

**HOLY TRINITY CATHOLIC ACADEMY
MEDIUM TERM CURRICULUM PLANNER**

Subject: COMPUTING		
INTENT Digital Literacy:		
<ul style="list-style-type: none"> To be responsible users of digital devices inside and outside of school. To make connections with their learning and apply it to their everyday use of technology. (Online safety) To be able to retain and recall specific knowledge throughout the year. 		
INTENT ICT:		
<ul style="list-style-type: none"> To develop confident users of technology. To develop links between curriculum subjects, such as Maths and Science, to create and produce data which can be analysed, evaluated and presented. 		
INTENT Computer Science:		
<ul style="list-style-type: none"> To develop enquiring minds through practical investigations through the use of coding. To be confident in explaining the debugging process (KS2), when solving errors within coding. 		
EYFS Curriculum	KS1 National Curriculum Objectives:	KS2 National Curriculum Objectives:
<p>1.To know how to operate some ICT or mechanical toys</p> <p>2.To know how to be able to operate a CD player or music app on the Ipad and show understanding of the remote controls.</p> <p>3.To know and be able to operate a digital device and show understanding of the remote controls.</p> <p>To know and to be able to show interest in other technological items.</p> <p>4.To know how to be able to understand and complete a simple program on a computer</p>	<p>1.To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>2.Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs</p> <p>3.Use technology purposefully to create, organise, store, manipulate and retrieve digital content Recognise common uses of information technology beyond school</p> <p>4.Use technology safely and respectfully, keeping personal data private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p>	<p>1.Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>2.Use sequence, selection and repetition in programs; work with variables and various forms of input and output</p> <p>3.Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>4.Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</p>

Possible adaptations for SEND children:

- Step by step reminders (C&L)
- Explicitly teach new vocab / recap with talk partner
- Scribe written responses, my turn, our turn, your turn
- Mixed ability pairs (C&I)
- Adapted KO
- Enlarged visual/Text to speak facility (P&S, SEMH)
- Ear defenders/noise cancelling headphones, increase of time
- Use of Natural Reader

5. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

6. Select, use and combine a variety of software (including internet services) on a range of digital devices to design & create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

7. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

YEAR	FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS
Foundation Stage	Digital Literacy (DL)	Safe Friend Adult	<ul style="list-style-type: none"> • Recognise inappropriate content and know to tell an appropriate adult • Are aware that information can be public or private <ul style="list-style-type: none"> • Can describe what makes a good friend
	Information Technology (ICT)	Mouse Screen Keyboard Spacebar Numbers Letters Tablet Ipad More Less Like Dislike	<p>Using a computer</p> <ul style="list-style-type: none"> • To know how to use a device to target and select options on screen • Recognise and use a range of digital devices • Understand that information and media can be stored on a digital device, e.g. they ask to view a photo that has been taken on a tablet <p>Communication</p> <ul style="list-style-type: none"> • Create simple digital content, e.g. digital art <p>Understanding and sharing data</p> <ul style="list-style-type: none"> • Sort familiar objects into 1 or more categories • Answer basic questions about information displayed in images, e.g. more or less • Collect and present simple data (e.g. likes/dislikes) on a topic
	Computer Science (CS)	Instructions Actions Goal	<ul style="list-style-type: none"> • Understand that we control computers • Follow a short sequence of instructions • Repeat an action to trigger a specific outcome • Evaluate an outcome based on an initial goal • Recognise patterns in groups of objects

