database L6 Know how to independently create an identification tool	CREATING MEDIA – Desktop publishing L1 Know how to recognise how text and images convey information L2 Know how to recognise that text and layout can be edited L3 Know how to choose appropriate page settings L4 Know how to add content to a desktop publishing publication L5 Know how to consider how different layouts can suit different purposes L6 Know how to consider the benefits of desktop publishing	PROGRAMMING B – Events and actions in programs L1 Know how to explain how a sprite moves in an existing project L2 Know how to create a program to move a sprite in four directions L3 Know how to adapt a program to a new context L4 Know how to develop my program by adding features L5 Know how to identify and fix bugs in a program L6 Know how to design and create a maze-based challenge
VOCABULARY					

Rachael Glendinning
St. Mary's Catholic Voluntary Academy, Grantham
2022-23

Digital device, input, process, output, program, digital, non-digital, connection, network, network switch, server, wireless access point, network cables, network sockets	Animation, flip book, stop-frame animation, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, animation, delete, media, import, transition	Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, sprites, programming blocks, motion, turn, point in direction, go to, glide, sequence, event, task, design, code, run the code, order, note, chord, stage, costume, backdrop, algorithm, bug, debug	Attribute, value, questions, table, objects, branching database, database, objects, equal, even, separate, questions, structure, compare, order, organise, selecting, information, decision tree	Text, images, advantages, disadvantages, communicate, font, font style, communicate, template, choose appropriate page settings, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, layout, purpose, benefits	Motion, event, sprite, algorithm, logic, move, resize, algorithm, extension block, pen up, set up, design, event, action, debugging, errors, code, test, debug

Year 4 COMPUTING

PRIOR KNOWLEDGE WILL BE DETERMINED BEFORE NEW CONTENT IS TAUGHT

ONLINE SAFETY IS A LIFE SKILL AND WILL ALWAYS BE REFORCED AND REITERATED THROUGHOUT THE YEAR

ADVENT 1 Children will…	ADVENT 2 Children will…	LENT 1 Children will…	LENT 2 Children will…	PENTECOST 1 Children will…	PENTECOST 2 Children will…
COMPUTING SYSTEMS AND NETWORKS – The internet L1 Know how networks physically connect to other networks L2 Know how networked devices make up the internet L3 Know how websites can be shared via the World Wide Web (WWW)	CREATING MEDIA – Audio production L1 Know that sound can be recorded L2 Know how to explain that audio recordings can be edited L3 Know how the different parts of creating a podcast project L4 Know how to apply audio editing skills independently	PROGRAMMING A – Repetition in shapes L1 Know how to identify that accuracy in programming is important L2 Know how to create a program in a text-based language L3 Know how to explain what 'repeat' means L4 Know how to modify a count-controlled loop to produce a given outcome	DATA AND INFORMATION – Data logging L1 Know how to explain that data gathered over time can be used to answer questions L2 Know how to use a digital device to collect data automatically L3 Know how to explain that a data logger collects 'data points' from sensors over time	CREATING MEDIA – Photo editing L1 Know how to explain that the composition of digital images can be changed L2 Know how to explain that colours can be changed in digital images L3 Know how to explain how cloning can be used in photo editing	PROGRAMMING B – Repetition in games L1 Know how to develop the use of count-controlled loops in a different programming environment L2 Know how to explain that in programming there are infinite loops and count controlled loops L3 Know how to develop a design that