YEAR	FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE ADVENT TERM:	
KSI	<p style="text-align: center;">Digital Literacy (DL)</p>	<p>Cyber Safety E-safety Cyber Bullying Technology Devices Portable Personal Information</p>	<p>Year A:</p> <p><i>Challenge for Y2/more able children:</i></p> <ul style="list-style-type: none"> • To recall E-Safety knowledge with greater confidence, making connections • To be able to say how they can apply this to own use of technology at home <ul style="list-style-type: none"> • To know what personal information is – E.g. Name, Address, School name, Age and Email address. • To know who we can trust with our personal information – E.g. Teachers, Schools, Police, Parents. • To know and understand the school rules when using technology • To know how to use technology safely at home E.g. make sure an adult is near by or watching what I am doing. • To know how to keep my personal details safe, such as passwords that I need to remember. (Keep passwords in your reading diary for school websites – don't share them with other children) • To know why you shouldn't share passwords with other people – accounts get hacked (E.g. TTRockstars coins being spent – this could be real money for some people) • To know who to speak to when I am concerned online. E.g. Staff member or parents or report button. 	<p>In Year B Some objectives are repeated yearly to ensure that they are embedded and are the core foundations of being safe online.</p> <p><i>Challenge for Y2/more able children:</i></p> <ul style="list-style-type: none"> • To recall E-Safety knowledge with greater confidence, making connections • To be able to say how they can apply this to own use of technology at home <ul style="list-style-type: none"> • To know what personal information is – E.g. Name, Address, School name, Age and Email address. • To know who we can trust with our personal information – E.g. Teachers, Schools, Police • To know why you shouldn't share personal information online – E.g. people use it to set up fake accounts or people can find out which school you are at. • To know when it is acceptable to share information – E.g. when you go on a school trip your teacher needs a copy of your name and phone number for an emergency • To know who to tell when I don't feel safe (example – when I see something I shouldn't, when someone asks for my details or when bad messages are sent) . E.g. A parent, teacher or trusted adult. • To know that an adult should be checking what I do online – E.g. A parent to be in the room when using the internet. Adults in school always share which app/website to use. • To know that personal information shouldn't be shared with others, even offline. E.g. In the park, at an amusement arcade. • To know that passwords are used to keep personal information safe.

FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE LENT TERM:	
Information Technology (ICT)	<p style="text-align: center;"> Screen Keyboard Mouse Store Folder Document Create Retrieve Manipulate Organise </p>	<p>YEAR A: Challenge for Y2/more able children – within ‘Using a computer’ to do this with greater independence and to support younger / less able children to do so in mixed ability partners</p> <p>Using a computer</p> <ul style="list-style-type: none"> • To know the key parts of a computer – screen, keyboard, mouse • To know how to turn the computer on and log on to the Class Folder • To know how to shut down a computer • To know how these devices can be used outside of school • <p>Powerpoint</p> <ul style="list-style-type: none"> • To know how to open Powerpoint • To know how to create up to 2 PowerPoint Slides and save into the pupil folders – Link to History – Fire of London (Advent Term) – Children can use History books and Knowledge organisers to create a PowerPoint to show what they have learned in class. • To know how to save a PowerPoint in a folder on the pupil folders – Y1/2 are using Bears pupil folders to store work. Work will include PowerPoints about The Fire of London. • To know how to open a saved Powerpoint document • To know how to use ‘Caps Lock’ to create capital letters • To know how to add text to a single slide • I know how to add an image and move it • I know how to copy and paste an image (with support) 	<p>YEAR B: Challenge for Y2/more able children – within ‘Using a computer’ to do this with greater independence and to support younger / less able children to do so in mixed ability partners</p> <p>Using a computer</p> <ul style="list-style-type: none"> • To know the key parts of a computer – screen, keyboard, mouse • To know how to turn the computer on and log on to the Class Folder • To know how to shut down a computer • To know how these devices can be used outside of school • Link to Significant Individuals History Topic • To know how to store a document in a folder on pupil folders – children in Y1/2 are using Bears pupil folders to store work. • To know how to open a saved document from pupil folders. <p>Work can include the image of the Significant individual and a short piece of text to say who the person is. The document can be named with the child’s name.</p> <p>Microsoft Word:</p> <ul style="list-style-type: none"> • I know how to enter text • I know how to understand and use capital letters • I know how to understand and use lowercase letters • I know basic typing skills including the use of the space bar, return key and basic punctuation. • I know how to format text (size and font) (with support) • I know how to insert clip art and images (with support) Link to Significant Individuals History Topic – Children can be shown how to safely

				<p>search for bitesize website around Columbus or Armstrong for images to save into a folder by right clicking and saving.</p> <ul style="list-style-type: none"> I know how to save and retrieve a document
	FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE PENTECOST TERM:	
		<p>Algorithm Debug Programs Prediction Digital Device Instructions</p>	<p>YEAR A: Using Beebots</p> <p>Link to wider curriculum – Beebots can be used on floor mats that have some key features of Newark on. E.g. Newark Castle, Train Station, Our School, Sconce Park, A46 – This links to the topic in Geography ‘Comparison of small area of UK (Newark) vs Non-European Country Town/Market.</p> <p>Challenge for Y2 / More Able children:</p> <ul style="list-style-type: none"> Complete task with more steps Create more instructions with greater independence ensuring that they are clear/easy to read/follow Use Beebot App independently and complete further levels Programme the Beebot to pass through various points without having to do it in small steps <ul style="list-style-type: none"> To know how to decompose a problem/task into small steps to make it simple To know how to write and follow simple instructions To know how to programme a Beebot using simple instructions (algorithm) To know that algorithms are precise instructions for a digital device. To know how easy it is to make a mistake if instructions are not correct and how to correct these To know how to use the inputs and outputs of a Beebot to get it from Point A to Point B. To know how to use the inputs and outputs of a Beebot to turn 90 degrees. 	<p>YEAR B: Using Beebots</p> <p>Link to wider curriculum – Beebots can be used on floor mats that have obstacles that might be there in War – eg buildings or rivers. Group children to ‘capture’ objectives on the floor mat. Links to William Tritton inventor of the first fighting tank. Beebots can be used as mini-tanks that move across the map.</p> <p>Challenge for Y2 / More Able children:</p> <ul style="list-style-type: none"> Complete task with more steps Create more instructions with greater independence ensuring that they are clear/easy to read/follow Use Beebot App independently and complete further levels Programme the Beebot to pass through various points without having to do it in small steps <ul style="list-style-type: none"> To know how to decompose a problem/task into small steps to make it simple To know how to write and follow simple instructions To know how to programme a Beebot using simple instructions (algorithm) To know that algorithms are precise instructions for a digital device. To know how easy it is to make a mistake if instructions are not correct and how to correct these To know how to use the inputs and outputs of a Beebot to get it from Point A to Point B. To know how to use the inputs and outputs of a Beebot to turn 90 degrees.
	Computer Science (CS)			

			<ul style="list-style-type: none"> To know how to use diagrams to represent an algorithm, e.g. a flowchart 	<ul style="list-style-type: none"> To know how to use diagrams to represent an algorithm, e.g. a flowchart
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YEAR	FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE ADVENT TERM:	
LKS2 Y3/4	Digital Literacy (DL)	E-safety Cyber Safety Cyber Bullying Behaviours Reporting Collaboration Network Communication Digital Content Content Contact	YEAR A: Challenge for Y4 / more able children: <ul style="list-style-type: none"> To know how to work out if information online is true and reliable To know what personal information is – E.g. Name, Address, School name, Age, Email address, Phone Numbers, Bank Details, Family members names, Jobs. To know who we can trust with our personal information – E.g. Teachers, Schools, Police To know why you shouldn't share personal information online – E.g. people use it to set up fake accounts or people can find out which school you are at. To know that an adult should be checking what I do online – E.g. A parent to be in the room when using the internet. Adults in school always share which app/website to use. To know that personal information shouldn't be shared with others, even offline. E.g. In the park, at an amusement arcade. To know how to protect their online reputation through the actions they make To know how to create a strong password to secure information online. To know how to be 'kind' to others online. 	YEAR B: Challenge for Y4 / more able children: <ul style="list-style-type: none"> To identify specific examples of bad behaviours that you might report online, linked to their own personal experience To know what personal information is – E.g. Name, Address, School name, Age, Email address, Phone Numbers, Bank Details, Family members names, Jobs. To know who we can trust with our personal information – E.g. Teachers, Schools, Police To know why you shouldn't share personal information online – E.g. people use it to set up fake accounts or people can find out which school you are at. To know and identify the dangers of people online – E.g. people aren't who they say they are. Not to meet up with people you don't know. To know the social media age restrictions and why they have been put in place To know who to tell when you have been cyberbullied online (Staff, Parent, Trusted Adult) To know that you can report bad behaviour online using a report button. To know that an adult should be checking what I do online – E.g. A parent to be in the room when using the internet. Adults in school always share which app/website to use. To know that personal information shouldn't be shared with others, even offline. E.g. In the park, at an amusement arcade. To know that passwords are used to keep personal information safe.

FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE LENT TERM:	
<p style="text-align: center;">Information Technology (ICT)</p>	<p>Search Engine Results Variables Content Software Digital devices Programs Collecting Analysing Evaluating Data Information</p>	<p>YEAR A: Link the above to the History unit of Early Civilisation: Ancient Egypt. Children can use the iPads to create pictures or videos about the topic they have learned. These can be uploaded to OneDrive and used in Word Documents or PowerPoints when using laptops or computers in school.</p> <p>Challenge for Y4 / more able:</p> <ul style="list-style-type: none"> • To be able to type using all fingers at speed • To work with greater independence • To support mixed ability partner <p>Using a computer</p> <ul style="list-style-type: none"> • I know how to log on and log off correctly • To know how to open and save a file to a suitable folder • To know how to use suitable file names when saving work • To know how to use right-click, left-click and double-click appropriately on a mouse • To know how to copy text and images into a another document • To know how to retrieve a document, to save changes within the same document <p>Communication</p> <ul style="list-style-type: none"> • To know how to create a Word document <p>Understanding and sharing data</p> <ul style="list-style-type: none"> • To know how to create a simple table in Word linked to eg Ancient Egypt History Topic <p>Microsoft Word</p> <ul style="list-style-type: none"> • I know how to use a range of punctuation • I know how to insert tables • I know how to format text including font and paragraph justification eg centre the text in a cell 	<p>YEAR B: Link to the History unit on Anglo-Saxons. Using given websites, children create their own simple PowerPoint slides (3-6 slides) using the key board shortcuts.</p> <p>Challenge for Y4/ more able:</p> <ul style="list-style-type: none"> • I know how to add animation to slides (Transition/Text/Appear/Disappear) • To work with greater independence • To support mixed ability partner <p>Using a computer</p> <ul style="list-style-type: none"> • To know how to log on and log off correctly • To know how to create a simple Powerpoint document and save to the Class Folders • To know how to save and retrieve a PPT document in a folder • To know how to use right-click, left-click and double-click appropriately on a mouse • To know simple key-board shortcuts such as select all, copy, paste and save. Ctrl+C Ctrl+V Ctrl+S <p>Powerpoint</p> <ul style="list-style-type: none"> • I know how to use a range of punctuation • I know how to insert and resize images into presentations • I know how to inset and resize a text box • I know how to format text including font and paragraph justification • I know to select the background design PPT and apply to all • I know how to create 3-6 slides as part of a slideshow