L4 Know how content can be added and accessed on the World Wide Web (WWW) L5 Know how the content of the WWW is created by people L6 Know how to evaluate the consequences of unreliable content	L5 Know how to combine audio to enhance my podcast project L6 Know how to evaluate the effective use of audio	L5 Know how to decompose a task into small steps L6 Know how to create a program that uses count-controlled loops to produce a given outcome	L4 Know how to recognise how a computer can help us analyse data L5 Know how to identify the data needed to answer questions L6 Know how to use data from sensors to answer questions	L4 Know how to explain that images can be combined L5 Know how to combine images for a purpose L6 Know how to evaluate how changes can improve an image	includes two or more loops which run at the same time L4 Know how to modify an infinite loop in a given program L5 Know how to design a project that includes repetition L6 Know how to create a project that includes repetition
VOCABULARY					
Internet, network, network security, Network switch, server, wireless access point (WAP), router, Website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, content, download, sharing, ownership, permission, Information, accurate, honest, content, adverts.	Audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, sound, layer, import, record, playback, edit, selection, load, import, save, export, MP3, editing, evaluate, feedback	Program, Turtle, commands, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, algorithm, value, repeat, repetition, count-controlled loop, trace, value, count-controlled loop, decompose, procedure.	Data, table, layout, input device, sensor, data logger, data logger, logging, data point, interval, analyse, data set, import, export, review, conclusion	Image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, retouch, clone, select, copy, paste, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, rotate, crop, zoom, clone, select, copy, paste, undo, font	Scratch, programming, sprite, blocks, code, loop, repeat, value, block, repeat, forever, infinite loop, count-controlled loop, costume, repetition, forever, animate, costume, event block, duplicate, block, repeat, forever, modify, design, algorithm, duplicate, debug, refine, evaluate

Year 5 COMPUTING					
PRIOR KNOWLEDGE WILL BE DETERMINED BEFORE NEW CONTENT IS TAUGHT					
ONLINE SAFETY IS A LIFE SKILL AND WILL ALWAYS BE REFORCED AND REITERATED THROUGHOUT THE YEAR					
ADVENT 1 Children will…	ADVENT 2 Children will…	LENT 1 Children will…	LENT 2 Children will…	PENTECOST 1 Children will…	PENTECOST 2 Children will…

COMPUTING SYSTEMS AND NETWORKS- Sharing information	CREATING MEDIA – Video production	PROGRAMMING A – Selection in physical computing	DATA AND INFORMATION – Flat-file databases	CREATING MEDIA – Vector drawing	PROGRAMMING B – Selection in quizzes
L1 Know that computers can be connected together to form systems	L1 Know how to explain what makes a video effective	L1 Know how to control a simple circuit connected to a computer	L1 Know how to use a form to record information	L1 Know how to identify that drawing tools can be used to produce different outcomes	L1 Know how to explain how selection is used in computer programs
L2 Know how to recognise the role of computer systems in our lives	L2 Know how to identify digital devices that can record video	L2 Know how to write a program that includes count-controlled loops	L2 Know how to compare paper and computer-based databases	L2 Know how to create a vector drawing by combining shapes	L2 Know how to relate that a conditional statement connects a condition to an outcome
L3 Know how to experiment with search engines	L3 Know how to capture video using a range of techniques	L3 Know how to explain that a loop can stop when a condition is met	L3 Know how to outline how you can answer questions by grouping and then sorting data	L3 Know how to use tools to achieve a desired effect	L3 Know how to explain how selection directs the flow of a program
L4 Know how search engines select results	L4 Know how	L4 Know how to explain that a loop can be used to repeatedly check whether a condition has been met	L4 Know how to explain that tools can be used to select specific data	L4 Know how to recognise that vector drawings consist of layers	L4 Know how to design a program which uses selection
L5 Know how search results are ranked	L5 Know how to identify that video can be improved through reshooting and editing	L5 Know how to design a physical project that includes selection	L5 Know how to explain that computer programs can be used to compare data visually	L5 Know how to group objects to make them easier to work with	L5 Know how to create a program which uses selection
L6 Know why the order of results is important, and to whom	L6 Know how to consider the impact of the choices made when making and sharing a video	L6 Know how to create a program that controls a physical computing project	L6 Know how to use a real-world database to answer questions	L6 Know how to apply what I have learned about vector drawings	L6 Know how to evaluate my program