			<ul style="list-style-type: none"> I know how to colour a cell I know how to alter page orientation – portrait or landscape 	<ul style="list-style-type: none"> To know how to present information linked to a topic through PPT
	FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE PENTECOST TERM:	
	Computer Science (CS)	Algorithm Debugging Coding Selection Sequence Selection Repetition Decomposition Input Output Program World Wide Web System Software Physical Software Detect Correct Errors	YEAR A: Challenge for Y4 / more able children <i>Use and explore Scratch Junior Y3s, More able children/Y4 Scratch – to produce an animation to create a character that can move in the shape of a square</i> <ul style="list-style-type: none"> To know how to explain some simple algorithms. To know how to detect an error in a simple algorithm. To know how to correct an error in a simple algorithm. To know how to decompose a problem into smaller steps to make it simpler To know how to use repetition to make programs more efficient, e.g. a forever loop in Scratch Junior To predict the outcome of a program, e.g. Scratch Junior To know how to use diagrams to represent an algorithm, e.g. a flowchart To know how to create a program using a range of events/inputs to control what happens 	YEAR B: Challenge for Y4 / more able children <i>Use and explore Scratch Junior Y3s, More able/Y4 Scratch – to produce an animation to using ‘if and then commands</i> <ul style="list-style-type: none"> To know how to explain some simple algorithms. To know how to detect an error in a simple algorithm. To know how to correct an error in a simple algorithm. To know how to decompose a problem into smaller steps to make it simpler To know how to remix and change an existing program To know how to use selection in algorithms and programs, i.e. if... then... To know how to use procedures in programs to create a sub-routine e.g. a procedure called ‘square’ in Scratch To know how to use repetition to make programs more efficient, e.g. a forever loop (Scratch)

YEAR	FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE ADVENT TERM:	
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<p>UKS2 Y5/6</p>	<p>Digital Literacy (DL)</p>	<p>E-safety Cyber Safety Cyber Bullying Behaviours Reporting Collaboration Network Communication Digital Content Content Contact Digital Footprint Phishing</p>	<p>YEAR A: Challenge for Y6 / More able pupils</p> <ul style="list-style-type: none"> <i>To be able to articulate how they can apply this knowledge and live this out at home when using own personal devices</i> To know how when it is Okay to share information To know what having a positive digital footprint means To know ways in which I can build a positive digital footprint. To know how to be a critical consumer while online To know about different online scams, including what ‘phishing’ means. To know how to describe ways to evaluate what we see on social media To know how to explain how social media can mislead or misrepresent reality To know how to identify different types of online scams people our age may experience, including ‘phishing’/ To know how to identify sources of support for someone who is worried about anything online. To know some of the risks when using technology online E.G. – People aren’t who they say they are, phishing and scams, theft of identity. To know how to minimise the risks of losing personal data E.G – phishing/unknown links. 	<p>YEAR B: Challenge for Y6 / More able pupils</p> <ul style="list-style-type: none"> <i>To be able to articulate how they can apply this knowledge and live this out at home when using own personal devices</i> To know how to apply previous knowledge of online safety to their own activities (use SMART robot) To know who to tell when if concerned about content or contact online (Teachers, Adults, CEOP website/Reporting functions on apps/gaming) To know ways to develop safe habits online, including the importance of protecting personal information. To know how to create a strong password and why this is important at school and in the wider world. To know that different passwords should be created for different things. To know how to describe ways to keep personal information private online by using safety tools and privacy settings. To know how to respond to hurtful online behaviour, in ways that keeps you safe and healthy. To know that you have to make choices when using technology and that not everything is true and/or safe. To know that if I make personal information available online, it can be seen and used by others – talk about social media and keeping accounts private and ‘about me’ private.
<p>FOCUS AREA</p>		<p>VOCABULARY</p>	<p>KEY KNOWLEDGE & SKILLS BY THE END OF THE LENT TERM:</p>	

**Information
Technology
(ICT)**

**Search Engine
Results
Variables
Content
Software
Digital devices
Programs
Collecting
Analysing
Evaluating
Data
Information**

YEAR A: *Linked to Geography Topic on Mountains and Volcanoes*

The children will research eg. the height of Mountains and Volcanoes and will use their digital research findings to present this data using Excel.