VOCABULARY					
System, connection, digital, input, process, output, Search, search engine, refine, Index, crawler, bot, search engine, ordering, ranking, links, algorithm, search engine optimisation (SEO), Searching, web crawler, content	Video, audio, camera, talking head, panning, close up, video camera, microphone, lens, close up, mid range, long shot, moving subject, side by side, high angle, low angle, normal angle, static camera, zoom, pan, tilt, storyboard, import, split,	Microcontroller, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, components, switch, motor, LED, Sparkle, crocodile clips, connect,	Database, data, information, record, field, sort, order, group, record, sort, order, search, criteria, graph, chart, axis, compare, filter, presentation	Vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, order, copy, paste, group, ungroup, duplicate, reuse, reflection	Selection, condition, true, false, count-controlled loop, outcomes, conditional statement (the linking together of a condition and outcomes), algorithm, program, debug, question, answer, outcomes, test, run, debug

creator, selection, ranking	trim, clip, edit, reshoot, delete, trim, reorder, export, evaluate, share	battery box, program, condition, Input, output, selection, condition, action, repetition, selection, debug			

Year 6 COMPUTING					
PRIOR KNOWLEDGE WILL BE DETERMINED BEFORE NEW CONTENT IS TAUGHT					
ONLINE SAFETY IS A LIFE SKILL AND WILL ALWAYS BE REFORCED AND REITERATED THROUGHOUT THE YEAR					
ADVENT 1 Children will…	ADVENT 2 Children will…	LENT 1 Children will…	LENT 2 Children will…	PENTECOST 1 Children will…	PENTECOST 2 Children will…
COMPUTING SYSTEMS AND NETWORKS – Internet communication L1 Know the importance of internet addresses L2 Know how data is transferred across the internet L3 Know how sharing information online can help people to work together L4 Know how to evaluate different ways of working together online L5 Know how we communicate using technology L6 Know how to evaluate different	CREATING MEDIA – Webpage creation L1 Know how to review an existing website and consider its structure L2 Know how to plan the features of a web page L3 Know how to consider the ownership and use of images (copyright) L4 Know how to recognise the need to preview pages L5 Know how to outline the need for a navigation path L6 Know how to recognise the implications of linking to content owned by other people	PROGRAMMING A – Variables in games L1 Know how to define a 'variable' as something that is changeable L2 Know how to explain why a variable is used in a program L3 Know how to improve a game by using variables L4 Know how to design a project that builds on a given example L5 Know how to use my design to create a project L6 Know how to evaluate my project	DATA AND INFORMATION – Introduction to spreadsheets L1 Know how to create a data set in a spreadsheet L2 Know how to build a data set in a spreadsheet L3 Know how to explain that formulas can be used to produce calculated data L4 Know how to apply formulas to data L5 Know how to create a spreadsheet to plan an event L6 Know how to choose suitable ways to present data	CREATING MEDIA – 3D modelling L1 Know how to recognise that you can work in three dimensions on a computer L2 Know how to identify that digital 3D objects can be modified L3 Know how to recognise that objects can be combined in a 3D model L4 Know how to create a 3D model for a given purpose L5 Know how to plan my own 3D model L6 Know how to create my own digital 3D model	PROGRAMMING B – Sensing L1 Know how to create a program to run on a controllable device L2 Know how to explain that selection can control the flow of a program L3 Know how to update a variable with a user input L4 Know how to use a conditional statement to compare a variable to a value L5 Know how to design a project that uses inputs and outputs on a controllable device L6 Know how to develop a program to use inputs and outputs on a controllable device

Rachael Glendinning
St. Mary's Catholic Voluntary Academy, Grantham
2022-23

methods of online communication					
VOCABULARY					
Communication, protocol, data, address, Internet Protocol (IP) address, Domain Name Server (DNS), Packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration, internet, public, private, one-way, two-way, one-to-one, one-to-many	Website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, hyperlink, evaluate, implication, external link, embed	Variable, change, name, value, set, design, event, design, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share	Data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, input, output, cells, calculate, operation, range, duplicate, sigma, propose, question, data set, organise, chart, evaluate, results, comparison, questions, software, tools.	2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group cylinder, placeholder, hollow, choose, combine,construct, evaluate, modify	Micro:bit, MakeCode, input, process, output, flashing, USB, trace, condition, if then else, variable, random, selection, input, condition, variable, sensing, accelerometer, value, compass, direction, variable, navigation, design, task, algorithm, variable, step counter, plan, create, code, test, debug