Challenge for Y6 / more able children

- *I know how to use simple formula (Sum/Average)*
- *I know how to sort and filter data for a given purpose*

Digital Research

- I know how to use the internet for independent research (with a given goal – Teacher Led research task)
- I know how to use advanced searching techniques (use of quotation marks to location precise information)

Using a computer

- To know how to use the keyboard confidently and use common keyboard shortcuts (Copy, Paste, Select All, Undo, Redo, Bold, Italic, Underlined)

Excel

- I know how to sort data for a given purpose
- I know how to use cell formatting (number/alignment/font/fill)
- I know how to use simple formula (SUM)

Understanding and sharing data in Excel

- To know how to create charts and databases
- To know how to combine information created on multiple devices into a single document to be presented in class – link to wider curriculum (See below)

YEAR B: *Link to History curriculum: When creating PowerPoints/Word documents children have to produce a piece of work that is linked to the Mayan Civilisation and present a powerpoint to the class (Lent 1 unit in History)*

Challenge for Y6 / more able children

- *I know how to insert hyperlinks externally and internally within a Powerpoint presentation*
- *I know how to use a Contents for internal hyperlinks*
- *I know how to use and understand the slideshow tab to include timings and loops.*

Digital Research

- I know how to use the internet for independent research (with a given goal – Teacher Led research task)
- I know how to use advanced searching techniques (use of quotation marks to location precise information)

Using a computer

- To know how to use the keyboard confidently and use common keyboard shortcuts (Copy, Paste, Select All, Undo, Redo, Bold, Italic, Underlined)
- To know how to resize and crop an image within a computer program such as Word or PowerPoint.

Communication

- To recognise the purpose and audience when designing and creating digital content – formal PowerPoint for presentations, word documents for note making.

Understanding and sharing data

- To know how to share data in a presentation for an audience.

PowerPoint

			<ul style="list-style-type: none"> • I know how to cut, copy and paste, select all, undo and redo using keyboard shortcuts. • I know how to format a specific area or text (highlight, move and edit according to task) • I know how to format bar charts etc within an excel document (wrapping, crop, resize, remove background) 	<ul style="list-style-type: none"> • I know how to cut, copy and paste, select all, undo and redo using keyboard shortcuts. • I know how to use the spell check and thesaurus • I know how to format a specific area or text (highlight, move and edit according to task) • I know how to format pictures within a document (wrapping, crop, resize, remove background) • I know how to add music to slides • I know how to insert hyperlinks externally • I know how to use and understand the slideshow tab • I know how to use the notes appropriately for presenting.
	FOCUS AREA	VOCABULARY	KEY KNOWLEDGE & SKILLS BY THE END OF THE PENTECOST TERM:	
	Computer Science (CS)	Algorithm Debugging Coding Selection Sequence Selection Repetition Decomposition Input Output Program World Wide Web System Software Physical Software Detect Correct Errors	YEAR A: Create a 'Racing Game' Challenge for Y6 / more able children To know how to combine a variable with relational operators (< = >) to determine when a program changes, e.g. if score > 5, say "well done" <ul style="list-style-type: none"> • To know that different solutions exist for the same problem • To know how to create programs including repeat until loops • To know how to create simple variables, e.g. to keep score or remove lives in a game • To know how to use two-way selection, i.e. if... then... else... • To know the difference between if... then... and if... then... else... statements • To predict what will happen in a program or algorithm (e.g. change of output) when the input changes (e.g. sensor, data or event) • To design a physical computing system that uses sensors, e.g. using a flow chart 	YEAR B: Create a Ping Pong game on Scratch online. Challenge for Y6 / more able children <ul style="list-style-type: none"> • To know how to combine a variable with relational operators (< = >) to determine when a program changes, e.g. if score > 5, say "well done" • To know what an algorithm is. • To know that different solutions exist for the same problem • To know how to create programs including repeat until loops • To create simple variables, e.g. to keep score or remove lives in a game • To know how to use two-way selection, i.e. if... then... else... • To know the difference between if... then... and if... then... else... statements • To predict what will happen in a program or algorithm (e.g. change of output) when the input changes (e.g. sensor, data or event)

				<ul style="list-style-type: none">• To design a physical computing system that uses sensors, e.g. using a flow chart
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